REPORT OF THE WATER POLICY COMMITTEE TO THE 53RD LEGISLATURE OF THE STATE OF MONTANA

December, 1992

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December 10, 1992

President of the Senate
Speaker of the House
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As chairman of the Water Policy Committee, I am pleased to transmit the Committee's final report to the Fifty-Third Legislature, as required by section 85-2-105, MCA.

As required by statute, the Committee has made policy recommendations regarding the Montana Dam Safety Act, the water reservation process, water user and recreational water user fees, geothermal resources, the water leasing study, the state water plan, the water development programs, water research, and water data management. Additional information and policy recommendations regarding state drought response, wilderness dams, and federally reserved water rights is also provided.

On behalf of the Water Policy Committee, I urge your consideration of this report.

Sincerely,

Hal Harper

Representative Hal Harper
Chairman

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Introduction

This is the fourth biennial Water Policy Committee report to the Montana Legislature. The Committee focused on legislative mandates from the 1991 Legislature during this interim. These mandated studies included Dam Safety, Water Reservations, Geothermal Resources, Water User/Recreational User Fees, and Water Leasing. Additionally, the statute establishing the Water Policy Committee requires the Committee to "analyze and comment on" the state water plan, water development program, water research and water data management.

Besides these required issues, the Committee spent significant time on, and made policy recommendations regarding, the issues of state drought response, wilderness dam maintenance, and federally reserved water rights.[1]

Issues considered and discussed by the Committee, but for which no policy recommendations were made, included the water rights issues involved in the Montana Supreme court case Baker Ditch Co. v. 18th Judicial District, the Upper Missouri River water reservation process and final order, water rights condemnation issues involved with federal hydropower licensing on Wisconsin Creek, and water diversions from Butte Silver Bow Creek by ARCO required by federally mandated hazardous waste cleanup. These issues are not otherwise discussed in this Committee report. Please see Committee staff for additional information.

The Committee devoted considerable time late in the interim to one additional issue -- the future of the Water Policy Committee.

The Committee understands its responsibilities to Montana as contained in section 85-2-105(2) MCA.

> *On a continuing basis, the committee shall:*
> *(a) advise the legislature on the adequacy of the state's water policy and of important state, regional, national, and international developments which affect Montana's water resources;*
> *(b) oversee the policies and activities of the department of natural resources and conservation, other state executive agencies, and other state institutions, as they affect the water resources of the state; and*
> *(c) communicate with the public on matters of water policy as well as the water resources of the state.*

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[1] It is important to remember that this report should serve as only an introduction to these complex issues. The report is not intended as the definitive analysis of water policy issues in Montana, and those interested in additional information regarding specific report sections should consult Committee or state agency staff as appropriate.

Committee members expressed some frustration with the number and subject matter of the legislatively mandated interim studies. Some members felt that the required studies, especially those reviewed in Part I of this report, precluded the Committee from devoting scarce Committee resources to other, more important, issues and impeded compliance with the statutory responsibilities cited above. The Committee decided to meet periodically through the 1993 session in an attempt to keep better track of legislation that would affect the Committee next interim. Additionally, the Committee expressed an interest in developing a prioritization process for water related issues that would allow the Committee to complete a long range assessment of the important water issues in Montana and Committee concerns and resources. The Committee will continue work on this project next interim.

The Committee also initiated a free ranging and spirited discussion regarding the value and proper role of a continued Water Policy Committee. The Committee opened this discussion to the public for additional comments and perspectives. Members agreed that to be as effective as possible in carrying out their responsibilities the Committee needed to maintain a clear focus and direction. Members felt that continued periodic reevaluation of Committee direction, along with the assessment project mentioned above, would serve to ensure that the Committee carries out its statutory mandates and responsibilities in the most effective and efficient manner possible.

Part I

Legislative Mandates

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"?

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?

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?

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.

Section 2. -- Water Reservation Study

Introduction

Senate Bill 313, again derived from the 1991 State Water Plan recommendations, directed the Water Policy Committee to conduct a study analyzing the impacts of the current water reservation process on new storage facility construction in Montana.

Specifically, SB 313 states:

> *The water policy committee shall also conduct a study to determine whether the statutory restriction against allowing private entities to obtain water reservations is an impediment to the development of water storage projects. Specifically, the study must evaluate the desirability of:*
>
> > *(a) allowing private entities to apply for and obtain water reservations; and*
> >
> > *(b) designating a public entity with responsibility to advance water reservation applications for private entities that are precluded from applying for and receiving a water reservation under 85-2-316.*

Committee Action Summary

The Committee decided that the most efficient method of analyzing this issue was to contact those individuals and organizations most directly affected. The Committee identified and contacted these individuals, reviewed the legislative direction, and also requested a response to the following questions.

> *To help focus comments on the study, we have prepared the following questions for your review and response. These questions are not exclusive, we welcome any and all relevant comments regarding this important issue.*
>
> * *Does the current water reservation process impede in any way the construction of water storage projects in Montana? If so, how?*
>
> * *How best can the impediments identified above, if any, be removed?*
>
> * *What in your opinion are the largest impediments, from any source, to the construction of water storage facilities in Montana and what can or should the state government do about them?*

* *What are your thoughts regarding the two options identified in SB313, i.e., allowing private entities to hold a reservation and or designating a public entity to advance reservations for private entities?*

The letter was forwarded to the following ten individuals:

Michael E. Zimmerman, Montana Power Company;
Neil V. Colwell, Washington Water Power Company;
Jim Peterson, Montana Stockgrowers Association;
Jo Brunner, Montana Water Resources Association;
Lorna Frank, Montana Farm Bureau;
Stan Bradshaw, Montana Trout Unlimited;
Peggy Parmelee, Montana Association of Conservation Districts;
Karen Barclay-Fagg, Director, DNRC;
K.L. Cool, Director, DFWP; and
Dennis Iverson, Director, DHES.

Eight of the ten responded either in writing or orally at the public hearing held on this issue. The Committee received no response from the DHES or the Montana Stockgrowers Association.

What follows is a brief summary of public response to the questions presented. Complete copies of the written responses and relevant portions of Committee meeting minutes are included as Appendix 3.

* *Does the current water reservation process impede in any way the construction of water storage projects in Montana? If so, how?*

No respondent stated that the reservation process itself inhibited the construction of new water storage facilities. However, some respondents were concerned with the impact of specific reservations for instream flow on new storage projects.

Additionally, Montana Power Company (MPC) also stated that the process could be viewed as an impediment because some private entities representing the public, such as MPC, could not apply on their own for a reservation, while other private entities, such as conservation districts, could propose and hold their own water reservations.

* *How best can the impediments identified above, if any, be removed?*

Due to the responses to the first question, this question was not relevant.

* *What in your opinion are the largest impediments, from any source, to the construction of water storage facilities in Montana and what can or should the state government do about them?*

Far and away, the largest impediment to new storage projects identified by the respondents was a lack of economic resources for project design, construction, and maintenance. Other impediments included increased environmental concerns and inadequate water availability. Please see Appendix 3 for details on suggested governmental remedies for these impediments.

> * *What are your thoughts regarding the two options identified in SB313, i.e., allowing private entities to hold a reservation and or designating a public entity to advance reservations for private entities?*

In the responses to this question, only the utility companies expressed a desire to allow private entities to apply for and hold a water reservation. There was no interest expressed for designating a public entity to advance reservations for private entities.

The Committee, keeping in mind its legislative mandate and the narrow scope of the study, considered the responses and public comments and reached its final recommendation with little discussion.

Final Committee Recommendation

The Committee finds that the current statutory restriction against allowing private entities to obtain water reservations is not an impediment to the development of water storage projects in Montana and therefore, the Committee recommends no change in the current water reservation process.

Section 3. – Geothermal Resources Study

Introduction

The 1991 Legislature, through Senate Joint Resolution 25, requested the Committee to conduct an interim study of the need for and feasibility of state regulation of Montana's geothermal resources. Specifically, the Committee was asked to determine:

> i. the need for and feasibility of state regulations to control the development of energy that may be extracted from the natural heat of the water and the development of any geothermal byproduct;
>
> ii. if regulation of geothermal resources exists in other states with substantial geothermal resources; and
>
> iii. if water users and entities with an interest in geothermal resources in Montana need and want state regulation of geothermal resources.

The issue of increased state regulation of geothermal resources was addressed by the Environmental Quality Council (EQC) in the 1991 Rural Development Study requested by the Governor. The EQC studied the issue and drafted legislation that established a different water use permitting scheme for water with a temperature greater than 85 degrees. This legislation was tabled by the Senate Natural Resources Committee. The Senate Committee noted that the bill connected water quantity and water quality in a manner that was new to Montana water use laws. Additionally, the Committee questioned whether the EQC had adequately investigated the bill's impact on current and future water users.

The following excerpt from the 1991 EQC Rural Development Study Report is presented as an introduction to the issue and as a summary of the previous EQC study.

1991 EQC GEOTHERMAL DEVELOPMENT STUDY SUMMARY

Background

Unlike many other states with geothermal resources, Montana does not recognize, under state water law, any difference between "hot" and "cold" water. Therefore, while a water right to a geothermal resource is subject to the same appropriation and adjudication procedures and protections as any other water right, only the quantity of the water is protected, not the temperature or other products, e.g. minerals or gas, commonly associated with geothermal resources. Additionally, use of a ground water geothermal resource, even a use that threatens the value of that resource to another user, is exempt from state water use permit requirements.

If the geothermal resource is used as a power source however, it may fall under the Major Facility Siting Act, (Act) section 75-20-101 et. al. MCA. The Act, implemented by the Department of Natural Resources and Conservation (DNRC), requires state certification of environmental compatibility before a geothermal power project can be developed. The Act also includes exploration notification provisions for geothermal projects that are potentially covered by the Act.

The DNRC has determined that use of a geothermal resource solely for space heat, e.g. greenhouses, residential or storage buildings, or spa use, could be defined as "geothermally derived power", and therefore be covered by the Act. The DNRC makes this determination based on the specific details of the plan as submitted by the developer. To date however, the DNRC has not applied the Act to any geothermal resource project.

Problems

Current and future users of geothermal resources have no means of protecting the heat or by-product value of the resource under state water law. This could lead to inefficient and wasteful use of the resource and cause irreparable harm to the resource in an entire area. Additionally, while the DNRC will determine if a geothermal development is covered by the Major Facility Siting Act based on the plans of the developer - it is unclear who must submit a plan to the DNRC.

Deliberations

The Council reviewed geothermal statutes in surrounding states and heard presentations by DNRC personnel regarding the potential for implementing similar legislation in Montana. The Council decided that geothermal resources are a unique asset in this state and should receive more protection than is currently available through the Water Use Act.

Recommendation

To adequately protect all of Montana's water resources, the Water Use Act should be modified to require a permit for the use of geothermal resources. Additionally, the Major Facility Siting Act should be clarified as applicable only to geothermal resource use for the production of electricity of 7.5 megawatts or greater.

Implementation

The Council has prepared draft legislation that addresses this issue.

What follows is a brief summary of the Water Policy Committee's Geothermal Resource Study. For more information on geothermal resources, or the study itself, please contact Committee staff.

SJR 25 ISSUE I. THE COMMITTEE SHALL DETERMINE THE NEED FOR AND FEASIBILITY OF STATE REGULATIONS TO CONTROL THE DEVELOPMENT OF ENERGY THAT MAY BE EXTRACTED FROM THE NATURAL HEAT OF THE WATER AND THE DEVELOPMENT OF ANY GEOTHERMAL BYPRODUCT.

Sub Issues Identified for In-Depth Analysis

Issue 1. The "Need for" Geothermal Regulation

A. Extent of the Geothermal Resource in Montana

The Committee expressed a strong desire to better understand the extent of geothermal resources in Montana before determining the "need for" increased regulation. This task proved difficult. Neither state water law nor well driller regulations require that the temperature of a water resource be recorded. There is a requirement that the type of water use be noted on water rights certificates and water use permits yet while there is a category for "geothermal use" on those documents, of over 200,000 water rights claims filed since 1973, only 22 water users indicated they were using the water for geothermal purposes. The DNRC said this grossly underestimated the actual use of geothermal resources but it was understandable. A water user using a geothermal resource for stock water, for example, would probably indicate the use as "stock" and not "geothermal".

Representatives from the Montana Bureau of Mines and Geology (MBMG), as well as from the U. S. Geological Survey (USGS) provided information to the Committee regarding their studies involving Montana's geothermal resources. The last MBMG geothermal study, completed in 1981, identified vast areas of the state with a high probability for low temperature, less than 100° C., geothermal resources, and also identified approximately 100 thermal wells and springs in the state. MBMG has applied for a water development grant to update and refine this study during the next biennium.

USGS personnel provided details regarding the four federally designated Known Geothermal Resource Areas (KGRA's), in Montana. These KGRA's located near Corwin Springs, Boulder, Marysville, and West Yellowstone, were designated in the 1970's based on the potential for commercial geothermal development. None of these areas have been developed as of yet. The state also has a geothermal leasing program for state lands but there are currently no leases under that program. USGS personnel also explained that the current procedure for establishing or modifying a KGRA is through the federal Bureau of Land Management and that there are apparently no statutes or rules governing that process.

B. Public Perception of "Need for" Geothermal Regulation

The Committee addressed the "need for" increased geothermal regulation through its analysis of SJR 25 Issue III. Please see page 24 for details.

Issue 2. "Feasibility of" Geothermal Regulation

Before the Committee could decide whether or not increased regulation of geothermal resources was "feasible", the Committee had to attempt to define both the term "geothermal resource" and the scope of the study. Due to the unique nature of geothermal resources, the Committee wrestled with these two issues during most of the interim.

A. Study Scope

Geothermal resources are simultaneously part energy, part water, and part mineral resource. The Committee had to determine if the study should include energy extraction devices, such as geothermal heat pumps, or should it concentrate mainly on "hot water". The Committee found that the geothermal use most likely to adversely impact the resource and resource users is currently subject to Montana water law. The methods of extracting energy from the earth not subject to Montana water law, i.e. earth coupled heat pumps which may or may not use geothermal water, do not appear to pose a large threat to the resource or resource users. The Committee determined that geothermal resource regulation tied to existing water use permitting statutes would be the most efficient and effective method of regulation. The Committee understands that this does not protect existing users to the extent some users desire, but it is a reasonable first step in increasing their protection.

Committee Findings

Public and agency testimony indicates that most concerns regarding geothermal use, as well as most of the geothermal use most likely to have adverse impacts on the existing resource and resource users, involves water use. A vast majority of geothermal water use is currently subject to existing Montana water law. For effective and efficient administration, any increase in geothermal resource regulation should be incorporated into the current water use permitting process. If this proves inadequate, the Committee or the legislature may revisit this issue in the future.

B. Geothermal Definition

The definition of "geothermal" varies from state to state and the federal government. Again, the Committee had to determine if Montana should use a strict temperature based definition, adopt a temperature gradient definition, or adopt a definition based on the use of the resource.

The Committee received reports from staff and federal agency personnel on the options available for defining geothermal resources. Committee members expressed concern over the approach taken by the EQC in 1991. They felt that a strict temperature definition, in that case 85°F., was arbitrary in nature, could be difficult to accurately determine, and would not reflect advances in geothermal development technology. The Committee also had reservations regarding the current federal definition, one based on a thermal gradient compared to mean annual air temperature. While being less arbitrary than a specific temperature, the Committee felt that this definition could also be difficult to determine and apply, and it was concerned that a resource once defined as "geothermal" could, over time, lose that designation through a small change in the thermal gradient or mean annual air temperature. Members of the public and state agency personnel argued that if the resource, regardless of its actual temperature, was being used for its thermal value, that value should be protected. For example, a rancher who is using water at a temperature of 50°F. for stock water, and who requires that temperature to ensure the water remains open during the winter, should be entitled to protection of that thermal value during the period needed.

Committee Findings

Of the numerous methods used to define geothermal resources the beneficial use definition provides the most protection for the resource and the resource user. If geothermal resource regulation is increased, and that regulation is tied to existing water use law, the state should use its current beneficial use and adverse impact criteria to determine if a geothermal resource is involved and threatened.

SJR 25 ISSUE II. THE COMMITTEE SHALL DETERMINE IF REGULATION OF GEOTHERMAL RESOURCES EXISTS IN OTHER STATES WITH SUBSTANTIAL GEOTHERMAL RESOURCES.

Committee Action Summary

The regulation of the geothermal resource in other states varies widely. All the states utilizing the prior appropriation doctrine regulate geothermal resources to some extent. Most states, including Montana through the Major Facility Siting Act, regulate only those high temperature geothermal resources capable of electrical energy production. Others, i.e., Idaho and California, identify two levels of geothermal resource, low and high temperature, and regulate them differently. Still others regulate any geothermal development but provide exemptions for various uses such as home heating or cooling. The Committee understood that resolution of the important issues involved in the regulation of geothermal resources - what is regulated and how - is largely dependant upon the definition of the resource.

SJR 25 ISSUE III. THE COMMITTEE SHALL DETERMINE IF WATER USERS AND ENTITIES WITH AN INTEREST IN GEOTHERMAL RESOURCES IN MONTANA NEED AND WANT STATE REGULATION OF GEOTHERMAL RESOURCES.

Committee Action Summary

To a large extent, the Committee based its final recommendations on the strong, if not voluminous, public support for increased geothermal regulation. The Committee sought out geothermal resource users and solicited their comments regarding the study and their perspective on the need for increased regulation of the resource. Members of the public who testified made it clear that they consider their geothermal resource very valuable and that they feel that resource is threatened without at least the same level of protection currently granted to other water rights.

As mentioned earlier, some concern had been expressed during the 1991 legislative session regarding the unknown impacts of increased regulation on water users, specifically on the agricultural community. However, attempts to locate members of that community with concerns about increased geothermal resource regulation, through the assistance of the Montana Water Resources Association and the Montana Stockgrowers Association, proved fruitless. No one testified against increasing regulation for either the geothermal resource or resource users.

Copies of letters to resource users, written public responses, and relevant portions of meeting minutes, are included as Appendix 4.

Final Committee Findings

Based on the information presented throughout the study, the Committee made the following findings:

* Geothermal values are a parameter of water quality.

* Under current statutes, rules, and DNRC policy, it is unclear whether or not the DNRC may deny or condition water use permits on the basis of impacts to water quality, including impacts to geothermal values. It is clear that the DNRC has never denied or conditioned a water use permit on this basis.

* Geothermal resources have a value in addition to those associated with other, non-geothermal, water resources.

* Current geothermal resource users strongly express a desire to ensure that their geothermal resources are fully protected under Montana water law.

* Protecting existing and future geothermal resource users necessitates increasing the protection of the geothermal resource itself.

Final Committee Recommendations

The Committee recommends that the DNRC be granted clear authority to deny or condition new water permits or applications for changes to water use permits on the basis of impacts to geothermal values. This determination should be based on beneficial use and adverse impact criteria currently used by the DNRC in processing new permit or change of use applications.

Additionally, the Committee recommends that state law be amended to allow for designation of a controlled ground water area on the basis of future or existing adverse impacts to a geothermal resource.

Implementation

The Committee closely followed the State Water Planning Process (see Section 6, page 35, of this report) and believes that the changes recommended in that Plan would adequately implement the Committee recommendations for this study.

Specifically, the final plan section, dated November 2, 1992, recommends that state law should:

> *Clarify that the DNRC has the authority to condition or deny new water use permits and change of use permit applications based on a preponderance of the evidence and a consideration of whether and to what extent:*
>
> *a) The water quality of another appropriator would be adversely affected*
> . . . .

Additionally, the plan section also recommends that the legislature should:

> *Amend the controlled ground water area statute . . . to broaden water quality considerations by allowing a petition based on a showing that excessive groundwater withdrawals would cause contaminant migration "or" that a degradation of groundwater quality exists within the groundwater area. . . .*

The Committee believes, and the DNRC Director agreed, that the term "water quality" in both these recommendations includes the specific parameter of geothermal values. It is the intent of the Committee that geothermal values be added to the "bundle" of rights protected under the state water plan recommendations. The Committee will present testimony to the appropriate legislative committees conducting hearings on plan implementation legislation to ensure that the Committee's intent is included in the legislative record. If this approach proves to be inadequate to protect the resource and resource users, the Committee or the legislature may revisit the issue.

Section 4. -- Water User/Recreational User Fees Study

Introduction

The 1991 legislature, again through Senate Bill 313, directed the Department of Natural Resources and Conservation (DNRC) and the Department of Fish, Wildlife, and Parks (DFWP) to conduct studies assessing the feasibility of charging fees or increasing fees for diversionary and recreational water use and to submit a written study report to the Water Policy Committee. Due to the nature and outcome of these studies, the Committee will combine discussion of the agency study reports into this one section.

These studies, both recommended in the 1991 State Water Plan, ask the question - Are all the beneficiaries of state-owned water storage projects paying their fair share for the construction, maintenance and rehabilitation of those projects?

What follows is a brief summary of the agency studies, final agency recommendations, Committee discussion and Committee recommendations. For a copy of the agency studies, or for more information on this issue, please contact agency or Committee staff.

Committee Action Summary

Water User Fees Study

The DNRC was directed by the 1991 legislature to:

> conduct and coordinate a study to assess the feasibility of increasing the fees charged to diversionary water users to assist in the repayment of a greater portion of new state-owned water storage projects' costs or existing state-owned water storage projects' rehabilitation costs. . . .

The DNRC stated that since it had no plans to construct any new state-owned projects, its report would not address the issue of fees for new projects.

Report Summary

Section 6 of SB 313 asked the DNRC to assess the "feasibility of increasing charges to diversionary water users". The DNRC states that this has already been established. The DNRC has increased the fees charged to diversionary water users on projects involved in each completed dam rehabilitation project. In its report, the DNRC described the method used to determine the water user fees for each project and also identified the water users' contribution as compared to the total project cost for each completed project. Alternative economic methodologies to determine water user fees were also discussed.

In summary, the DNRC concluded that they currently charge diversionary water users the amount the water users can afford to pay.

Recreational Water User Fees Study

Section 5, SB 313, directed the DFWP, with the cooperation of the DNRC, to:

> ... conduct and coordinate a study that assesses the feasibility of charging recreational beneficiaries of water storage projects fees to assist in the repayment of a portion of those project costs associated with recreational opportunities. Options to be assessed include but are not limited to:
>
> (a) requiring entrance fees for the recreational use of water storage facilities;
>
> (b) requiring purchase of a water development stamp as a prerequisite for purchase of a fishing, duck hunting, boating, or other license for which water in an integral part of the recreational experience;
>
> (c) increasing the motorboat fuels tax;
>
> (d) requiring purchase of a land and water conservation license by anyone using public lands or water; and
>
> (e) obtaining funding from the (DFWP) that is derived from taxes or fees on recreational activities.

Report Summary

The DFWP report analyzed only the five options identified in SB 313 because no completely different options were identified by the DFWP that appeared viable. The options were analyzed on the basis of three questions:

1. Is the option legal?

2. Would it be profitable?

3. Would it be fair to the payers?

The DFWP was careful to emphasize that the report did not intend to advocate for or against any option. The purpose of the report was to consider only the "feasibility" of the options.

The following brief summary of the department analysis for each option was taken from the report Executive Summary.

Option 1. Requiring entrance fees for the recreational use of water storage facilities.

Although potentially the most fair of the options, charging of entrance fees is not feasible because it's not profitable at most sites and existing fees do not cover the cost of recreation management. There are also legal barriers at sites managed by federal agencies or improved using federal fish and wildlife funds.

Option 2. Requiring purchase of a water development stamp as a prerequisite for purchase of a fishing, duck hunting, boating, or other license for which water is an integral part of the recreational experience.

This option, as a prerequisite for fishing and hunting licenses, is not feasible because it would violate federal funding and state assenting laws. It could be legally required of boaters, which would also be profitable. Whether it would be fair to boaters would depend on which other funding options might also be chosen.

Option 3. Increasing the motorboat fuels tax.

An increase in the share of the existing tax going to the motorboat account is very likely legal, profitable and fair. However, an about-to-be-released federally sponsored study must support an increase based on consumption. Preliminary findings for Montana do not support an increase over the present 0.9% allocation to the State Park System.

Option 4. Requiring purchase of a land and water conservation license by anyone using public lands or water.

This option is burdened with so many legal, fairness and profitability issues that it is not feasible.

Option 5. Obtaining funding from the (DFWP) that is derived from taxes or fees on recreational activities.

Three sources of money could be used legally, fairly and profitably on a limited case-by-case basis. Their use would be strictly controlled by federal funding laws and state assenting laws. These sources are:

1. *state fishing and hunting license revenues;*

2. *the federal Aid in Sport Fish Restoration Fund; and*

3. *the federal Land and Water Conservation Fund.*

All DFWP funding sources are currently fully appropriated to current level services, some at state water storage projects. Additional redirection of existing funds to state water projects would reduce public services elsewhere. Depending upon the funding options selected, this could be a major problem for the already seriously under funded State Park System.

The Committee accepted the reports as submitted and requested comments and recommendations from the agencies. The Committee also advertised a public hearing on the issue.

Agency Comment and Recommendations

In response to the Committee's request for comments and recommendations, the DNRC and DFWP submitted a joint letter, included in Appendix 5, setting out the following proposed approach.

. . . Both DFWP and DNRC have dams which need rehabilitation. . . . Both agencies feel that a joint approach to rehabilitation of state-owned water projects would be beneficial. To facilitate the rehabilitation of state water projects it is proposed that the dams owned by the DNRC and . . . [DFWP] . . be combined into a single list and prioritized based on need, cost, benefits and hazard rating. The top priority dams would then be considered for funding from a variety of sources from both agencies. DNRC would utilize traditional funding sources. . . . [DFWP] . . . would contribute Sport Fish Restoration dollars if the agencies determined the project warranted the expenditure of those funds and appropriate fishery benefits would be provided. . . . We propose to come to the 1995 legislature with the top priority projects identified and a cost share proposal for funding rehabilitation of these projects.

The Committee was very interested in this joint approach proposal and requested additional information from the agencies on a number of points. Specifically, the Committee asked the departments:

* How much money do the departments estimate is currently available for dam rehabilitation and what are the sources of that money? Can the departments estimate the amount available for future years?

* If the funds are federal, are there any restrictions placed on the use of those funds?

* On what basis are the departments making the apparent determination that the proposed federal fund transfers meet any federal restrictions identified above - written communications, oral statements, prior experience, etc.?

* What criteria will your department use to determine if a particular project warrants the expenditure of federal funds?

* What are the impacts of transferring the identified federal or other funds to dam rehabilitation projects? In other words, from what activities are the funds being transferred?

Agency responses to these questions are included in Appendix 6.

Final Committee Recommendation

The Committee appreciates and commends the efforts of the DNRC and the DFWP in completing the studies and responding to Committee requests. However, the Committee remains uncertain of the exact impacts of the joint approach recommended by the agencies. Until these impacts are more fully understood the Committee will withhold an endorsement of the proposed joint approach for project rehabilitation. The Committee recommends that the next interim Water Policy Committee continue to evaluate this issue.

Section 5. – Water Leasing

Introduction

The Water Policy Committee has been actively involved in the water leasing study since the study's inception in 1989. This interim the Committee received an update from the Department of Fish, Wildlife, and Parks (DFWP) on the water leasing study at each of its meetings. The DFWP report required by section 85-2-436(3)(a) MCA, detailing major accomplishments and specific lease information, was submitted by the department and accepted by the Committee at its last interim meeting. For a copy of the report, please contact Committee or DFWP staff.

Committee Action Summary

The Committee was concerned by the apparent lack of progress in the Water Leasing Study early in the interim. The Committee forcefully reasserted that the intent of the legislature in establishing the program was to secure a lease and "get some water back into the streams." The DFWP noted the problems with negotiating the first lease. Public uncertainty with the program, complex water rights issues involving many water rights holders, public relations issues involving the DFWP, and economic concerns, all impeded study progress.

The Committee decided that it could play a role in public awareness and education and issued a press release strongly supporting the water leasing study in October, 1991. A copy of the press release is attached as Appendix 7. Individual Committee members also spoke to various water user groups encouraging their support for the study.

As detailed in the DFWP report, the department has recently signed two water leases for existing water rights on Mill Creek, an important cutthroat trout spawning tributary of the Yellowstone River. These leases are currently in the DNRC change of use process.

Final Committee Recommendation

While the Committee is encouraged by the progress made by the DFWP in securing water leases for instream flows, the Committee strongly recommends that the agency increase its efforts to utilize the water leasing process to improve Montana's fisheries.

Part II

Continuing Oversight Responsibilities

Section 6. -- State Water Plan

Introduction

The Water Policy Committee has been closely involved in the state water planning process since the Committee's creation in 1985. One of the reasons the Committee was created was to ensure that the DNRC took a more active and comprehensive approach to water planning. Additionally, section 85-1-203, MCA requires the DNRC to submit the water plan to the Committee, and section 85-2-105, MCA requires the Committee to "analyze and comment on" the plan sections in its report to the legislature. This interim, individual Committee members, as well as the Committee itself, played a vital role in the planning process.

1991-92 Planning Cycle

The following is a brief outline of the current DNRC state water planning process and a summary of interim planning activity. This interim's water plan sections, attached as Appendix 8, represent the third planning cycle using this process.

1. **State Water Plan Advisory Council** (SWPAC) -- The Governor appointed the SWPAC in May, 1991. This interim's SWPAC included Water Policy Committee members Senator Bengtson and Senator Grosfield. Senator Grosfield also served as SWPAC Chair.

2. **Scoping Meetings** -- The SWPAC and the DNRC scheduled scoping meetings in May, 1991 around the state to solicit public comment regarding the water planning process and specific study issues. The meetings were held in Havre, Poplar, Terry, Roundup, Livingston, Deer Lodge, Missoula, Big Fork, Browning, and Fort Benton, during May, 1991.

3. **Issue Selection** -- The DNRC, with assistance from the SWPAC, considered the comments received at the scoping meetings and selected the issues to be studied during the interim. The issues identified most often at the scoping meetings included water quality/quantity coordination, nonpoint source pollution, ground water quality, the interrelationship between ground and surface water, and the role of water in sustainable economic development. All these issues were selected by the DNRC for further study during the interim.

4. **Steering Committee Appointments** -- The DNRC, again with the assistance of the SWPAC, assigned steering committee members to study the selected issues. Steering Committee assignments included Committee members Representative Fagg, Ground Water Steering Committee, Senator Stimatz, Surface Water Steering Committee, and Representative Lee, Chairman, Surface Water Steering Committee. Additionally, Senator Beck and Representative Brooke served on the Clark Fork Steering Committee established through last interim's water plan recommendations.

5. **Draft Plan Section Development** -- The steering committees developed draft plan sections identifying policies, issues, background, options, and draft recommendations for each study issue. These draft plan sections were reviewed throughout the interim by the Committee.

6. **SWPAC Review** -- The draft plan sections were reviewed and amended by SWPAC as needed.

7. **Open House Meetings** -- Eight informal open house meetings were held around the state in May, 1992 to solicit public comment on the draft plan sections. These meetings, sponsored jointly by the DNRC and the SWPAC were held in Bozeman, Cut Bank, Dillon, Great Falls, Hamilton, Kalispell, Malta, and Miles City. A total of 132 citizens participated.

8. **Final Plan Section Development** -- SWPAC considered the public comment received at the open house meetings and developed the final plan sections.

9. **Public Hearings** -- The final plan sections were submitted to formal public hearings for public comment in September, 1992. A total of 59 citizens attended the meetings in Helena, Billings, and Missoula. An additional 38 written responses were received.

10. **Final Review and Amendment** -- Comments from the public hearings were reviewed and the final plan sections amended by the SWPAC as needed.

11. **Board of Natural Resources and Conservation Adoption** -- The final plan sections were reviewed by the Board for adoption in September. The Board adopted the final plan sections without revision on October 30, 1992.

12. **Implementation** -- The DNRC will implement the adopted recommendations through DNRC rulemaking or proposed legislation as appropriate.

It is important to note that this process is not required by statute or by DNRC administrative rule. Section 85-1-203(2), MCA states:

> The department shall formulate and, with the approval of the board, adopt and amend, extend, or add to a comprehensive, coordinated multiple-use water resources plan known as the "state water plan". The state water plan may be formulated and adopted in sections, these sections corresponding with hydrologic divisions of the state.

> The state water plan must set out a progressive program for the conservation, development, and utilization of the state's water resources and propose the most effective means by which these water resources may be applied for the benefit of the people, with due consideration of alternative uses and combinations of uses. Before adopting the state water plan or any section of the plan, the department shall hold public hearings in the state or in an area of the state encompassed by a section of the plan if adoption of a section is proposed. Notice of the hearing or hearings must be published for 2 consecutive weeks in a newspaper of general county circulation in each county encompassed by the proposed plan or section of the plan at least 30 days prior to the hearing.

The Committee strongly endorsed the current planning process and continued close involvement in the process by the Committee and individual Committee members. The Committee, hearing that the Board had concerns regarding the practicality and implementation of the proposed plan recommendations wrote the Board in May, 1992 stating:

> *State law requires that the Department of Natural Resources and Conservation develop the state water plan in consultation with the Water Policy Committee. The Water Policy Committee has reviewed and supports the adoption of the draft recommendations regarding the integration of water quality and quantity management developed through the state water planning process.*
>
> *The Water Policy Committee has always supported vigorous and effective water planning in Montana. In 1985, the Select Committee on Water Marketing, the precursor to the current standing legislative Water Policy Committee, identified many advantages of a progressive water planning process and strongly urged the Department of Natural Resources and Conservation to fully implement such a process. The current Water Policy Committee, with seven of its eight members actively involved in the current water planning cycle, has followed the current planning efforts closely and urges you to adopt the plan sections.*
>
> *It is important to note that the draft recommendations are consensus decisions, the result of many hours of volunteer work by the water plan steering committees. The committee's members, representing all the diverse affected interests, were able to go beyond narrow special concerns and develop sound water policy that both increases the protection of the resource and improves the efficient use of that resource. The integration of water quality and quantity management benefits all Montanans.*
>
> *The Water Policy Committee believes that endorsing the recommendations is just as importantly an endorsement of the process. The current water planning process, a process based on broad spectrum participation, with many avenues for public involvement, and consensus decisions, is vastly superior to the alternatives of legislative vote counting or no action.*

The process, and the results of the process, deserve the Board's favorable consideration and support.

Toward this end, members of the Water Policy Committee are willing to work with Board members to discuss any concerns regarding the draft recommendations or the water planning process. It will be crucial to present a unified front to the legislature in order to implement this important policy of water quality and quantity integration.

Final Committee Recommendations

The Committee understands the value of a broad-based, consensus building approach to solving the complex water issues facing Montana. The Committee believes that the current DNRC water planning process reflects these values and the Committee strongly endorses its continuation.

Additionally, the Committee recommends that it stay closely involved in the planning process through membership on the SWPAC and steering committees or through thorough and frequent updates.

Section 7. – Water Development Program

Introduction

Section 85-2-105(3)(b), MCA, requires the Water Policy Committee to "analyze and comment on the report of the status of the state's water development program . . . when filed by the department [of natural resources and conservation]. . . ."

The DNRC report is usually filed just prior to legislative sessions, after the Committee has concluded its interim business. For this reason, the Committee has never analyzed or commented on the report. This interim, the DNRC delivered a draft copy of the Renewable Resource and Water Development Programs Report to the Committee for review at its December, 1992 meeting. The Committee did not feel they had adequate opportunity for review and made no comment on the report itself this interim. Please see DNRC staff for a copy of the final report.

However, the Committee did make recommendations regarding the next interim Water Policy Committee's involvement in this issue.

Final Committee Recommendations

The Committee requests that the DNRC provide the Committee a copy of next interim's draft report by September 30, 1993 to allow the committee adequate opportunity for proper analysis and comment.

The Committee also recommends that the next interim Committee review and comment on the DNRC grant prioritization process.

Finally, the Committee is concerned by the continued and increasing use of Resource Indemnity Trust funds, through the Water Development and Renewable Resource Development Grant programs, to fund general operating expenses of state agencies.[1] The Committee notes that this practice is in direct violation of section 15-38-203(2), MCA, enacted in 1985, that states:

> ***It is the intent of the legislature that future appropriations from the resource indemnity trust interest account not be made to fund general operating expenses of state agencies.***

The Committee recommends that the next interim Committee examine this issue in detail.

[1] DNRC Resource Development Bureau staff informed the Committee that approximately 88% of the total funding for the Water Development and Renewable Resource Development Grant Programs will come from the Resource Indemnity Trust this biennium.

Section 8. – Water Research

Introduction

Since its creation in 1985, the Water Policy Committee has considered the question - How can water research best serve Montana? Despite progress this interim, to a large extent, a satisfactory answer remains elusive.

Last interim, the Committee made the following recommendations regarding water research in general and the Water Resources Center specifically:

1990 Final Action

The Water Policy Committee endorses a strong and effective Water Resources Center. The Committee believes that before the legislature increases its commitment to water research and the Water Resources Center, the university system must demonstrate its commitment to these important state issues. At a minimum, the university system should restructure the Center charter to reflect the following goals:

a. The Water Center should become vitally involved in all water issues in Montana.

b. The Water Center should foster and nurture a network of water researchers and water research users in the state.

c. The Water Center should become the focus of water research in Montana.

d. The Water Center should pursue externally funded research through an aggressive grant proposal writing program.

e. The Water Center should facilitate the development of academic programs in water resources.

f. The Water Center should maintain an aggressive information transfer program.

Additionally, the university system should provide increased funding to allow the Center to move towards the attainment of these goals.

The Water Policy Committee will periodically review the restructuring of the Center. Increased legislative funding for water research and the Water Resources Center will be reconsidered by the Committee before the 1993 legislative session.

This interim the Committee has focused on reviewing the University System's progress implementing these recommendations.

University System Action Summary

Implementation of the 1990 Committee recommendations began at the home of the Water Resources Center, Montana State University (MSU). Bob Swenson, MSU Vice President for Research and Creative Activity, formed the MSU Water Initiatives Committee in January 1992 to review the role of MSU in water research. The following "preamble", goals, and objectives are taken from the Water Initiatives Committee report dated April 2, 1992.

> *There is growing concern over the long-term integrity of Montana's water resources. The purpose of the MSU Water Initiative is to respond as a university to the challenge of protecting the integrity of the state's water resources by developing a cohesive and coordinated water resource education and research program at MSU. The MSU Water Initiative's aim is to accomplish this by:*
>
> *(1) developing an excellent educational opportunity for today's and tomorrow's water scientists, engineers, managers, and technicians;*
>
> *(2) promoting pure and applied research to better understand the dynamics of water systems, their use and management in order to sustain the quantity and quality of Montana's aquatic ecosystems; and*
>
> *(3) encouraging and supporting communication which contributes to Montanan's knowledge and awareness of wise water stewardship.*
>
> *To fulfill the intent of the Preamble, the Water Initiatives Committee developed the following specific education, research, and communication goals and objectives.*
>
> A. *Education: Develop a strong, well-known, coordinated, on and off campus education program for students, faculty, agencies, and the public. . . .*
>
> B. *Research: Develop a strong disciplinary and multi-disciplinary, basic and applied research program relevant to important problems in the state and nation. . . .*
>
> C. *Communication: Enhance a strong communication and coordination network for water education and research programs between the campus, the public, and state and federal agencies to stimulate the educational and research goals. . . .*

The MSU Water Initiatives Report was the basis for a system-wide plan developed jointly by the vice-presidents responsible for research at MSU, the University of Montana, and Montana College of Mineral Science and Technology. This report, A Plan for the Restructuring of the Montana University System Water Resources Center, was prepared in response to the Committee's 1990 recommendations and presented to the Committee in November, 1992. A copy of the Plan is included as Appendix 9.

Committee Action Summary

The Committee debated water research issues throughout the interim. Debate and discussion focused mainly on the goals of water research in Montana, the most efficient means of reaching those goals, and funding. The Committee was very interested in the University system efforts, especially at MSU, to improve water related research, education and communication.

Final Committee Recommendations

The Committee appreciates the efforts of the University System in developing its plan to implement the 1990 Committee recommendations. However, due to the unclear state fiscal situation, the Committee could not endorse the plan and its proposed funding request.[2] Additionally, the Committee expressed a concern regarding the apparent program duplication in the restructuring plan. The Committee noted the .5 FTE Water Policy position at each of the three campuses as an example of this possible duplication.

The Committee expressed a strong desire to work with the University System to achieve as many of the goals as possible under the current fiscal constraints. The Committee also strongly encourages the University System to increase its internal support of water research and the Water Resource Center through a reprioritization of existing funds.

[2] The Committee was informed at its December, 1992 meeting that the University System had withdrawn all of its budget modification requests except for those regarding the University library.

Section 9. – Water Data Management

Introduction

Section 85-2-105(3)(d), MCA requires the Water Policy committee to:

> . . . analyze, verify, and comment on the adequacy of and information contained in the water resources data management system maintained by the department [of natural resources and conservation] . . . .

The DNRC responsibility to "establish and maintain a centralized and efficient water resources data management system"[3] was delegated to the Montana Water Information System (MWIS) in 1986. MWIS, created in 1986 as part of the Natural Resources Information System (NRIS), provides a central contact point for locating and obtaining all types of water data. The MWIS is fully integrated with the NRIS program.

The Committee received updates from NRIS staff on the water data management system and specific programs throughout the interim.

The Montana Water Information System

Data requests to the MWIS have increased substantially with each successive year of operation. The number of requests increased by 50 percent in FY 91. Overall, the MWIS processes an average of 260 formal requests each year and about 150 to 200 informal inquires. Data clearinghouse activities constitute a major portion of the day-to-day MWIS work load and are a priority for the program.

The profile of MWIS users has remained very consistent during the six years of operation. About 52% of requests come from state agencies, followed by private (24%) and federal (9%) users. Use by specific state agencies has also remained consistent with the largest number of requests (54%) coming from the DNRC. The DNRC is followed by the DHES (21%), DFWP (9%), and DSL (8%). In short, MWIS primarily serves state agencies and private users.

Access to all major federal, state, and local water resource data bases is available through MWIS. Access to data systems at the U.S. EPA and the Montana Bureau of Mines and Geology (MBMG) has been significantly improved during the interim. Substantial effort is focused on making these important information sources as accessible as possible. In addition, MWIS staff established alternative access avenues to most major water data sources so that reliable access is always available. NRIS also completed the Montana Data Directory which is an index of data bases. This tool can be used to identify alternative sources for various types of water data. The Data Directory has been distributed to users around the state and will be updated periodically.

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[3] Section 85-2-112, MCA.

MWIS data gap identification benefits greatly from use of the NRIS Geographic Information System (GIS). Initially, data gaps were tracked using conventional data base techniques. Currently, the MWIS uses GIS technology to view the distribution of data layers directly on the computer screen and to produce maps. This GIS version of the "Data Gap Log" is updated annually and is an invaluable tool for assessing the availability of data in Montana.

The MWIS is increasingly involved in statewide data management efforts such as drought monitoring, ground water assessment, stream reach mapping, and the production of a ground water atlas. The State Water Plan also calls for MWIS support in the integrated water quality and quantity management component. Specifically, MWIS coordinates the Drought Monitoring Project which reports and maps surface water supply and soil moisture conditions for the entire state. The NRIS GIS is used to produce the drought maps that are included in the DNRC Surface Water Supply Report. MWIS staff also participate in, and chair, the newly formed Ground Water Assessment Steering Committee (GWASC) established by the Ground water Assessment Act. The GWASC directs the new ground water monitoring and aquifer assessment programs.

NRIS continues to work with the DFWP to support the Montana Rivers Information System, a data base that identifies and rates river related natural resources. As part of this project, NRIS is engaged in an effort to create a GIS layer for stream segments or reaches. Once completed, this layer will be useful to many state and federal agencies responsible for managing stream related resources.

Finally, MWIS was awarded a grant from the U.S. EPA to develop and publish a ground water atlas for Montana. The atlas consists of a series of maps displaying various ground water features, general descriptions and highlights of each map, tabular information and summary statistics, and schematic block diagrams showing the general types of ground water regions present in Montana. The atlas will be a valuable tool for any organization involved with the management and protection of Montana's ground water resources.

The NRIS core program activities, which include the Water Information component, are funded by a variety of sources including an appropriation from the RIT program, DFWP license fees, and federal funds from the DSL through the Office of Surface Mining Reclamation and Enforcement.

The Ground Water Assessment Program

The Montana Ground Water Assessment Act, section 2-85-901 et seq., MCA, systematically funds efforts to evaluate Montana's ground water resource. Major legislative purposes are to:

* coordinate Montana's ground water data collection and information distribution efforts;

* develop an extensive and better planned state wide ambient water level and water quality monitoring network; and

* create an ambitious 21 year program to systematically evaluate Montana's ground water resource.

The Assessment Act is administered by the Montana Bureau of Mines and Geology (MBMG) and a statewide steering committee. Membership on the steering committee is shared by state and federal water agencies, the university system, local governments, and water user groups. MBMG will develop the program under the policy guidance of the committee.

During the 1993 biennium, the Assessment Act was funded through several sources:

* increased licensing and renewal fees for water well drillers, water well contractors, and monitoring well constructors;

* increased fees for wells producing less than 35 gallons per minute (gpm) or less than 10 acre/feet per year;

* charging an additional $1.00 per acre/foot fee for wells producing greater than 35 gpm or greater than 10 acre/feet per year; and

* obligating a part of the hook-up fee for public water supply systems.

In the 1995 and subsequent bienniums, the Assessment Act will be funded through diversion of $666,000 per year from the Resource Indemnity Trust (RIT) Tax proceeds. This diversion will delay the capping of the RIT Account for approximately one year and reduce increases in interest used for funding other programs. Committee members stated that the appropriateness of the proposed 1995 biennium funding source will be closely evaluated during the 53rd legislative session.

Final Committee Recommendations

The Committee understands the importance of the Montana Water Information System and supports continued stable funding for the program. Additionally, the Committee also supports continued funding for the Ground Water Assessment Act Program.

Part III

Other Interim Issues

Section 10. -- State Drought Response

Introduction

Drought is a persistent problem in Montana. In response to prolonged drought over much of the state, the 1991 Legislature created the Drought Advisory Committee (DAC). Section 2-15-3308 MCA, states:

> *. . . The drought advisory committee is chaired by a representative of the governor and consists of representatives of the departments of natural resources and conservation; agriculture; commerce; fish, wildlife, and parks; military affairs; health and environmental sciences; state lands; and livestock. The governor's representative must be appointed by the governor, and the representative of each department must be appointed by the head of that department. Additional, nonvoting members who represent drought-affected federal and local government agencies and public and private interests may also be appointed by the governor.*
>
> *(3) The drought advisory committee shall:*
>
> *(a) with the approval of the governor, develop and implement a state drought plan;*
>
> *(b) review and report drought monitoring information to the public;*
>
> *(c) coordinate timely drought impact assessments;*
>
> *(d) identify areas of the state with a high probability of drought and target reporting and assistance efforts to those areas;*
>
> *(e) upon request, assist in organizing local drought advisory committees for the areas identified under subsection (3)(d);*
>
> *(f) request state agency staff to provide technical assistance to local drought advisory committees; and*
>
> *(g) promote ideas and activities for groups and individuals to consider that may reduce drought vulnerability.*
>
> *(4) The department of natural resources and conservation shall provide staff assistance to the drought advisory committee.*
>
> *(5) The drought advisory committee shall meet, at a minimum, on or around the 15th day of the months of October and February of each year to assess moisture conditions and, as appropriate, begin preparations for drought mitigation.*
>
> *(6) By March 15th of each year, the drought advisory committee shall submit a report to the governor describing the potential for drought in the coming year. If the potential for drought merits additional activity by the drought advisory committee, the report must also describe:*
>
> *(a) activities to be taken by the drought advisory committee for informing the public about the potential for drought;*
>
> *(b) a schedule for completing activities;*

(c) geographic areas for which the creation of local drought advisory committees will be suggested to local governments and citizens; and

(d) requests for the use of any available state resources that may be necessary to prevent or minimize drought impacts.

Understanding its statutory responsibility to "oversee the policies and activities of . . . state agencies and . . . institutions as they affect the water resource"[4], the Water Policy Committee closely followed the DAC's efforts over the interim.

Committee Action Summary

The Committee heard numerous DAC presentations on drought conditions and DAC activities throughout the interim. After the Governor declared a drought emergency the Committee wrote the County Commissioners of each county that had not created a Local Drought Advisory Committee and strongly supported the Governor's request that local committees be established. The Committee also issued a press release expressing its concern over the worsening drought and encouraging water conservation and increased cooperation between water users.

The Committee was very encouraged to see the high level of cooperation between water users in some areas. The Committee wrote the Broadwater-Missouri Water Users Association and the Ruby River Water Users Association commending them for their important efforts to mitigate drought impacts.

The Committee expressed some concern regarding state agency drought response. The Committee wrote the Department of Health and Environmental Sciences and the Department of Fish, Wildlife, and Parks requesting information on agency responsibilities, drought impacts, impact mitigation and problem areas. The Committee letters and agency responses are included in Appendix 10.

Near the end of the interim, the Committee Chairperson wrote DAC Chairperson, Lieutenant Governor Rehberg, commending the DAC for its efforts and requesting specific information regarding DAC goals, successes and problems.

> *I am writing on behalf of the Water Policy Committee to congratulate you on the successes of the State Drought Advisory Committee. You, your fellow Drought Advisory Committee (DAC) members, and your staff, have achieved significant progress in elevating Montana's drought response to a more appropriate level.*

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[4] Section 85-2-105(2)(b) MCA.

Our Committee has followed your efforts with great interest throughout the interim and is very eager in ensuring your continued success. It is with that in mind that we ask you to prepare a final report to the Water Policy Committee on the DAC's activities over the 1991-92 interim. Information regarding DAC goals, what you consider to be your successes, and identification of any problems you encountered, would be most helpful. Additionally, our Committee would be happy to review and consider supporting or sponsoring any suggestions regarding specific legislative changes for the 1993 session if you feel that would be appropriate.

While the Water Policy Committee understands the crucial importance of drought impact monitoring and reporting, we also believe that impact mitigation was a primary focus in the legislation creating the DAC. Therefore, the Committee would appreciate information regarding drought impact mitigation activities undertaken by state or local agencies and specific recommendations for improving that process.

The Drought Advisory Committee 1992 Staff Report was submitted in response to this request in November, 1992. For a copy of the DAC report, please contact Committee or DNRC staff.

Final Committee Recommendations

The Committee commends the Drought Advisory Committee for its efforts to improve Montana's drought response capabilities. The Committee understands the importance of drought impact monitoring and is therefore concerned with the loss of federally supported stream gauging stations. Additionally, the Committee understands the importance of drought impact mitigation and requests the DAC to:

* ***ensure that the relevant state agencies understand and fully comply with their responsibilities during periods of extreme drought;***

* ***increase DAC support to the crucial Local Drought Advisory Committees from the administration and its agencies;***

* ***develop and institute objective drought response triggers to increase the efficiency and effectiveness of drought response in Montana; and***

* ***develop a clear and functional statement of the DAC's mission and goals.***

The Committee further recommends that the next interim Water Policy Committee review the DAC State Drought Plan expected to be completed in early 1993 as well as DAC progress implementing these recommendations.

Section 11. -- Wilderness Dam Maintenance and Repair

Introduction

Early in the interim the Committee became aware of a growing controversy regarding the maintenance and repair of non-federally owned dams in federally designated wilderness areas.

Responding to the controversy, in June, 1991 the U.S. Forest Service (USFS) established a Wilderness Dams Policy Task Force (Task Force) to analyze the issues. The following excerpt from a Task Force letter to interested citizens dated November 22, 1992, reviews the problems and identifies the specific issues involved.

> *The Wilderness Dams Policy task force was established by the Regional Forester of the Northern Region to address the question of management of dams located within Congressionally-designated wildernesses managed by the Forest Service.*
>
> *Within the Northern Region . . . (Montana, northern Idaho, and North Dakota) there are 27 dams/reservoirs located partially or entirely within . . . wildernesses. The majority of these dams (17) are located on the Bitterroot National Forest, within the Selway-Bitterroot Wilderness. . . .*
>
> *Maintenance*
>
> *All of the dams require yearly maintenance. Primarily this consists of the removal of driftwood that floats up to the face of the dam. This debris poses a threat to the dams because of the possibility of it blocking the spillway, resulting in the potential for overtopping of the dam and failure of the structure. In the fall, when water levels are low, the driftwood is removed by cutting, piling, and burning the debris. Some of the dam owners have proposed the use of chainsaws and chainsaw winches to cut and pile the annual collection of debris.*[5] *It is, however, possible to accomplish the necessary work with crosscut saws and horse teams, but it takes longer and is more expensive. At times in the past, use of chainsaws and chainsaw winches has been allowed by some Forest Service officials, but denied by others. The questions with respect to this issue are:*

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[5] Section 4(c) of the Wilderness Act specifically prohibits motorized equipment in wilderness areas "except as necessary to meet minimum requirements for administration of the area for the purposes of this Act (including measures required in emergencies involving the health and safety of persons within the area) . . . ."

Is the use of small power equipment -- such as chainsaws and chainsaw winches -- appropriate for debris removal at the dams? If so, when and under what circumstances?

On what factors should the approval/disapproval of the use of this equipment for debris removal be based?

Should the cost of non-mechanical means of debris removal, compared to use of mechanized equipment, be a relevant consideration? If so, how?

Mechanized equipment is more efficient than non-mechanized equipment. It takes fewer people less time to accomplish the needed maintenance when using chainsaws and winches than when using non-mechanized equipment. Is it preferable to have fewer people at the dam for a shorter period of time using chainsaws and winches; or is it preferable to have more people at the dam for a longer period of time using crosscut saws and draft horses? At what point does the greater efficiency of the mechanized equipment compensate for the greater noise impacts? Should this factor be considered and under what parameters?

Reconstruction

Some existing dams do not meet current safety standards and will either have to be reconstructed to current safety standards or be breached. Over time, more dams will be faced with the same situation of needing reconstruction to meet safety standards. The Wilderness Act contains no language specific to the management of dams and no specific language relating to the Selway-Bitterroot area. Reconstruction of existing dams thus raises several issues:

Should heavy equipment (bulldozers, etc.) to be used in reconstructing existing dams be permitted to be driven through the wilderness? What if this is the only feasible means of performing the reconstruction?

If reconstruction would result in serious and long-term damage to wilderness resources, should the Forest Service a) terminate the permit, b) seek adjustment to the wilderness boundaries to remove the dams from the wilderness, or c) use other viable options?

What types of impacts on the wilderness are unacceptable?

If the dams are not reconstructed, they will have to be breached, as the Forest Service will not allow them to be used in violation of current safety standards. Breaching of the dams would have serious economic consequences on the downstream water users. How should this factor into decisions regarding reconstruction?

What other safety factors should the Forest Service consider in permitting reconstruction of the dams to meet current safety standards?

The USFS Task Force proposed a revised dam maintenance and repair policy in January, 1992 and requested comments. In brief, the proposed policy stated:

There will be no use of motorized/mechanized equipment for maintenance or reconstruction of dams in designated wilderness except:

1. Emergencies (Immediate threat to life and property)

2. Where impacts to wilderness resources would be greater using non-motorized /non-mechanical methods (includes duration of impacts)

3. When physically infeasible to use non-motorized methods

4. When economics make the use of primitive methods infeasible

Decisions made on reconstruction or maintenance of wilderness dams will be made through the NEPA process with public participation. This approach is consistent with the way decisions are made on other National Forest actions.

Committee Action Summary

The Committee considered this issue throughout the interim and closely followed Task Force progress. After receiving information from USFS personnel, DNRC dam safety officials, and interested citizens, and after reviewing the DNRC response to the proposed policy, the Committee also responded. Copies of the DNRC and Committee response are included in Appendix 11.

The following excerpts summarize the Committee's response.

. . . After considering the comments of all affected interests and much debate, the Committee generally supports the Forest Service's attempt to develop a concise, uniform policy for making decisions regarding the use of motorized equipment on dams in wilderness areas. Forest Service personnel turn-over in the area is high, and a clear written policy, consistently implemented, would be a great help to all who benefit from these dams.

However, the Committee does wish to emphasize certain concerns expressed during the testimony and Committee deliberations on this topic.

The Committee understands that the use of motorized equipment to maintain dams in wilderness areas is necessary to successfully complete certain maintenance projects. . . .

The Committee believes that permits for these normal maintenance projects should be issued in a timely manner. . . .

The Committee suggests that strong consideration should be given to the comments submitted by the Montana Department of Natural Resources and Conservation (DNRC) regarding the use of multi-year maintenance plans. As discussed by the DNRC, these maintenance plans could serve both the Forest Service's desire for a case-by-case review of projects and the dam owners' desire for a longer term permit. . . .

The USFS adopted the proposed policy in June, 1992 with the following "management directions":

1) decisions on the use and transport of motorized/mechanized equipment must be made on a case-by-case basis. . . . [E]ach site, situation, and action is different and must be treated as such . . . .

2) that each Forest managing wilderness dams in the Region will approve maintenance activities for a five year period for each wilderness dam when permits are renewed. These activities will be reviewed annually, along with the dam operations plans, if there is no change in dam condition or activity, then no additional analysis need occur to continue implementation of the approved activities. . . .

The complete policy is included in Appendix 11.

The DNRC stated that it was difficult to determine exactly how the USFS would implement the new policy, but that the DNRC Dam Safety Bureau would work with the USFS and water users to develop and implement the multi-year maintenance plans.

Final Committee Recommendation

The Committee is pleased that the USFS appears to be moving towards a reasonable solution to this issue. The Committee recommends that the next interim Committee continue to review the implementation of the new wilderness dam maintenance and repair policy for its impact on water users and the wilderness resource.

Section 12. -- Federally Reserved Water Rights

Introduction

This section will review Committee activity involving the status of certain federally reserved water rights. Included in this section is information relating to:

* Milk River water rights issues involving the Blackfeet, Rocky Boy and Fort Belknap Tribes;

* the Northern Cheyenne Compact;

* the Fort Peck Compact; and

* the continuing compact negotiations with the U.S. Park Service.

Milk River Water Rights Issues

A. Blackfeet Tribe

Early in the interim, the Attorney General's (AG's) office notified the Committee that the Blackfeet Tribe had removed itself from negotiation with the state, through the Reserved Water Rights Compact Commission (RWRCC), regarding its reserved water rights. RWRCC staff informed the Committee that it did not appear to be a matter of the tribe preferring litigation to negotiation. Rather, the tribe sees no need for any quantification of their reserved water right -- they are located at the headwaters of the river, they have been there since aboriginal times and they see no need to talk to the state about who owns the water. The AG's office wanted to keep the Committee informed because the issue, if it went to court, would be very costly and additional funds would be needed from the 1993 legislature. The AG continued to prepare for potential litigation even after the Blackfeet unofficially reopened negotiations in May, 1992 to ensure that the state did not jeopardize its case, should litigation become necessary.

The issue remains technically in litigation before the Water Court but the AG's office sees the fact that the parties are "at the table" as significant progress. The AG's office stated that substantive progress had been hampered by tribal and state elections but a concrete proposal from the Blackfeet Tribe is expected shortly.

Negotiations continued with the Fort Belknap and Rocky Boy Tribes after the Blackfeet terminated discussions with the state. Both the Fort Belknap and Rocky Boy Tribes, located downstream of the Blackfeet, encouraged the Blackfeet to return to negotiations.

B. Rocky Boy Tribe

A recent proposal from the Rocky Boy Tribe requests 20,000 ac/ft from three drainages and the creation of additional storage. The negotiations are complicated by the tribe linking its water right claims to a proposed transfer of certain state lands to the tribe. The RWRCC has entered into a Memorandum of Understanding with the Department of State Lands to ensure negotiation participation of all interested parties.

C. Fort Belknap Tribe

Negotiations with the Fort Belknap Tribe are also proceeding. The most recent tribal proposal requested 200,000 ac/ft in the Milk River drainage and included many other federal or non-water issues as well. The RWRCC has asked the tribe to resubmit a proposal more in line with existing water availability and its negotiation authority.

Northern Cheyenne Compact

A reserved water rights compact between the Northern Cheyenne Tribe and Montana was signed in May, 1991. The federal legislation approving the compact was introduced in July and hearings were held in November, 1991. Issues raised at the federal level included Crow Tribal water rights, certain boundary disputes and the potential settlement costs to the federal government. The federal legislation was passed by the Senate in July, 1992 and signed by President Bush on September 30, 1992. This was the first compact in the Missouri Basin to be signed into law.

The federal legislation allowed the Northern Cheyenne 60 days to request a tribal referendum on the compact. Petitions requesting the referendum were submitted on November 29, 1992. The referendum, scheduled for January 14, 1993, must receive a majority of the votes, and at least 30% of eligible tribal voters must participate, or the referendum fails and the compact will be ratified. If the referendum passes, the compact is not ratified and the state and the Tribe must either renegotiate or litigate the water rights issues. The RWRCC continues to review the compact to ensure that there were no changes which would require state legislative review. Work on the Tongue River dam rehabilitation project, a major component of the compact, also continues.

A secondary issue of Water Court responsibilities in the compact ratification and notification process was also raised during the interim. Chief Water Court Judge Bruce Loble expressed concern with potential conflicts between legislative priorities and the Water Court budget. The Water Court has clear statutory priorities, for example, Milk River adjudication, but the Court also has a responsibility to ensure that compact ratification proceeds in a timely manner. The Judge estimated that the notification process for the Northern Cheyenne Compact would cost approximately $9,000. Judge Loble asked for clear guidance from the legislature if the Water Court budget did not allow the court to proceed with its legislative priorities and the compact ratification process.

Fort Peck Compact

The federal legislation approving the compact between the state and the Fort Peck Tribe did not receive U.S. Senate approval this year. Federal approval is required for the water marketing provisions of the compact, negotiated in 1985. The compact legislation has become embroiled in overarching Missouri River management issues. One such issue involves the U.S. Army Corps of Engineers management of the Fort Peck Reservoir. Downstream states are concerned that a reprioritization away from navigation towards recreation will lead to adverse impacts. Downstream states are also concerned with the precedential effects of tribal reserved water rights.

The RWRCC has notified downstream states that the compact, except for the water marketing provisions, is in effect. Additionally, the AG's office has approached other states in an attempt to resolve the larger issues.

U.S. Park Service Compact Negotiations

The other major activity of the RWRCC involved compact negotiations with the U.S. Park Service. Reserved water rights negotiations were initiated for five U.S. Park Service units: Glacier National Park; Yellowstone National Park; Big Hole Battlefield National Monument; Little Big Horn Battlefield National Monument; and the Big Horn Canyon National recreational Area.

The RWRCC told the Committee that progress has been made with these negotiations, especially those involving Yellowstone National Park. The Yellowstone negotiations are complicated by several streams that cross the park but that do not originate on Park Service land, and the geothermal resource issue. The RWRCC hopes to present a settlement on all five units under one bill if possible.

Final Committee Recommendations

The Committee supports the resolution of water rights issues through negotiation rather than litigation and further supports the continued efforts of the RWRCC towards that end. Additionally, the Committee recommends that the Water Court be funded at an adequate level to carry out all of its responsibilities, but, if a budgetary conflict arises, the Court should ensure that the compact ratification process proceeds in a timely manner.

Appendix 1

_____ BILL NO. _____

INTRODUCED BY _____

BY REQUEST OF THE WATER POLICY COMMITTEE

A BILL FOR AN ACT ENTITLED: "AN ACT ESTABLISHING A GROSS NEGLIGENCE LIABILITY STANDARD FOR CERTAIN DAM OWNERS; EXTENDING THE LIABILITY STANDARDS TO CERTAIN DAMS IN ADDITION TO PERMITTED DAMS; EXTENDING THE LIABILITY STANDARDS TO NONFEDERAL DAMS ON FEDERAL PROPERTY; ESTABLISHING A PENALTY; AMENDING SECTIONS 85-15-107 AND 85-15-305, MCA; AND REPEALING SECTION 85-15-501, MCA."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF MONTANA:

Section 1. Section 85-15-107, MCA, is amended to read:

"85-15-107. Exemptions. (1) The provisions of ~~85-15-105, 85-15-106,~~ 85-15-108 through 85-15-110, 85-15-209 through 85-15-216, 85-15-305, 85-15-401, ~~85-15-501, and~~ 85-15-502, and [section 4] do not apply to:

(a) dams subject to a permit issued pursuant to 82-4-335 for the period during which the dam is subject to the permit.;

(b) ~~The provisions of 85-15-108 through 85-15-110, 85-15-209 through 85-15-216, 85-15-305, 85-15-401, 85-15-501, and 85-15-502 do not apply to~~ federal dams and reservoirs, ~~to nonfederal dams and reservoirs located on~~

federal lands if they are subject to a dam safety review--by a federal agency, or to;

(c) dams and reservoirs licensed and subject to inspection by the federal energy regulatory commission. The provisions of 85-15-105, 85-15-106, 85-15-108 through 85-15-110, 85-15-209 through 85-15-216, 85-15-305, 85-15-401, 85-15-501, and 85-15-502 do not apply to; or

(d) dams that are required to obtain a certificate of environmental compatibility and public need pursuant to 75-20-201 for the period during which the dam is subject to the certificate. In addition, the provisions of 85-15-108 through 85-15-110, 85-15-209 through 85-15-216, 85-15-305, 85-15-401, 85-15-501, and 85-15-502 do not apply until July 1, 1990, to high-hazard dams that have been inspected by the U.S. army corps of engineers pursuant to P.L. 92-367 and for which resultant dam safety reports have been submitted to the owner.

(2) The provisions of 85-15-108 through 85-15-110, 85-15-209 through 85-15-216, 85-15-401, 85-15-502, and [section 4] do not apply to nonfederal dams and reservoirs located on federal lands if they are subject to a dam safety review by a federal agency."

NEW SECTION. **Section 2.** Purpose. (1) The legislature finds that dams provide a variety of benefits to the state of Montana. These benefits include the regulation of

streamflows for flood control; water storage for irrigation, for municipal, industrial, and stock water consumption, and for hydropower generation; improved opportunities for flatwater recreation; and improved fisheries. Additionally, dams play a crucial role in maintaining the vitality of Montana's economy. The state therefore has a legitimate and compelling interest in encouraging the construction of dams that conform to the water storage policy provided in 85-1-703.

(2) The legislature further finds that one impediment to the construction of new dams is the potential liability associated with dam construction and operation. The legislature understands the inherent risks to public safety associated with dam construction and operation but finds that compliance with the Montana Dam Safety Act reduces those risks to an acceptable level.

(3) The legislature further understands and finds that a reasonable and prudent landowner should understand the inherent risks associated with placing a structure below an existing dam. The legislature finds that a landowner who places a structure downstream from an existing dam assumes some of the potential risk to person or property of dam failure. The legislature finds that instituting a gross negligence liability standard for existing permitted and other existing properly constructed dams, as provided for in

85-15-305, serves the compelling state interest of encouraging dam construction in the least intrusive manner possible and that the development of the gross negligence liability standard is closely related to that compelling state interest.

Section 3. Section 85-15-305, MCA, is amended to read:

"85-15-305. Liability of owners for damage. (1) Except as provided in ~~subsection~~ subsections (2) and (3), nothing in this chapter relieves an owner of a dam or reservoir of any legal duty, obligation, or liability incident to its ownership or operation, including any damages resulting from leakage or overflow of water or floods caused by the failure or rupture of the dam or reservoir.

(2) The owner of a dam or reservoir that has been permitted by the department in accordance with this chapter or that was designed, constructed, and regularly maintained under the supervision of an engineer is ~~not~~:

(a) in the absence of negligence, not liable for damages to persons or property resulting from flows of water from failure of the dam or reservoir; ~~which--are---of sufficient--magnitude--to--exceed-the-limits-of-the-100-year floodplain-as-defined-in-76-5-103.~~ or

(b) in the absence of gross negligence:

(i) not liable for property damages resulting from flows of water from failure of the dam or reservoir to

structures placed downstream from an existing dam; or

(ii) not liable for personal injury or death if the person injured or killed was downstream from an existing dam as a result of a structure being placed downstream from the existing dam.

(3) In addition, the owner of any dam or reservoir that has been permitted by the department in accordance with this chapter or that was designed, constructed, and regularly maintained under the supervision of an engineer may, without incurring liability, allow passage through the reservoir of inflows without diminution."

NEW SECTION. **Section 4.** **Civil penalty.** An owner of a dam with an impounding capacity of 50 acre-feet or greater measured at the maximum normal operating pool who fails to comply with a provision of this chapter or a rule or order of the department adopted or made pursuant to this chapter is subject to a civil penalty not to exceed $1,000. Each day of violation is a separate offense.

NEW SECTION. **Section 5.** **Repealer.** Section 85-15-501, MCA, is repealed.

NEW SECTION. **Section 6.** **Codification instruction.** [Section 4] is intended to be codified as an integral part of Title 85, chapter 15, part 5, and the provisions of Title 85, chapter 15, part 5, apply to [section 4].

-End-

_____ BILL NO. _____

INTRODUCED BY _____

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; AMENDING SECTIONS 85-15-106, 85-15-107, 85-15-209, 85-15-211, 85-15-212, 85-15-213, AND 85-15-216, MCA; AND REPEALING SECTIONS 85-15-306, 85-15-307, 85-15-308, 85-15-309, 85-15-310, 85-15-311, 85-15-402, 85-15-403, 85-15-404, AND 85-15-501, MCA."

STATEMENT OF INTENT

A statement of intent is required to provide guidance to the department of natural resources and conservation in adopting rules to implement this bill. It is the intent of the legislature to provide a uniform process for complaints regarding unsafe dams and to reduce the potential for nuisance actions against dam owners. It is further the intent of the legislature to authorize the department to investigate all complaints regarding unsafe dams.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF MONTANA:

Section 1. Section 85-15-106, MCA, is amended to read:

"**85-15-106. Definitions.** Unless the context requires

otherwise, in this chapter the following definitions apply:

(1) "Alterations" or "repairs" means alterations or repairs that may directly affect the safety of a dam or reservoir.

(2) "Appurtenant works" means all works incident or attached to a dam or reservoir, including but not limited to:

(a) a spillway, either in the dam or separate from it;

(b) the reservoir and its rim;

(c) a low-level outlet; and

(d) a water conduit such as a tunnel, pipeline, or penstock, either through the dam or its abutments.

(3) "Construction" or "construct" includes construction, alteration, repair, enlargement, or removal of a dam or reservoir.

(4) "Dam" means ~~any~~ an artificial barrier, including appurtenant works, used to impound or divert water ~~with an impounding capacity of 50 acre-feet or greater--measured--at maximum normal operating pool~~.

(5) "Department" means the department of natural resources and conservation provided for in Title 2, chapter 15, part 33.

(6) "Emergency" means ~~any~~ a threat to life caused by the condition of a dam or reservoir or by present or imminent floods that threaten the structural integrity of

any dam or reservoir.

(7) "Engineer" means a registered professional engineer licensed to practice in the state of Montana under Title 37, chapter 67, part 3.

(8) "Enlargement" means ~~any~~ a change in or addition to an existing dam or reservoir that raises or may raise the water storage elevation or increases the impoundment capacity of the reservoir.

(9) "High-hazard dam" means ~~any~~ a dam or reservoir with an impounding capacity of 50 acre-feet or more at the maximum normal operating pool, the failure of which would be likely to cause loss of life.

(10) "Inspection" means a visual or mechanical check, a measurement, a boring, or any other method necessary for determination of the adequacy of construction techniques, conformity of work with approved plans and specifications, or the safety and operating performance of a dam or reservoir.

(11) "Owner" means ~~any~~ a person who owns, controls, operates, maintains, manages, or proposes to construct a dam or reservoir.

(12) "Person" means an individual, association, partnership, corporation, business trust, state agency, political subdivision, utility, municipal or quasi-municipal corporation, or ~~any~~ other entity or ~~any~~ authorized agent,

lessee, or trustee of any of the foregoing.

(13) "Removal" means removing, taking down, or changing the location of ~~any~~ a dam or reservoir.

(14) "Reservoir" means ~~any~~ a valley, basin, coulee, ravine, or other land area that contains ~~50-acre-feet-or more-of~~ impounded water ~~measured-at-maximum-normal-operating pool~~."

Section 2. Section 85-15-107, MCA, is amended to read:

"**85-15-107. Exemptions.** (1) The provisions of ~~85-15-105,-85-15-106,~~ 85-15-108 through 85-15-110, 85-15-209 through 85-15-216, 85-15-305, 85-15-401, ~~85-15-501,--and~~ 85-15-502, and [section 8] do not apply to:

(a) dams subject to a permit issued pursuant to 82-4-335 for the period during which the dam is subject to the permit~~.~~;

(b) ~~The--provisions--of--85-15-108--through--85-15-110, 85-15-209----through----85-15-216,---85-15-305,---85-15-401, 85-15-501,-and-85-15-502-do-not-apply-to~~ federal dams and reservoirs~~,--to--nonfederal--dams--and-reservoirs-located-on federal-lands-if-they-are-subject-to-a-dam-safety-review--by a-federal-agency,-or-to~~;

(c) dams and reservoirs licensed and subject to inspection by the federal energy regulatory commission~~.--The provisions---of---85-15-105,--85-15-106,--85-15-108--through 85-15-110,---85-15-209---through----85-15-216,----85-15-305,~~

~~85-15-401, 85-15-501, and 85-15-502 do not apply to~~; or

(d) dams that are required to obtain a certificate of environmental compatibility and public need pursuant to 75-20-201 for the period during which the dam is subject to the certificate. ~~In addition, the provisions of 85-15-108 through 85-15-110, 85-15-209 through 85-15-216, 85-15-305, 85-15-401, 85-15-501, and 85-15-502 do not apply until July 1, 1990, to high-hazard dams that have been inspected by the U.S. army corps of engineers pursuant to P.L. 92-367 and for which resultant dam safety reports have been submitted to the owner.~~

(2) The provisions of 85-15-108 through 85-15-110, 85-15-209 through 85-15-216, 85-15-401, 85-15-502, and [section 8] do not apply to nonfederal dams and reservoirs located on federal lands if they are subject to a dam safety review by a federal agency."

Section 3. Section 85-15-209, MCA, is amended to read:

"**85-15-209. High-hazard dam -- determination.** Any A person proposing to construct any a dam or reservoir with an impounding capacity of 50 acre-feet or more measured at the maximum normal operating pool shall make application to the department for a determination of whether the dam or reservoir is a high-hazard dam. The application must include the information required by the department. The department shall make the determination required by this section within

60 calendar days after a complete application is received by the department."

Section 4. Section 85-15-211, MCA, is amended to read:

"**85-15-211. Inspection and reports during construction.** (1) An engineer must be in charge of and responsible for inspections during construction of any high-hazard dam.

(2) Inspections during construction must be performed at intervals necessary to ensure conformity with the permit. The engineer in charge or a qualified designee shall perform the inspections.

(3) The department shall set procedures and requirements for reporting information obtained from, during, or as the result of an inspection. The engineer in charge shall certify all reports to the department.

(4) The department may also inspect the high-hazard dam during construction to ensure conformity with the construction permit.

(5) If the department finds that construction of the high-hazard dam does not conform with the construction permit, it may order that construction be stopped until changes are made in conformity with the permit."

Section 5. Section 85-15-212, MCA, is amended to read:

"**85-15-212. Operating permit.** (1) An operation plan must be prepared by the owner and approved by the department prior to operation of the high-hazard dam or reservoir. The

operation of the high-hazard dam as it considers necessary.

(3) The owner is responsible for inspections required under this section."

Section 7. Section 85-15-216, MCA, is amended to read:

"85-15-216. High-hazard dam ~~Permit~~ permit cancellation. Failure to comply with the provisions of 85-15-209 through 85-15-212 or 85-15-214 subjects the permit to cancellation at any time during the progress of construction or the operation of the high-hazard dam. The department is authorized to cancel any permit if the provisions of 85-15-209 through 85-15-212 or 85-15-214 have not been or are not being complied with, and the cancellation operates as a forfeiture of all rights acquired under and by virtue of any permit approved by the department."

NEW SECTION. **Section 8.** Civil penalty. The owner of a dam with an impounding capacity of greater than 50 acre-feet or more measured at the maximum normal operating pool who fails to comply with a provision of this chapter or a rule or order of the department adopted pursuant to this chapter is subject to a civil penalty not to exceed $1,000. Each day of violation is a separate offense.

NEW SECTION. **Section 9.** Repealer. Sections 85-15-306, 85-15-307, 85-15-308, 85-15-309, 85-15-310, 85-15-311, 85-15-402, 85-15-403, 85-15-404, and 85-15-501, MCA, are repealed.

operation plan must set forth at a minimum:

(a) a reservoir operation procedure;

(b) a maintenance procedure for the high-hazard dam and appurtenant works; and

(c) emergency procedures and warning plans.

(2) When construction is complete and if the high-hazard dam or reservoir conforms to the construction permit and when an operation plan has been approved, the department shall issue a permit to operate the high-hazard dam or reservoir, containing such conditions on the safe operation of the high-hazard dam as it considers necessary."

Section 6. Section 85-15-213, MCA, is amended to read:

"**85-15-213. Periodic inspections after construction.** (1) ~~Any~~ A high-hazard dam, whether or not previously permitted by the department, must be inspected as often as considered necessary by the department, but at least once every 5 years, in order to ensure the continued safe operation of the high-hazard dam.

(2) Periodic inspections required by this section must be performed by a qualified engineer, who shall make a report of the inspection to the department. If the department finds that the high-hazard dam conforms to current safety standards, it shall issue or reissue, as the case may be, a permit to continue operation of the high-hazard dam, containing such conditions on the safe

NEW SECTION. **Section 10.** Codification instruction. [Section 8] is intended to be codified as an integral part of Title 85, chapter 15, part 5, and the provisions of Title 85, chapter 15, part 5, apply to [section 8].

NEW SECTION. **Section 11.** Coordination instruction. If _____ Bill ____ [LC 0949] is passed and approved and if it includes a section amending 85-15-107 and instituting a civil penalty for a violation of the dam safety act, then [sections 8 and 10 of this act] are void.

-End-

WATER POLICY COMMITTEE
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July 30, 1992

TO: Committee Members

FROM: Michael S. Kakuk

RE: Dam Safety Study - Public Response Summary

This is a summary of the written responses from the May 28, 1992 mailing to interested persons regarding the Committee's "draft" final study recommendations. One final mailing containing the Committee's final study recommendations will be sent after the September 11, 1992 Committee meeting. Numbers in parentheses indicate the number of written comments along those general lines.

Issue 1. Liability - *Recommendation - The Committee will investigate the potential for shifting liability away from dam owners and on to landowners who place structures in the hydraulic shadow of an existing dam.*

Agree: 5

Disagree: 0

Written Comments:

* Dam owners should retain a majority of the liability. (2) Chinook

* Dam owners should not be liable for those who move below a constructed dam. (7) White Sulfur Springs, Superior, Choteau, Chinook, Madison Co.

* The person in control of the dam must be held liable. (2) Butte

* Dam owners should maintain their dams in a reasonable manner and accept the liability if they don't. They probably should not be held liable for unusual flood events or earthquakes. Laurel

* Dam owners must share the liability. (5) Missoula, Helena, Miles City, Gallatin Co.

* Transferring liability would be appropriate if:
  - the full extent of the hydraulic shadow is contained in a public document; and
  - there is a legal requirement that any construction within that shadow be preceded by a permit containing a full disclosure of the shadow boundaries and a full understanding of the release of the dam operators from any liability (short of the normal requirement for responsible and non-negligent operation).

Any other policy would constitute downstream blackmail. (2) Great Falls

<u>Issue 2. High-Hazard Nomenclature</u> - *Recommendation - The Committee believes a term other than high-hazard should be used to designate a dam that, if it failed, could cause the loss of a life. Options include: Class C; Class 1; Permitted; etc.*

Written Comments:

* Follow the federal nomenclature for consistency. (3) Chinook

* Follow S.C.S. nomenclature. White Sulfur Springs

* The term is appropriate and should not be changed. (2) Butte

* Change the term but not the definition.

* Change it to Class A, B, C, etc. (2) Dawson Co., Helena

* Change the term to Class 1 and Class 2, etc. (6)
Two Dot, Helena, Cut Bank, Laurel

* If I were considering building a house, I'd want someone to tell me I was building in the flood area below a high-hazard dam, not that I was building in the "hydraulic shadow of a Class A dam"! Shadows don't drown people. Missoula

* Change to Exposure Categories, e.g.,
  0 - No potential damage
  1 - Erosion or non-structural potential
  2 - Structural damage potential
  3 - Threat to life and property
  4 - Likelihood of loss of life

(2) Great Falls, Superior

* It should remain "high-hazard" because other agencies are using this method. Gallatin Co.

Issue 3. Dam Regulatory Capacity - *Recommendation - The Committee determined the current standard is appropriate.*

Agree: 12

Disagree: 0

Written Comments:

* The state should not regulate any dam smaller than 100 ac/ft. White Sulfur Springs

* The state should only regulate dams greater than 1000 ac/ft. Helena

* The state's regulation should depend not so much on size of the dam as on potential damage. Great Falls

Issue 4. Loss of One Life Standard - *Recommendation - The Committee determined the current standard is appropriate.*

Agree: 17

Disagree: 0

Written Comments: None Received.

Issue 5. Dam Owner Not Included in Loss of Life Calculation -
Recommendation - The Committee determined the current standard is appropriate.

Agree: 15

Disagree: 0

Written Comments:

* If the dam owner wants to endanger his family, that's his problem. Chinook

Issue 6. Initial Reservoir Condition - *Recommendation - The Committee determined the current standard is appropriate.*

Agree: 16

Disagree: 0

Written Comments: None Received.

Issue 7. Clear Weather Failure Mode - *Recommendation - The Committee determined the current standard is appropriate.*

Agree: 16

Disagree: 0

Written Comments:

* The failure calculation should include both a high (flooding) and low (clear weather) estimate.

* Clear weather failure is not very probable.

Issue 8. Definition of "Structures" - *Recommendation - The Committee determined the current standard is appropriate.*

Agree: 11

Disagree: 0

Written Comments:

* "Structures" should include any road where a dam failure will result in a specific depth and velocity of flow as well as any road where, due to a dam failure, the culvert may wash out.

* Some consideration should be given to how often a particular road is travelled. If an oiled road doesn't receive much traffic then the dam should not be classified as high-hazard. Chinook

* Flooded depth should be the same as FEMA flood insurance studies - 0.5 feet. Hazardous velocities should also be considered, possibly anything over 5 fps.

* Certain "structures" such as houses should be weighted as more likely to cause loss of life than others such as railroads.

* "Structure" should include any occupied structure.

Issue 9. Statutory Risk Assessment - *Recommendation - The Committee determined the current standard is appropriate.*

Agree: 12

Disagree: 0

Written Comments:

* Standards should vary according to potential loss of life. (3) Dawson Co., Miles City, Gallatin Co.

* Standards should vary according to the site specific conditions. Chinook

* A risk assessment should be part of the design standard for all dams. Imposing the most stringent standard on all dams is not reasonable. Laurel

* Adapt the degree of regulation to the degree of potential damage. Great Falls

Issue 10. Risk Scales in DNRC Regulations (a) Spillway Standards *Recommendation - The Committee determined the current standard is appropriate.*

Agree: 17

Disagree: 1

Written Comments:

* Too much emphasis given to PMF. White Sulfur Springs

* Federal standards are appropriate for spillways and new dam construction. Butte

* Spillway standards are too high. Old dams that have functioned well for many years now need spillways several times larger. Helena

Issue 11. Risk Scales in DNRC Regulations (b) Spillway Requirements and Warning Time - *Recommendation - The Committee determined the current standard is appropriate.*

Agree: 19

Disagree: 0

Written Comments:

* Distance from dam to structures is relevant and should be accorded more weight. White Sulfur Springs

* No substitutions should ever be considered for structural design by eliminating warning systems. Butte

* Standard is OK if it relates to stream size and flood potentials. Superior

* Standards must be the same regardless of population or nearest community. Miles City

Issue 12. Risk Scales in DNRC Regulations (c) Instrumentation - *Recommendation - The Committee determined the current standard is appropriate.*

Agree: 12

Disagree: 0

Written Comments:

* Installing instrumentation could cause additional risk by allowing water to rise in drill holes. White Sulfur Springs

* Accessible instrumentation should be provided for those responsible for dam operation. Gallatin Co.

Issue 13. Risk Scales in DNRC Regulations (d) Construction Standards - *Recommendation - The Committee determined the current standard is appropriate.*

Agree: 13

Disagree: 0

Written Comments:

* Monitoring and enforcing standards is a must. Paper products with worthless words do not save lives. Butte

* Other than spillway standards which are too high, the construction standards are OK. Helena

Issue 14. Risk Scales in DNRC Regulations (e) Dam Inspections, Frequency - *Recommendation - The Committee found that the current inspection standards were appropriate but the Committee did not reach agreement on allowing the DNRC to inspect dams. This issue will be addressed at a future meeting and the Committee is particularly interested in receiving comment regarding this issue.*

Written Comments:

* It is very appropriate to allow the DNRC to require more frequent inspections regardless of the condition of the dam. Butte

* Allow the DNRC to inspect dams but only if the program is 100% self-supporting. Chinook

* Dam inspections are for the safety of the public and therefore should be paid for by the public. Requiring dam owners to pay for costly inspections is a sure way of discouraging dam construction. White Sulfur Springs

* This should remain with the private engineers.

* To ensure consistency and lower cost, the DNRC should inspect dams. (6) Two Dot, Madison Co., Cut Bank, Helena

* For dams less than 500 ac/ft, five year inspections by the DNRC are adequate. Larger dams should have more frequent inspections. Chinook

* DNRC inspections may make dam ownership more affordable. Helena

* To ensure adequate and timely inspection, the DNRC should provide the engineers or help pay for private engineers. Laurel

* Qualified DNRC engineers should be allowed to inspect dams. (2) Missoula, Choteau

* This should remain with private engineers to avoid liability issues for the state. Miles City

Issue 15. Risk Scales in DNRC Regulations (f) Dam Inspections, Extent - *Recommendation - The Committee determined the current standard is appropriate.*

Agree: 11

Disagree: 0

Written Comments:

* Dam inspections should be increased with increased potential hazard. Miles City

Issue 16. Other Risk Assessment Considerations, DNRC Scoring Process - *Recommendation - The Committee decided that it would make no recommendations regarding Issue 16. If the DNRC had additional information regarding these issues,the Committee would consider them again.*

Agree: 6

Disagree: 0

Written Comments:

* Scoring could be done easily by an inspection with classes: No Risk; Minimum Risk; and High-Hazard. White Sulfur Springs

* DNRC should consider developing a scoring process. (2) Dawson Co.

* A scoring process would reduce liability and simplify the process to determine hazard classification. Madison Cty.

* A dam scoring process is not as useful as a report as to the dam condition. Laurel

* A scoring process must be used to rank dams according to hazards. The problem is subjective ranking. Miles City

* This should be considered along with other states' experiences.

Issue 17. Other Risk Assessment Considerations, Probabilistic Approach - *Recommendation - The Committee decided that it would make no recommendations regarding Issue 17. If the DNRC had additional information regarding these issues, the Committee would consider them again.*

Agree: 7

Disagree: 0

Written Comments:

* This should be considered along with other states' experiences.

General Comments:

* Water storage may be the only answer to agriculture v. instream flow conflicts. The proposed dam safety regulations will almost surely deter individuals from building new storage. Some compromise is required. Helena

WATER POLICY COMMITTEE
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June 1, 1992

TO: Committee Members

FROM: Staff

RE: Dam Safety Study - Summary of Public Comment

The following is a summary of written public comment regarding the Dam Safety Study received to date. You have been given all the public responses on these issues, but this summary will be needed for the report to the legislature and it may help you when reviewing the study as well. The last two pages are an excerpt from the unapproved Committee minutes from the May 8, 1992 meeting and reflect the oral public comment received as part of the Dam Safety Study public hearing.

The June Water Policy Committee meeting will clean up remaining Dam Safety issues regarding liability, flood insurance and DNRC dam inspections. Final decisions on all the identified dam safety issues will be addressed at the September meeting.

DAM SAFETY STUDY
Summary of Public Comment

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

Yes: 8

No: 3

Written Comments:

* Yes, keep the risk burden with the dam owner. Bozeman

* Yes, if all safety requirements have been met the dam owner should not be held liable for unforeseen events. Chinook

* Yes, particularly during a large flood event. Billings

* Dam owners should not be held liable for damages from earthquakes. They should be held liable for negligent acts. In all cases I believe that public safety should override operational costs. Not one dam is worth a person's life. Missoula

* State regulations and local zoning laws should be developed to regulate downstream areas that may be affected by dam failure. Wolf Point

* New residents below an existing dam should be held liable for any damage that occurs due to a dam failure. Choteau

* Designing regulations to avoid litigation is a waste of time. Tomorrow's court decision will wipe out today's assumptions. Great Falls

* Once an operating plan has been approved, and barring willful negligence, a dam owner should not be held liable for damages. Martinsdale

* No. Responsibility for a dam failure rests solely on the owner. Any damages to downstream residents should be fully recoverable.

* Liability for dam failure should be shared by the public that moves below an existing dam. Great Falls

* I do not think you can legally affect liability issues. Missoula

* Dams are "created" hazards. Dam owners should retain liability. Great Falls

* No. Responsibility for dam failure must rest with the operator. Butte

Issue 2. High-Hazard Nomenclature - The term "high-hazard" is sometimes misunderstood to mean unsafe. Should permitted dams be called something other than "high-hazard"?

Yes: 2

No: None

Written Comments:

* Yes. I think "regulated" would be a better term than "high-hazard". Choteau

* No. The term high-hazard is quite appropriate for dams 50 ac/ft or larger. Butte

Issue 3. Dam Regulatory Capacity - Montana currently regulates dams that contain 50 ac/ft of water or more. Should this standard be changed?

Yes: None

No: None

Written Comments:

Height and storage capacity are not accurate predictors of potential damage. Any size dam could pose a problem depending on what or who was below it. You should also consider velocity. Great Falls

The standard should not be increased to reduce the number of regulated dams in Montana. Butte

Issue 4. 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?

Yes: No Comments Received

No:

Written Comments:

Issue 5. 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?

Yes: No Comments Received

No:

Written Comments:

Issue 6. 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?

Yes: No Comments Received

No:

Written Comments:

Issue 7. 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?

Yes: No Comments Received

No:

Written Comments:

Issue 8. 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 list of "structures" be changed?

Yes: None

No: 1

Written Comments:

* Historical data should be used, if available, to help the DNRC more accurately determine the flood depth. Great Falls

Issue 9. 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?

Yes: 3

No: 14

Written Comments:

* No, give the DNRC more flexibility. Bozeman

* The applicable standards should be negotiated between the engineer, owner, and DNRC based on circumstances. Billings

* Probable risk to life and property should be a prime consideration. Missoula

* I do not agree with, and cannot accept, a tradeoff between human life and cost savings. Wolf Point

* I strongly favor all regulations that protect the public to the fullest extent possible. Deer Lodge

* The Committee's goal should be to protect public safety.

* No. Not if allowing them to consider the risks would lower some costs for dam owners. White Sulphur Springs

* The legislature must double the funding for this important program. Once it is fully implemented, then it can be scaled back.

Note: Due to the confusing way I phrased this question on the response form, the answers to this question can be misleading. Almost all of the "No" responses indicated that the DNRC should hold dams to a higher standard if they pose a threat to life or property.

Issue 10. 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?

Yes: 8

No: 2

Written Comments:

* Yes, but give the DNRC more flexibility, especially where the risk to population is greater. Bozeman

* Yes. Cost is important but secondary to the risk to life. Great Falls

* Perhaps the spillway standards should be statutorily set rather than set in an administrative rule. Big Timber

* Yes. However, the PMF is often overstated which leads to high cost spillways.

* Please pay the utmost attention to the aspect of cost in setting the balance. Although we are all very conscious of safety, cost cannot be ignored on a working ranch. Brookfield, WI

* More leeway should be given to off-stream storage regarding the PMF risk. White Sulphur Springs

* Any discretion the DNRC director is allowed must include the discretion to <u>increase</u> standards as well as reduce them. Missoula

* The DNRC needs more flexibility in setting appropriate standards. White Sulphur Springs

* No. The professional engineers standard is appropriate. A 100 year flood is a reasonable standard. Missoula

* No. Suppose a dam owner can show that a lower design standard will not result in a greater loss of life. Billings

* Federal spillway standards are appropriate and should be used in montana. Butte

* The PMF is often extreme. Butte

<u>Issue 11. Risk Scales in DNRC Regulations (b) Spillway Requirements and Warning Time</u> - Montana allows smaller spillways for dams where the nearest community is less than 20 residents and more than 4 hours away? Is this appropriate?

Yes: 8

No: 4

Written Comments:

* The DNRC should have more flexibility to determine spillway standards based on risk and overall dam integrity. Great Falls

* Not in the case of 20 residents - one life lost is too many. 4 hours away is OK. Bozeman

* Yes, especially when the distance factor is so much less severe. Big Timber

* The more lead time the better. Missoula

* There should be no exceptions to a properly designed and sized spillway. Wolf Point

* No, there will always be people that expect to be warned no matter how far away they live. Choteau

* The state should emphasize and increase the ability to alert the public regarding dam failures. Deer Lodge

* Spillway repair should be mandated to ensure public safety.

* The idea of linking standards to some arbitrary number of residents and hours is absurd. The standards should look at the threat to one person. Missoula

* Yes, only if there is a fail safe warning system. How would you like to be one of those 20 residents? Billings

* Unsafe structural conditions should not be compensated by early warning systems. Butte

Issue 12. 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?

Yes: 16

No: None

Written Comments:

* I feel that dams less than 500 ac/ft, and less than 100 ft in height, should have to meet lower standards. Chinook

* This instrumentation requirement should also apply to federal dams. Bozeman

* Instrumentation should be left to discretion of engineer with DNRC approval.

* If a dam remains stable for a period of years, instrumentation seems unwarranted. Great Falls

* Engineer discretion is fine - if the engineer is a state agent and understands that the first duty is to protect public safety. Missoula

* Instrumentation should only be based on size and hazard classification, not dam condition. How do you know when the condition changes?

* Engineer discretion regarding instrumentation requirements for dams less than 100 ft could be considered. Conrad

* Engineer discretion regarding instrumentation requirements for small dams with DNRC approval is appropriate. Butte

Issue 13. 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?

Yes: 10

No: 1

Written Comments:

* I think the state should follow all federal standards unless they are not as strict as state standards. Plentywood

* Federal standards may make projects too expensive. I think current acceptable engineering standards are adequate, with inspections. Bozeman

* Montana's standards need to account for local phenomenon, i.e., weather, runoff and seismic activity. Big Timber

* Federal standards are OK, but any standard is difficult to obtain in the field. Billings

* If dams cannot be built to the federal standards because it is far too expensive, allow a lesser standard. Great Falls

* I am not sure that federal standards are strict enough. Martinsdale

* If Montana cannot improve on federal standards then they should not be changed.

* Would allowing variations from federal standards increase state liability for dam failure? Great Falls

* The real question is if there will be any more dams built at the current federal standards due to the high cost. White Sulphur Springs

* Standards should be left to engineer's discretion. Missoula

* Federal spillway standards should be used. State or local standards are not appropriate. Butte

Issue 14. 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?

Yes: 17

No: None

Written Comments:

* Dam location should be a factor. I would like to see yearly inspections for all "high risk" dams. Maybe DNRC engineers should do all the inspections. Plentywood

* I believe more frequent dam inspections are needed. Dam inspections do not have to be expensive, or they should be done by the DNRC. Great Falls

* Such decisions should be made by people more accountable than DNRC bureaucrats. Big Timber

* Please minimize the frequency of dam inspections. Each inspection by a professional engineer costs between $500 and $1000. Brookfield, WI

* The cost of inspections for dams that were built before the current standards were established should be borne by the DNRC. Martinsdale

* Five year inspections are not frequent enough to adequately protect public safety.

* A truly "high-hazard" dam should be inspected every year. Missoula

* The DNRC should provide engineers for dam inspections. Conrad

Issue 15. Risk Scales in DNRC Regulations (f) Dam Inspections, Extent - The extent of dam inspections currently varies depending on dam condition or location. Is this appropriate?

Yes: 19

No: 1

Written Comments:

* Yes, the greatest risk dams should be inspected more often, especially if they could cause a great loss of life. Helena.

* Yes, Montana's standards need to account for local phenomenon, i.e., weather, runoff and seismic activity. Big Timber

* Dam inspections that benefit the public should be paid for by the public. Martinsdale

* No. Stringent inspections must be required and the cost should stay with the dam owner.

Issue 16. 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 particular dam?

Yes: 14

No: 3

Written Comments:

* I believe scoring is a way to pick out which dams need to be inspected more often. Chinook

* I favor the use of a scoring system if all the factors, properly weighed, are considered. Big Timber

* Dam safety can not be accurately "scored". Missoula

* Include fatal-flaw analysis. Billings

* Include seismic analysis. Butte

* Objective and fair scoring could be appropriate. Butte

Issue 17. Other Risk Assessment Considerations, Probabilistic Approach - Should the DNRC establish a probability number for dam failure?

Yes: 10

No: 4

Written Comments: None

Relevant portions from the yet to be approved September 11, 1992 Committee meeting minutes.

Water Reservation Study

MR. KAKUK used EXHIBIT 9 to review the Water Reservation Study.

REP. HARPER opened the meeting to public comment.

MIKE ZIMMERMAN, Montana Power Company (MPC), used EXHIBIT 10 to respond to the issues.

NEIL COLWELL, Washington Water Power, said they echoed the comments of MR. ZIMMERMAN but they did not see this as a practical problem at this time.

MR. FRITZ, DNRC, reminded the Committee that last session, the legislature removed the time limit of ten years for the development of a water project. This allows a private user interested in constructing a storage facility to apply for a water use permit through the DNRC and, within a reasonable time, fully develop that project. Also, the recent upper Missouri River instream water reservations were conditioned to allow the Board to subordinate instream flows to new storage uses if the new storage would provide some benefits to the instream resource.

ROBERT STORY, Montana Association of Conservation Districts, used EXHIBIT 11 to respond to the issues.

STAN BRADSHAW, Montana Trout Unlimited, said the answer to the question - does the reservation process impede the development of new storage - was clearly no. Certain reservations, such as on the Yellowstone River, might preclude new storage, but the process itself does not. The largest impediment to new storage was economics. Referring to the question - should private entities be allowed to get a reservation - there are probably three other basins in the state where reservations are likely and, given the last reservation process, he said he would be surprised if another reservation process was begun.

LORNA FRANK, Montana Farm Bureau (MFB), agreed with MR. BRADSHAW that economics was the largest impediment to new storage in Montana. The MFB was a firm believer in new storage to provide benefits to instream flows and other uses but the question was how to fund these projects.

MS. BRUNNER, used EXHIBIT 12 to respond to the issues. She also would support a change in the reservation process that would allow a reservation if the applicant built a storage project to provide the additional water for that reservation.

MR. SPENCE used EXHIBIT 13 to respond to the issues.

SEN. GROSFIELD asked if a conservation district could change a reservation from some other use to a storage reservation.

MR. FRITZ said that was his understanding. Additionally, the district could certainly apply for a storage reservation.

SEN. BECK asked how the Yellowstone River reservations preclude new storage.

MR. BRADSHAW said that at the time the Yellowstone reservation process was underway a large perceived threat to the river was the Allenspur Dam just south of Livingston. The instream flow reservations on the Yellowstone include high flows and not just base flows so a large dam of this type is no longer possible. He said he was not sure what the situation was on the smaller tributaries.

SEN. GROSFIELD asked if MPC could go through county commissioners to get a storage reservation.

MR. ZIMMERMAN said they could ask, but why should a public utility, or private entity, not enjoy the same access to the process as a conservation district. They would be speculating in water the same as a conservation district and the burden is the same. They have to show beneficial use, intent to develop within a reasonable time, and that the reservation is in the public interest. He said that basically, it is a fundamental question of how much you trust or distrust private enterprise.

SEN. BECK asked if MPC had water rights and had they been adjudicated.

MR. ZIMMERMAN said they had water rights and rights to store water behind all the power generation dams and the rights were in the same adjudication process as everybody else.

SEN. BECK asked if MPC gained any benefit from instream flow reservations on the Missouri.

MR. ZIMMERMAN said it depended on the reach of the instream flow and where the dam was or would be built.

MR. STORY said that if you think the Missouri River reservation process was a mess, think about the situation had anyone been allowed to apply for a reservation.

REP. HARPER asked the staff to provide a summary of the testimony and options for Council discussion at the next meeting.

WATER POLICY COMMITTEE

Montana State Legislature

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Hal Harper, Chairman
Vivian M. Brooke
Russell Fagg
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COMMITTEE STAFF
Environmental Quality Council
Capitol Station
Helena, Montana 59620
(406) 444-3742

July 29, 1992

1~

Dear 2~:

Senate Bill 313 from the 1991 legislative session directed the Water Policy Committee to conduct a study analyzing the impacts of the current water reservation process on new storage facility construction in Montana. Specifically, SB313 states:

> *The water policy committee shall also conduct a study to determine whether the statutory restriction against allowing private entities to obtain water reservations is an impediment to the development of water storage projects. Specifically, the study must evaluate the desirability of:*
>
> > *(a) allowing private entities to apply for and obtain water reservations; and*
> >
> > *(b) designating a public entity with responsibility to advance water reservation applications for private entities that are precluded from applying for and receiving a water reservation under 85-2-316.*

Knowing your interest in water reservation and storage construction issues, we invite you to present your comments on this study to the Committee at its next meeting, Friday, September 11, 1992 in Room 108 of the State Capitol, Helena.

To help focus comments on the study, we have prepared the following questions for your review and response. These questions are not exclusive, we welcome any and all relevant comments regarding this important issue.

* Does the current water reservation process impede in any way the construction of water storage projects in Montana? If so, how?

* How best can the impediments identified above, if any, be removed?

* What in your opinion are the largest impediments, from any source, to the construction of water storage facilities in Montana and what can or should the state government do about them?

* What are your thoughts regarding the two options identified in SB313, i.e., allowing private entities to hold a reservation and or designating a public entity to advance reservation for private entities?

Committee staff, Michael S. Kakuk, Environmental Quality Council, 444-3742, will be calling you for your initial reactions and to schedule you for the next meeting if you desire to participate. Please feel free to contact him at anytime with questions or comments regarding this request. Your assistance in this study will allow the Committee to determine the best policy for the state of Montana.

Sincerely,

Hal Harper,
Chairman

cc: Michael E. Zimmerman, Montana Power Company
Neil V. Colwell, Washington Water Power Company
Jim Peterson, Montana Stockgrowers Association
Jo Brunner, Montana Water Resources Association
Lorna Frank, Montana Farm Bureau
Stan Bradshaw, Montana Trout Unlimited
Peggy Parmelee, Montana Association of Conservation Districts
Karen Barclay-Fagg, DNRC
K.L. Cool, DFWP
Dennis Iverson, DHES

MONTANA POWER COMPANY

OFFICE OF THE CORPORATION: 40 EAST BROADWAY, BUTTE, MONTANA 59701

LEGAL DEPARTMENT

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MICHAEL P. MANION
MARJORIE L. THOMAS
SUSAN CALLAGHAN
W. WAYNE HARPER
BRIAN HOLLAND

September 11, 1992

Representative Hal Harper
Chairman
Water Policy Committee
Montana State Legislature
Helena, Montana 59620

Dear Representative Harper:

Thank you for the opportunity to respond to questions related to the study the Water Policy Committee is undertaking pursuant to Senate Bill 313. The following sets out the questions asked by the Water Policy Committee and my responses.

Q1. Does the current water reservation process impede in any way the construction of water storage projects in Montana? If so, how?

To our knowledge the current reservations process has not had this effect. The Company has not recently constructed a new storage project. And, new storage projects are not currently planned. But, this is not to say that the current process couldn't be an impediment.

For the Company, the issue came up in scenarios where we asked, "what if we wanted to reserve water for a future hydroelectric project?" The thought was that other private interests, for example agricultural interests, through certain governmental entities, could reserve water for future uses and, in effect, secure all of the remaining water. Given the long-term planning requirement for new electric generation resources, we wondered why an electric utility which is reliant upon hydroelectric resources, should not have the same ability to reserve water as other private interests? The concern was that if all available water is reserved, then utilities would not have access to water for new hydroelectric generation.

As we considered this matter, we concluded that there is no entity like the Conservation Districts or the DNRC that would reserve water for a utility such as the Company.

This seems to be an unwise policy restriction. Because electric utilities use water to provide low cost electric service to the public who are their customers, we felt utilities should have the same access the reservations process. Because we haven't any present intention to construct new hydroelectric facilities requiring additional storage, however, we haven't studied this issue beyond this initial curiosity.

Q2. How best can the impediments identified above, if any, be removed?

Impediments may be removed by authorizing reservation applications by private interests, like utility companies, that serve the public through the use of the water.

Q3. What in your opinion are the largest impediments, from any source, to the construction of water storage facilities and what can or should the state government do about them?

Identifying impediments is easier than removing them.

Some impediments might be:

-access to capital;

- development, permitting and construction costs;

- environmental concerns; and

- water availability.

A means of dealing with impediments might be to facilitate public/private cooperation on a case by case basis so that economically justified projects may be realized. The on-going water planning process, which utilizes the cooperative effort of a broad base of private and public participants, is an example. This sort of effort could, on a project specific basis, identify impediments and alternatives for dealing with them.

Q4. What are your thoughts regarding the two options identified in SB313?

Applications by private entities should be allowed. Market economics will assure that the use of reserved water provides benefits to the public. In addition, the decision authority remains with a public agency.

Identifying a public entity to advance the interests of private entities is also a potential solution. But, unless you've a deeply ingrained mistrust of private enterprise and the regulatory influence of the market place, why should a governmental agency be required to develop and submit the application and advocate for it? This is particularly so when a governmental agency is the decision maker. This option, while workable, results in unnecessary increases in the costs of government.

Sincerely,

Mike

MICHAEL E. ZIMMERMAN

L29111.MEZ/jf

MONTANA ASSOCIATION OF CONSERVATION DISTRICTS

Points of testimony on water reservation process

MACD policy on water reservations:

1. MACD supports the reservation process to allow conservation districts to reserve water for agricultural use.

2. MACD supports conservation district reserved water having a priority second only to domestic use.

3. MACD supports reservations for instream-flow if they are consistant with the prior appropriation doctrine.

4. MACD believes that reservations for instream use should require the investment in in-kind storage or conservation practices since utilization of other rights requires diversion and thus investment.

5. MACD believes that no instream flow rights to water quantities in excess of water available, after existing water rights have been satisified be granted unless suported by off-stream storage.

   MACD recommends that diversion for off-stream storage be defined as an instream use of water. and beleives that instream water reservations should be used to fill these structures.

6. MACD objects to instream flow reservatins that preclude the development and building of storage projects.

7. MACD supports multiple use storage projects with all users helping pay the costs of construction and maintenance.

DOES MACD BELEIVE THAT THE RESERVATION PROCESS HINDERS THE DEVELOPMENT OF STORAGE?

1. Yes in those cases where the bulk of the water is dévoted to instream flow reservations for public health or recreation.

2. Yes because it is not clear that reserved water, either instream flow or water reserved by CD's for agriculture , can be stored.

3.

No , in cases where water in addition to what is reserved is available. An applicant could apply for a use permit and would receive a priority date at the time of application to develop water.

DOES MACD BELEIVE THAT THERE IS A SOLUTION TO THIS PROBLEM?

1. Yes, the reservation process could be modified to make it clear that water from all reservations could be used for storage and then used to fulfill the reservation.

2. MACD believes that all reservants should work together and support storage projects that would be multiple use and benefit all water users.

MACD believes in general that the main hinderance to development of water storage is cost, followed by environmental concerns. Many water storage projects already built probably not truly cost effective, but where would we be if we didn't have them. Water storage whould be looked uupon as a long term investment in the future of the state. We don't know what stored water may be valued at in future years. We also feel that sometimes the environmental benefits of storage may outweigh the localized damage to a stream a reservoir may cause. Proper design and management of reservoirs can greatly enhance the quality of a stream when compared to dewatering.

MACD does not support allowing private individuals to reserve water for any purpose. Since reservations are for future development, it would be too easy for speculation in water rights to develop. We particularly oppose private reservation for instream flow. Instream flow supposed to be a benefit for all users and should be held by government agencies. Since no investment or work is required to perfect an instream flow reservation or right all remaining water in the state would be filed on by instream flow advocates thus precluding the development of any water for domestic, municipal, agricultural, or industrial use. This would also make the process of administering water rights a very difficult process as there could be a great number of objectors in any given water hearing.

MONTANA WATER RESOURCES ASSOCIATION

501 N. Sanders • Helena, Montana 59601 • (406) 442-9666

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ENVIRONMENTAL QUALITY COUNCIL

August 12, 1992

Chairman Hal Harper
Water Policy Committee
Helena, Montana

Dear Representative Harper,

In response to your inquiry concerning SB313, the Montana Water Resources Association offers the following:

* 1. No, the current reservation process does not impede the construction of water storage projects in Montana.

Agriculture has the ability to obtain reserved waters through the Conservation Districts. Within that procedure, i.e. proving the land irrigable, etcetera, and through other related regulations, the means is available for obtaining the water to fill the facility.

Private entities such as preservationist groups, wanting to preserve a consistent instreamflow through a storage facility, have the means, working through department reservations, to cost share projects.

*2. The most formidable impediment to construction of water storage facilities is the reluctance of short sighted instream flow advocates to support development of both on and off stream storage facilities.

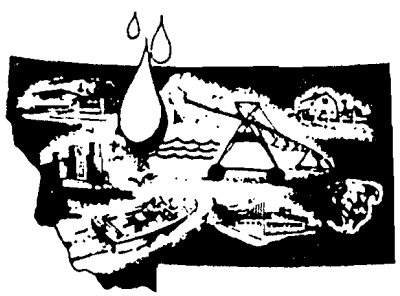
Consequently, Montana's high water flows out of state and into the storage dams and reservoirs of each downstream state in its path.

Dam owners and the water users increasingly recognize the benefits of regulating releases to accommodate the fishery needs, both as to amount and crucial timing.. Additional storage or rehabilitation of existing facilities to hold that high water could provide even more benefits to all water users.

Costs of rehab and construction should not be the burden of agriculture, or utilities, but shared by all the users. Education on all uses of water, geared to all water users is a top priority.

Over the years the water development, RIT funds have been deleted to be almost non-existant. On the ground development/rehabilitation programs have been replaced with staff maintenance and non-related programs.

National and statewide anti-water development groups, through extensive lobbying and media programs, have been able to reduce funding for new and rehab water projects.



The cost of construction, linked with increased environmental regulations, and with unreasonable criteria have brought water development to a virtual standstill.

Inability to consider economic benefits to a community is unrealistic and an impediment to dam construction. Payback of 10 years is unrealistic and an impediment.

*3. Refer to *1. MWRA does not support either of the two options. It is to be recognized that we are not considering individual agriculture or utility interests, but those interested in maintaining instream flows.

To our knowledge there are no participation restrictions in the development of water, including storage facilities, which would preclude a private entity from financially assisting a government entity.

Consequently, instream flow advocates have the ability to utilize departmental reservations while participating in the construction of storage facilities at this time.

There is an inconsistency in SB313. The opening statement and the 2 sub-paragraphs are not subject consistent.

The opening statement addresses impediments to development of storage facilities. A and b address private water reservations. If the language had included, in both a and b, the wording 'for the construction of storage facilities' MWRA would not have been opposed to the study.

The supposition is that the study will provide insight into whether or not a private individual/entity will request a reservation to store water in an existing facility or build a storage facility, and that the reservation would be contingent upon utilization of a storage facility? If so, would the reservation be for high water only?

Realistically, high water is probably the only water available, considering the over-appropriation of water in the streams feasible for additional storage.

Points to ponder --- In light of the long standing negative attitudes concerning alleged damage by storage facilities to fisheries, dewatering, etcetera, would such facilities all of a sudden be acceptable and beneficial? Or only the ones private individuals or entities build?

Would they allow multiple use, without cost to other users, on the reservoirs they construct and the water stored therein?

Thank you,

Jo Brunner, Executive Secretary
Montana Water Resources Association

Montana Department of Fish, Wildlife & Parks

1420 East Sixth Avenue
Helena, Montana 59620
September 9, 1992

Rep. Hal Harper, Chairman
Water Policy Committee
Montana State Legislature
Helena, MT 59620

Dear Mr. Harper:

This letter is in response to your letter of July 29, 1992 requesting the Department to comment on certain provisions of SB 313, specifically water reservations for private entities and the effects of reservations on construction of new storage. The following are our responses to the questions you posed:

1. Does the current water reservation process impede in any way the construction of water storage projects in Montana? If so, how?

   In the case of the Missouri River basin above Ft. Peck Dam, DFWP was recently granted instream reservations on a number of streams in the basin. We do not believe the instream reservations will necessarily impede the construction of water storage projects for two reasons: (1) DFWP was not granted reservations for high flows during the spring runoff period which should allow a new storage project to capture a portion of those high spring flows when they are available; (2) In granting the instream flow reservations, the Board of Natural Resources and Conservation imposed a condition applicable to all instream flow reservations granted as follows: "Instream flow reservations are subject to modification if any feasible new storage facilities are developed that may otherwise be precluded by a reservation. The Board may only approve the modification after notice and hearing, if the resource values protected by the reservation will be maintained or enhanced by the storage facility." We interpret this condition to allow flexibility during planning for a new water storage facility on a stream where an instream reservation has been granted. The reservation can be modified to allow the storage project to proceed as long as provisions are made to protect instream values below the project.

Finally, it should be noted that the reservation process provides a planning mechanism to reserve water for future storage projects and is, therefore, an advantage rather than an impediment to new storage possibilities.

2. How best can the impediments identified above, in any, be removed?

The reservation process does not present significant impediments to new storage projects. New storage projects can probably be accommodated in most situations if, during the planning process, consideration is given equally to the value of instream flows and the recreational uses of waters and the other benefits of the project such as irrigation, hydropower, etc. Good stream fisheries can be developed below storage projects provided that the planning process allows this to occur. Any project slated for planning or construction should, therefore, include provisions for maintaining these resources at an adequate level. Further, recognition by project developers of the value of instream and recreational resources and a commitment to consider those values in developing the project is a prerequisite to successful completion of a project that will provide multiple benefits.

3. What in your opinion are the largest impediments from any source to the construction of water storage facilities in Montana and what can and should the state government do about them?

Currently, the biggest impediment to construction of new projects is the cost and availability of funds to finance them. In addition, there are many existing projects in the State which are in need of substantial rehabilitation. DFWP owns a number of these projects and is in the process of upgrading some of these facilities to meet safety and other standards. This is also very costly. The Montana State Water Plan and the Legislature have identified the upgrading of existing water storage facilities as the number one priority (over constructing new facilities.) In summary, we feel that major impediments to new dam construction are the scarcity of suitable sites, the high cost of initial construction, the long term financial requirements to adequately maintain the facility and the backlog of existing dams in need of repair.

4. What are your thoughts regarding the two options identified in SB 313 (i.e. allowing private entities to hold a reservation and/or designating a public entity to advance reservations for private entities)?

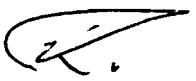
DFWP does not object to allowing private entities to apply for and obtain water reservations. There may be some cases where such private reservations would be beneficial. However, one problem we foresee is the availability of water in some basins. The Yellowstone and upper Missouri basins have already received reservations which, at least theoretically, limit the amount of water still available for private entities to acquire through the reservation process without interfering with reservations already granted to municipalities, conservation districts and instream flow entities. No reservations have yet been granted in the Columbia or Kootenai basins or the Missouri basin below Fort Peck Dam.

We believe that designating a public entity with the responsibility to advance water reservation applications for private entities through the reservation process may be difficult. Speaking for DFWP, we are not in a position with our current manpower to provide this service. Also, depending on the type of reservation required by the private entity, DFWP feels there may be conflicts of interest between the needs of the private entity and the mission of the Department to protect resources values, such as instream flows.

We are not in a position to offer an opinion at this time whether not allowing private entities to obtain water reservations is an impediment to the development of water storage projects. Numerous water storage projects have been constructed in Montana by private entities without having a water reservation. A water reservation may not be required if other means to acquire necessary storage water (such as transfer of water rights) can be found.

Thank you for the opportunity to comment on this issue. Please contact me if have any further questions.

Sincerely,



K.L. Cool
Director

drg

WATER POLICY COMMITTEE

Montana State Legislature

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COMMITTEE STAFF
Environmental Quality Council
Capitol Station
Helena, Montana 59620
(406) 444-3742

February 26, 1992

_____
_____
_____

Dear _____:

As I mentioned in our telephone conversation, the Water Policy Committee is completing a Geothermal Resources Study specifically looking at the need for, feasibility of, and public desire for increased regulation and protection of geothermal resources in Montana. As a geothermal resource user, your comments would be extremely useful to the Committee regarding this issue.

The Committee will be discussing this issue at its next meeting, **March 6, 1992**. If you cannot attend and present your comments personally, the Committee would appreciate, and fully consider, your comments via letter.

To allow the Committee to put your comments in context, I would appreciate it if you would address the following points:

* Do you have a water right to the geothermal resource?

* Are you aware that under current interpretations of state water law, it is questionable as to whether or not the state could protect the thermal value (the heat) of your geothermal resource from a new or changed water use?

* Do you feel that geothermal resources need increased protection in Montana?

* How, in your opinion, could this be best accomplished?

* Do you have any personal experience with this issue? In other words, has your use of the geothermal resource been threatened?

I have enclosed a meeting agenda and a memo regarding the study for your review and information. If you have questions regarding the study please call me at 444-3742

Again, the Committee understands that comments from geothermal resources users is crucial to a successful completion of this study. Thank you for your time.

Sincerely,

Michael S. Kakuk
Staff Attorney

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February 27, 1992

Michael S. Kakuk
Staff Attorney
Environmental Quality Council
State Capitol
Helena, MT 59620

RE: Geothermal Resources Study

Dear Mr. Kakuk:

Thank you for considering our comments to the water policy committee regarding the geothermal resources study. As it turns out, we have recently (1989) had an experience with this issue that has caused us much concern for the protection of our geothermal water rights.

Chico Hot Springs Resort depends on its flow of geothermal hot water for its existence and has done so for over 90 years. Chico Hot Springs has been, and is, a landmark in Montana both for the thriving tourist business it attracts as well as a familiar watering hole for local Montanans.

In October 1989, when we received information concerning a possible geothermal development less than three miles away from our existing hot springs, we immediately contacted the DNRC to check on our water rights for the hot spring, where we were informed of three important factors:

1) While our water right from the source is protected by priority date, the Law does not provide that the water table level or artesian pressure cannot be altered as long as we can reasonably exercise our water right. This could mean that we could be forced to initiate a pumping system to maintain our current geothermal water flow. It was unclear as to which party would be responsible for those expenses involved.

2) If a proposed well were to withdraw less than 100 gallons per minute, then a notice of completion is simply filed after the water is put to use. If this is the case, the DNRC would issue a certificate of water right after a review only for completeness of the filing form and reasonableness of the use of water, and leaves us with no opportunity to formally object to the proposed development! In this scenario, we may not be affected as far as water flow, but, and equally important, what happens if the tempature from the spring were to drop?

3) The Law does not provide for the protection of our water rights with regard to temperature whatsoever, as this problem evidently had not yet been encountered in Montana, so there had been no precedent set.

I'm sure that given this scenario, you can understand our concern regarding the inadequacies of our current water rights laws. We feel that given the increasing interest in geothermal development for the agencies involved to adopt a more aggressive stance on research and resolution of this issue.

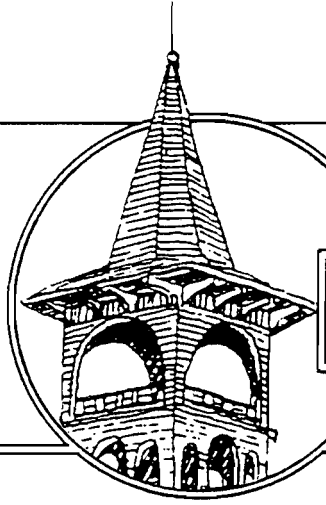
Thank you for your consideration of our viewpoints in this matter. While we are certainly not opposed to commercial development of natural resources, we do oppose any development that would or could adversely affect what is already in place. We feel that in order to adequately protect all of Montana's water resources, the Water Use Act should be modified to require a permit for the use of geothermal resources.

Sincerely,

Timothy C. Barnes

Timothy C. Barnes
General Manager

TCB/sdn



Broadwater
athletic club & hot springs

MARCH 6, 1992

WATER POLICY COMMITTEE
MONTANA STATE LEGISLATURE

I AM THE MAJORITY SHAREHOLDER OF BROADWATER RACQUET CLUB, WHICH OWNS AND OPERATES THE BROADWATER ATHLETIC CLUB & HOT SPRINGS LOCATED WEST OF HELENA.

HISTORICALLY, THESE HOT SPRINGS HAVE BEEN DEDICATED TO THE EXCLUSIVE USE AS A SOURCE OF HOT WATER AND HOT WATER HEAT: IN 1865 HELENA HOT SPRINGS OPERATED AS A BATHHOUSE AND STEAM ROOM AT THE PRESENT SITE OF THE BROADWATER ATHLETIC CLUB; IN 1889 THE WORLD FAMOUS BROADWATER HOTEL AND NATATORIUM OPENED AND IT OPERATED THE WORLD'S LARGEST INDOOR SWIMMING POOL. THE POOL WAS FED BY THE PRESENT HOT SPRINGS AND INTERMIXED WITH COLD WATER FROM A COLD SPRING ALSO LOCATED AT THE PRESENT SITE OF THE BROADWATER. IN 1935, AN EARTHQUAKE DISTURBED THE SOIL SURROUNDING THE WOODEN PIPES CARRYING THE HOT WATER TO THE NATATORIUM, AND RUPTURED THE PIPES. THE QUAKE DAMAGE, COMBINED WITH THE DEPRESSION, LED TO THE CLOSURE AND ULTIMATE DESTRUCTION OF THE HOTEL AND NATATORIUM.

IN 1979, THE BROADWATER ATHLETIC CLUB WAS BUILT AT THE SITE OF THE HOT SPRINGS. THERE ARE FOUR SPRINGS SURFACING AT THE SITE; A MODEST AMOUNT OF PLUMBING HAS BEEN INSTALLED TO DIVERT THEM TO A SINGLE COLLECTION POINT WHERE PUMPS MOVE THE HOT WATER TO TWO PRIVATE RESIDENCES AND TO THE ATHLETIC CLUB. THE AVERAGE TEMPERATURE OF THE HOT SPRINGS WATER IS 150 DEGREES FAHRENHEIT.

AT THE BROADWATER, THE HOT SPRINGS ARE USED IN HEAT EXCHANGERS TO HEAT THREE SWIMMING POOLS, THREE JACUZZI'S, DOMESTIC WATER FOR OVER TWELVE THOUSAND SHOWERS PER MONTH, AND THE ENTIRE 25,000 SQUARE FOOT BUILDING. IN 1981, IT WAS CALCULATED THAT THE READILY AVAILABLE BTU'S IN THE WATER USED BY THE BROADWATER, WOULD COST APPROXIMATELY $65,000 ANNUALLY IF PURCHASED IN THE FORM OF NATURAL GAS FROM MONTANA POWER. THE VALUE OF THIS RESOURCE FIGURED PROMINENTLY IN THE PURCHASE PRICE OF THIS FACILITY.

THE BROADWATER NEGOTIATED A CONTRACT FOR 100 GALLONS PER MINUTE OF

4920 West Highway 12 • Helena, Montana 59601 • 406/443-5777

THIS RESOURCE DEDICATED TO ITS EXCLUSIVE USE.

IN THE LATE 1980'S, THE OWNER OF THE SPRINGS, PERMITTED A THIRD PARTY TO DRILL A HIGH CAPACITY WELL INTO THE HOT SPRINGS AREA FOR THE PURPOSE OF HEATING A SERIES OF GREENHOUSES. THIS COMPANY PUMPED UP TO 1000 GALLONS A MINUTE FROM THE AQUIFER, CAUSING THE SPRINGS TO DRY UP AND REDUCING THE TEMPERATURE OF THE PUMPED WATER TO ABOUT 130 DEGREES. A PORTION OF THE PUMPED WATER WAS DIVERTED TO THE USE OF THE BROADWATER. THE LOSS OF TEMPERATURE MADE IT IMPOSSIBLE FOR THE BROADWATER TO HEAT ITS BUILDING, POOLS AND SHOWER WATER PROPERLY IN SEVERELY COLD WEATHER, AND BY VIRTUE OF THIS INABILITY CAUSED GREAT DISSATISFACTION AMONG ITS MEMBERS AND A RESULTANT LOSS IN REVENUE AND REPUTATION. THIS SORRY STATE OF AFFAIRS CONTINUED FOR TWO WINTERS AND CAUSED GREAT STRIFE AMONG THE VARIOUS USERS.

ECONOMIC FAILURE OF THE GREENHOUSES ULTIMATELY REMOVED THIS THREAT TO THE RESOURCE; AT THE TIME OF ITS CLOSURE, WE WERE PREPARING LEGAL ACTION TO ATTEMPT TO REDRESS OUR LOSS OF TEMPERATURE.

WITHOUT A BODY OF LAW OR PRECEDENCE RELATING TO THE PROTECTION OF THE HEAT VALUE OF GEOTHERMAL RESOURCES, OUR POSITION WAS HIGHLY TENUOUS; WE STOOD TO LOSE MILLIONS OF DOLLARS OF PRESENT VALUE AND FUTURE EARNINGS AND MAY HAVE BEEN POWERLESS IN THE COURTS.

I, THEREFORE, STAND IN FAVOR OF LEGISLATION PROVIDING PROTECTION TO THE COMMERCIAL VALUE OF MONTANA'S GEOTHERMAL RESOURCES.

VERY TRULY YOURS,

JAMES W. WILLIAMS
PRESIDENT

P.O. Box 370
White Sulphur Springs, MT 59645
May 6, 1992

RECEIVED
MAY 8 1992
ENVIRONMENTAL
QUALITY COUNCIL

Water Policy Committee
Environmental Quality Council
Attn: Michael S. Kakuk
Capitol Station
Room 106
Helena, MT 59620

Dear Mr. Kakuk:

Thank you for your time in our recent telephone conversation. As I mentioned to you on the phone, I am a current geothermal resource user in Montana, being the owner of the Spa Hot Springs Motel here in White Sulphur Springs.

I hold a water right for these resources, and am the latest in a string of owners, dating back to 1866, that have used these waters here in White Sulphur Springs. We now have two hot mineral pools that are used by the public for soaking and swimming. We also have recently converted our heating system over to geothermal. Our waste water is discharged back into the natural hot springs creek for disposal.

Recently a neighboring facility has begun plans to heat their buildings geothermally also. I am a little concerned with this, since there simply are no clear answers as to the nature of the geothermal aquifers below. Is the water in a large pool below the surface, or does it flow in more of a creek, which may be vulnerable to having its flow diverted if holes were drilled into it or next to it? Also, would a new geothermal well, or two or three, diminish the current temperature of the water that we pump? If so, even a small decrease could adversely affect our heating system.

Natural springs are always of a delicate nature, and I think geothermal springs even more so. Many geologists have studied this area, and none can provide a definitive answer as to the nature of the geothermal aquifers. In such a situation, it seems imperative that geothermal use and exploration in Montana proceed slowly and cautiously, so that the existing rights of current users be protected. Once a geothermal resource has been damaged or altered, it may never be recovered.

I'm pleased that your committee is looking into these issues, and I hope you will give strong consideration to the opinions and experiences of current geothermal users in Montana.

Sincerely,

Gene M Gudmundson

Gene M. Gudmundson

RECREATIONAL WATER USERS FEES STUDY

DON HYYPPA said that the draft report was being completed. He said he would send the draft out to the various departments for fact verification and then out to the Committee and the department for analysis, debate and comment. He also mentioned that the report would not advocate any position. It would attempt to be an objective, thorough study of the options and let the policy makers make the decision. MR. HYYPPA said that the two underlying issues involved in the study were funding and fairness. The proper way to analyze the options presented in the study included legal, economic, and fairness standards.

REP. HARPER asked that the Committee be included as soon as possible in this study.

MR. HYYPPA said that would be done.

GEOTHERMAL RESOURCES STUDY

Geothermal Resource Users Comments

MR. KAKUK noted that the Committee was required to look at the need for, feasibility of, and public desire for increased regulation of geothermal resources in Montana. At this meeting, the study concentrated on the last portion of the study which is whether there is a public desire for increased regulation. He contacted a number of individuals who used geothermal resources and asked them a number a questions regarding that use. He noted Exhibit 6 as an example of the letters sent to the geothermal resource users. Some of geothermal resource users were in the audience to present their testimony regarding the study.

JIM WILLIAMS, a majority shareholder in the Broadwater Athletic Club, presented Exhibit 7 and said that he did not believe in too much law but the experience related in Exhibit 7, has shown that increased regulation of geothermal resources is needed. They have a large investment in their hot springs and a new use that decreased the heat value could put them out of business.

EDWARD FRANCIS, Vice President and Business Manager, Church Universal and Triumphant, said the Church has rights dating back to 1899 on La Duke hot springs. In 1986 the Church installed a well 700 feet from the spring, on the opposite side of highway 89. This well was tested for use as a change in point of diversion from the spring. The Church had planned to pump hot water out of the well in a level not to exceed the historical flow of the spring. Since there were no other appropriators on the same source, the Church was told that the change would probably be approved. The development is now on hold due to the federal efforts to regulate geothermal resources in the

Yellowstone National Park area. A U.S.G.S. report has stated that the Church plans would not affect geothermal resources in Yellowstone.

MR. FRANCIS said he is concerned that the federal efforts to regulate geothermal resources not only impinges on Montana water law, but is also a removal of rights under the federal constitution. The Church is looking at other methods of using La Duke hot springs without the test well.

MR. FRANCIS said the Committee should include the potential impacts of geothermal heat pumps or down hole heat exchanges on geothermal resources in the study. He believes that geothermal resources should be regulated the same as water. This would allow anyone who felt that their rights were being threatened by a new use to object and present evidence.

FRANK RIGLER, a rancher from Corwin Springs, said his ranch had geothermal resources on it and he had been leasing them to Gulf Oil. In the future, he had plans to develop some of the geothermal resources for recreational purposes.

SENATOR GROSFIELD asked if MR. RIGLER'S lease with Gulf was developed. MR. RIGLER said the lease had been renewed periodically, but never developed.

REP. LEE asked who had "access" to geothermal resources.

MR. KAKUK said the landowner who drilled a well and hit geothermal resources could use that resource without a state permit if the well was under 35 gallons per minute. Over that amount, the owner would have to file for a water right with the DNRC. The use of a free flowing spring, in any amount, also would require a state permit.

MR. KAKUK stressed that the ownership of the water itself, the material medium containing the energy, was owned by the state, but it was an open question whether or not the state transferred the right to use a geothermal resource when it transferred mineral rights.

REP. HARPER asked about MR. FRANCIS' suggestion about regulating the heat in a geothermal resource like water and whether it would that work.

MR. KAKUK said that SB 210 defined geothermal resource to include the heat value of the resource. However, MR. FRANCIS was correct in stating that SB 210 did not protect a prior appropriator from the potential adverse affects of heat pumps or down hole heat exchangers.

SENATOR BECK said he was concerned about the federal involvement in this area of Montana water. He asked what had happened to SB 210 last session.

MR. KAKUK said that there were no opponents to SB 210 but some questions were raised in the Senate Natural Resources Committee concerning the temperature cut off of 85 F., and the potential impacts to the agricultural community.

SENATOR GROSFIELD also mentioned that some committee members were concerned that SB 210 would have linked water quantity and water quality under the water allocation process.

SENATOR BECK said there was some merit in what the speakers had said regarding the need for protecting the heat of a geothermal resource. He asked if state law should protect a prior appropriator from adverse impacts of new or changed uses.

MR. KAKUK said his understanding was that a well under 35 gpm was not regulated by the state. A well over that amount or any surface water use was subject to the prior appropriation doctrine but it was unclear whether the state could protect the heat value, or any water quality value, or just the quantity of water.

SENATOR GROSFIELD agreed with MR. FRANCIS regarding the potential for impacting a geothermal water right without using any water and felt the issue should be analyzed. He also questioned the temperature cut off in SB 210 of 85 degrees F. This needed further study as well. SENATOR GROSFIELD also noted the general lack of current data regarding geothermal resources in Montana. He asked if the state was planning to update its 15 year old study of geothermal resources in Montana.

MARVIN MILLER, Montana Bureau of Mines and Geology, said that little has been done since the study was completed in the 1970s. That study was sponsored by the federal Department of Energy and much of the information in that study was gathered from existing data. The MBMG has been considering updating the study using new study methods, but it would require funding from the Legislature.

SENATOR BECK asked if some states defined geothermal resources as a mineral right.

MR. KAKUK said the U.S.G.S. representative at the last meeting indicated that the federal government viewed geothermal resources on federal land as a mineral right.

Update on Federal Legislation

MR. KAKUK said that hearings had been held in the Senate Energy and Natural Resources Committee on the proposed ban on geothermal resources near Yellowstone National Park. Senate staff said that there was an interest in doing something, but there were questions regarding the compensation issue.

SENATOR GROSFIELD asked if the staff could get a copy of the Senate legislation for the Committee. MR. KAKUK said that would be done.

REP. HARPER asked if anyone in the audience had any opposition to the Committee recommending that something similar to SB 210 be drafted and submitted to the 1993 legislature.

SENATOR BECK said that SB 210 should be reviewed and the questions addressed. Anyone wanting to prevent the use of geothermal resources in Montana must base that opposition on good scientific data.

MR. KAKUK said that if the DNRC is allowed to protect the heat value of a prior appropriator's water rights, the protection of those rights would be folded into the existing water allocation process. He said that at the next meeting the staff would prepare information on how to protect geothermal resources rights from uses that do not involve water uses.

REP. LEE asked if the temperature was treated as a quality of the water.

MR. KAKUK said that the temperature triggered the definition of geothermal resources and also was defined as a protectable indicator of water quality.

REP. HARPER also asked the staff to prepare information on the water right versus mineral right distinction and the takings issue.

SENATOR BECK asked if geothermal resources included mainly ground water.

MR. KAKUK said that was correct but SB 210 also included the protection of surface water hot springs.

WATER USERS FEES STUDY

RICH BONDY, DNRC, said that the study was continuing and that as soon as the draft was ready, about the end of April, it would be forwarded to the Committee.

Montana Department
of
Fish, Wildlife & Parks

1420 East Sixth Avenue
Helena, MT 59620
August 17, 1992

Hal Harper, Chairman
Water Policy Committee
9 Comstock Road
Helena, MT 59601

Dear Chairman Harper:

On June 26, 1992, two reports were submitted to the Water Policy Committee regarding the ability of water users and recreationists to repay the costs of rehabilitating state water projects. This was done in compliance with S.B. 313 from the 1991 Montana legislative session.

DFWP and DNRC met shortly after the June Water Policy Committee meeting to discuss options for rehabilitation of state dams. Both DFWP and DNRC have dams which need rehabilitation. DNRC's top priority dam for rehabilitation is Tongue River Dam and Fish, Wildlife and Parks will be coming to the 1993 legislature with a proposal to rehabilitate Bear Paw Reservoir near Havre. Further DNRC priorities are described in that agency's "Six-Year Plan for Dam Rehabilitation."

Our discussion primarily focused on how to fund the remaining state water projects. DNRC traditionally utilizes a variety of funding mechanisms including water user fees, water development funds, RIT dollars and federal dollars for the rehabilitation of state water projects. Fish, Wildlife and Parks has utilized federal Sport Fish Restoration funds and license dollars to rehabilitate its water projects. Both agencies feel that a joint approach to rehabilitation of state-owned water projects would be beneficial.

To facilitate the rehabilitation of state water projects it is proposed that the dams owned by DNRC and Fish, Wildlife and Parks be combined into a single list and prioritized based on need, cost, benefits and hazard rating. The top priority dams would then be considered for funding from a variety of sources from both agencies. DNRC would utilize traditional funding sources. Fish, Wildlife and Parks would contribute Sport Fish Restoration dollars if the agencies determined the project warranted the expenditure of those funds and appropriate fishery benefits would be provided.

This approach is offered as a means to continue the rehabilitation of state water projects without creating a new recreational use fee. We propose to come to the 1995 legislature with the top priority projects identified and a cost share proposal for funding rehabilitation of these projects.

Sincerely,

K.L. Cool
Director
Department of Fish,
Wildlife and Parks

Karen Barclay Fagg
Director
Department of Natural Resources
and Conservation

dl

DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION

STAN STEPHENS, GOVERNOR

LEE METCALF BUILDING
1520 EAST SIXTH AVENUE

STATE OF MONTANA

DIRECTOR'S OFFICE (406) 444-6699
TELEFAX NUMBER (406) 444-6721

HELENA, MONTANA 59620-2301

November 2, 1992

Representative Hal Harper, Chairman
Water Policy Committee
Montana State Legislature
Capitol Station
Helena, Montana 59601

Dear Representative Harper:

This letter is in response to your letter of October 9, 1992. I will address the questions you raised in that letter as they apply to the projects of the Department of Natural Resources and Conservation.

For the past several bienniums, the department has been appropriated $800,000 from the water development account for the purpose of repairing and rehabilitating its projects. A larger appropriation is proposed for next biennium (and will be again the following biennium) for the Tongue River Dam.

The amount and sources of money we estimate is currently available for rehabilitation of our projects can be found in our budget requests. These requests are summarized below, along with an estimate of the total expenditures for the Tongue River Dam throughout the rehabilitation process.

Tongue River Dam

1994 - 1995 Biennium

Water Development Account	$ 1,415,000
Water Storage Account	460,000
Federal Funds	11,256,000
Total	$13,131,000

The Total Rehabilitation Package

State Funds	
Non-contract costs (In-kind services)	$4,200,000
Cash (Water Development Account)	5,000,000
Repayment of a Zero-Interest tribal loan	
Broadwater Power Project Revenues	6,500,000
Water User Payments	5,000,000
Total State Funds	$20,700,000
Federal Funds (Grant)	$31,500,000
Total	$52,200,000

North Fork Smith River Dam
1994 - 1995 Biennium

Water Development Account	$1,393,467
DFWP Funds	150,000
Total	$1,543,467

Restrictions are placed on the federal funds, but the project financing is developed to accommodate the restrictions. There are two important restrictions:

1. The federal funds can only be used for the specific project.

2. The federal funds can not be used to acquire land rights or water rights for the project. State funds that are used to match the federal funds can be used to acquire land and water rights.

The department is basing its determination that the proposed federal transfers meet the federal restrictions described above on similar agreements we have reached with federal agencies. The issues relating to criteria and impacts on other activities will be left to the Department of Fish Wildlife and Parks.

I appreciate the committee's efforts regarding our joint approach to dam rehabilitation. I feel that progress has been made in funding this critical program.

Sincerely,

Karen Barclay Fagg

Karen Barclay Fagg
Director

RB:KBF:na

Montana Department of Fish, Wildlife & Parks

Helena, Montana 59620
November 2, 1992

Rep. Hal Harper, Chairman
Water Policy Committee
State Capitol
Helena, MT 59620

Dear Hal:

This is in response to your October 9, 1992 letter where you requested additional information regarding the Department of Fish, Wildlife and Parks (DFWP) and Department of Natural Resources and Conservation (DNRC) proposal for a joint approach to funding dam rehabilitation. The joint approach called for DNRC to utilize traditional funding sources while DFWP would contribute Sport Fish Restoration dollars, if the agencies determined the project warranted the expenditure of those funds and appropriate fishery benefits would be provided.

The questions you asked and our response are listed below. Feel free to contact me if you or the committee have additional questions or request additional clarification.

* How much money do the departments estimate is currently available for dam rehabilitation and what are the sources of that money? Can the departments estimate the amount available for future years?

The DFWP has requested $525,000 in federal sport fish restoration funds for the FY 94/95 biennium for the rehabilitation of Bear Paw reservoir near Havre. For the current biennium (FY 92/93) the department has allocated $75,000 in D-J funds for the reconstruction of the Lake Inez fish barrier, a small dam on the Clearwater River between Seeley Lake and Lake Inez.

The source of that money is the Federal Aid in Sport Fish Restoration program administered by the U.S. Fish and Wildlife Service. The funding for that account results from an excise tax on fishing equipment, electric trolling motors, and sonar fish finders paid at the manufacturer's level. The Sport Fish Restoration funds are apportioned to each state according to its land area and the number of fishing licenses it sells. Projects to be funded are selected by the state, but must be approved by the Fish and Wildlife Service. When approved, the state is reimbursed for up to 75% of the project costs.

* Can the departments estimate the amount available for future years?

No. The amount available in future years will depend on the availability of the D-J funds which fluctuate from year to year and competing capital needs for those funds within the Fisheries and Parks programs. Competing capital needs could include development and maintenance projects at Fishing Access Sites, development and maintenance projects at water based State Parks where motorboat access is provided, and reconstruction and renovation actions at state fish hatcheries. For the FY 94-95 biennium $525,000 was prioritized for use in dam repair.

* If the funds are federal, are there any restrictions placed on the use of those funds?

There are strict eligibility requirements placed on the Sport Fish Restoration funds. The Federal funds must be matched with at least 25% non-federal funds. The project selection and expenditure of funds must remain under control of the direction of DFWP. Projects selected by the state must be approved by the Fish and Wildlife Service.

Fisheries and/or motorboat access opportunities must be commensurate with the expenditures. The amounts appropriated would have to reflect only that pro rata portion of the total project costs which can be shown to benefit fisheries or motorboat fishing enhancement.

In addition, fisheries and boating enhancement would have to be maintained at projects where these funds are used. Failure to maintain these benefits at specific projects could lead to a loss of this source of federal funding or result in the need to repay all or a portion of the funds spent on the project.

* What criteria will your department use to determine if a particular project warrants the expenditure of federal funds? Additionally, if fisheries benefits are required for federal fund expenditure, how will the department ensure that the project continues to benefit the fisheries in the future?

The department has not yet developed criteria to use in determining if a particular project warrants the expenditure of federal funds. We plan to consult with DNRC in developing these criteria. The number of angler days of use and the potential for fisheries enhancement are possible items to consider. Assurances would have to be secured that the project would be built and operated in a manner to benefit fisheries. This could be done through the actual reconstruction of the project or, more likely,

through development and implementation of annual operating plans for the project. Failure to maintain the fishery benefits could result in the need to repay the federal funds or the inability to use the federal funds for future dam rehabilitation projects.

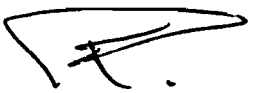
* On what basis are the departments making the apparent determination that the proposed federal fund transfers meet any federal restrictions identified above - written communications, oral statements, prior experience, etc.?

We have discussed this concept on several occasions with the Fish and Wildlife Service and have allocated Sport Fish Restoration funds on several existing dam rehabilitation projects. The Federal Aid regulations also permit this type of project.

* What are the impacts of transferring the identified federal or other funds to dam rehabilitation projects? In other words, from what activities are the funds being transferred?

Funds for dam rehabilitation would come from those normally used for other types of capital improvements such as site protection and maintenance at FAS, hatchery reconstruction, development of motorboat access facilities at State Parks and DFWP dam rehabilitation projects.

Sincerely,



K.L. Cool
Director

drg
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WATER POLICY COMMITTEE

Montana State Legislature

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Tom Beck
Lorents Grosfield
Lawrence G. Stimatz

HOUSE MEMBERS
Hal Harper, Chairman
Vivian M. Brooke
Russell Fagg
Thomas N. Lee

COMMITTEE STAFF
Environmental Quality Council
Capitol Station
Helena, Montana 59620
(406) 444-3742

PRESS RELEASE

"Water Leasing Endorsement"

FOR IMMEDIATE RELEASE

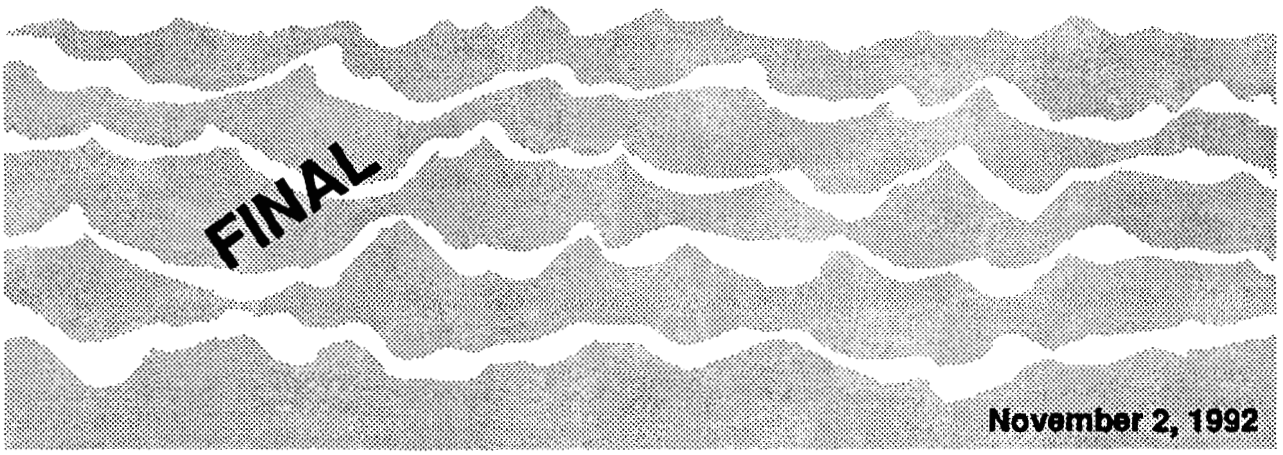
Montana's legislative Water Policy Committee has called the water leasing program "this state's best chance to avoid the coming showdown on the dewatering of Montana streams." Meeting in Helena in late September, the bi-partisan group of legislators representing both agriculture and fish, wildlife, and recreation interests, expressed its strong support for the full implementation of the pilot water leasing program. "The irrigator who leases water does not lose that water right and will be compensated for not using water for irrigation during the period of the lease," according to Senator Esther Bengtson, (D-Shepherd) committee vice-chair. Senator Lorents Grosfield (R-Big Timber), in making the motion endorsing the program, stated "all water users on a stream selected for leasing will be protected by procedures that prevent a lease from being finalized until all objections are resolved."

Faced with bitter battles between irrigators and instream flow advocates during the 1991 session, the legislature revised provisions of the leasing law to make it more attractive to potential lessors of water to enhance critical fisheries facing threats from chronic dewatering during the summer. Legislators viewed the leasing program as a compromise between irrigation practices "as usual" and more dramatic instream flow legislation that attracted hundreds of angry irrigators to the Capitol.

Expressing frustration with difficulties experienced by the Department of Fish, Wildlife, and Parks in negotiating a successful lease, members of traditional water user groups and conservationists urged the committee to do whatever it could to spur implementation of the program. Only through putting the temporary leasing of water in critical streams to the test can new methods of preserving and enhancing fisheries while protecting agricultural interests be developed, committee members asserted.

The water leasing program offers profitable economic alternatives for irrigators and offers benefits for instream values of Montana's waters at the same time. Rep. Hal Harper, (D-Helena) Committee Chair, calls on all water users to work together to solve the state's water problems. For more information, contact the Department of Fish, Wildlife, and Parks or the Water Policy Committee.

MONTANA WATER PLAN



Section: Integrated Water Quality and Quantity Management

WATER RESOURCES DIVISION • DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION

1520 EAST SIXTH AVENUE • HELENA, MONTANA 59620 - 2301 • (406) 444-6637

INTRODUCTION

The use and development of water have been essential to the settlement and growth of Montana. To encourage that growth, several laws and policies were developed to protect the rights of individuals to use water for a variety of purposes. These early laws and policies focused on the use of water and, with few exceptions, did not consider the quality of that water as an essential ingredient to continued use.

In response to public concerns about water pollution, additional laws and policies were enacted to protect the quality of Montana's water. While these laws are premised on the need to protect water quality for existing and future purposes, they may, in some instances, preclude future water use needs.

The legal foundation for these separate bodies of law can be found in Montana's Constitution. Article IX, Section 1 of Montana's Constitution requires the state to "maintain and improve a clean and healthful environment ... [and to] provide adequate remedies for the protection of the environmental life support system from degradation and provide adequate remedies to prevent unreasonable depletion of natural resources." Article IX, Section 3 provides that "[a]ll existing rights to the use of any waters for any useful or beneficial purpose are hereby recognized and confirmed," and "[t]he use of all water that is now or may hereafter be appropriated for ... beneficial use ... shall be held to be a public use." The latter phrase implies that additional water use is in the public interest of the state. Also, Article II, Section 3 describing inalienable rights includes "the right to a clean and healthful environment and the rights of ... acquiring, possessing and protecting property." This implies there must be a balance.

In reality, every use of water (and, in fact, natural processes) affects water quality. Similarly, it will be impossible to maintain water quality without impacting opportunities for additional and alternative water uses. The state's existing legal and institutional framework for water management does not adequately take into account the integral relationship between water use and water quality. Tradeoffs between water use and quality are inevitable, yet our laws seek both to maximize water use and enhance water quality rather than seeking an optimal balance between the two for specific water sources.

Increasing the use of water while wanting to improve its quality poses a difficult challenge to Montana's water management. The purpose of this plan is to build from these two potentially conflicting water policy goals a water management framework that in practice finds the proper balance. For a better understanding of how these goals come into conflict, a more detailed background explanation is found in Appendix A.

POLICY STATEMENT

It is the policy and practice of the State of Montana to integrate the management of water use and the protection of water quality to comply with the rights and policies articulated in the Montana State Constitution. Article II, Section 3 states inalienable rights include "the right to a clean and healthful environment and the rights of ... acquiring, possessing and protecting property." Article IX, Section I requires the state to "maintain and improve a clean and healthful environment ... [and to] provide adequate remedies for the protection of the environmental life support system from degradation and provide adequate remedies to prevent unreasonable depletion of natural resources." Article IX, Section 3 provides that "all existing rights to the use of any waters for any useful or beneficial purpose are hereby recognized and confirmed," and "the use of all water that is now or may hereafter be appropriated for ... beneficial use ... shall be held to be a public use." Implementation of this policy shall be accomplished by managing surface and groundwater quantity and quality as an integrated resource. Implementation shall promote the protection and sustainability of the resource for existing and future uses consistent with the state's legal and regulatory framework.

ISSUES, OPTIONS, AND RECOMMENDATIONS

Subsection A: General Integration Issues

Issue 1—Coordinate Permitting

a. Water Quality in the Allocation Process

While Montana water law allows for the consideration of water quality in new permits or change in use applications for quantities of water greater than 4,000 acre-feet and 5.5 cubic feet per second, it is unclear whether the Department of Natural Resources and Conservation (DNRC) has the statutory authority to condition or deny permits or changes on the basis of water quality concerns that fall below these amounts. According to the Water Use Act (Section 85-2-311 (1) (b), Montana Code Annotated (MCA)), when granting a water right permit an applicant must prove by substantial and credible evidence that "the water rights of a prior appropriator will not be adversely affected." DNRC evaluates effects on the water rights of a prior appropriator based on quantity. Therefore, water use permits are not conditioned or denied on the basis of known or potential water quality consequences. Further, when permits are granted, it is not known whether the added withdrawal will affect the water quality of surrounding users or whether that particular user will have water of sufficient quality for his or her intended beneficial use.

Options Recommended

1. Clarify that DNRC has the authority to condition or deny new water use permits and change of use applications based on a preponderance of the evidence and a consideration of whether and to what extent:
   a) The water quality of another appropriator would be adversely affected; or
   b) The use would result in a downgrading of the classification for state waters pursuant to 75-5-301 for that particular stream; or
   c) The ability of discharge permit holder(s) to satisfy effluent limitations would be adversely affected.

   Applications for new water use permits and changes in appropriation rights would only be subject to consideration of these criteria if a valid objection is made accompanied by substantive evidence indicating that these criteria would not be met. The criteria do not apply to current exemptions from water use permitting laws or temporary water quality disturbances caused by construction, maintenance, or other activity covered under the "310" or similar permit processes.
2. DNRC shall notify discharge permit holders of new water use permit or change applications in the vicinity.

Options Considered But Not Recommended

1. Request the Attorney General's opinion on whether DNRC already has the authority to consider water quality in all permits and changes. In preparing this opinion, the Attorney General should consult both DNRC and DHES.
2. Delete the 4,000 acre-feet and 5.5 cubic feet per second limitation and apply the reasonable use criteria to all new water use permits and change of use applications.
3. Reduce the 4,000 acre-feet and 5.5 cubic feet per second limitation to something more reasonable — that is, so the public interest criteria would apply to more water use permit and change of use applications than under existing limitations.
4. Clarify that DNRC has the authority to condition or deny new water use permits and change of use applications by revising Section 85-2-311, MCA, to specify that:
   a) The proposed use of water will not degrade water quality in the watershed to the extent that it would unreasonably disrupt a prior appropriator's use.
   b) The proposed use of water will not adversely affect the water quality of the water in the watershed to the extent that the water right of a prior appropriator is rendered unusable for its prior use.
   c) The proposed use will take into account the effects on the quality of water for existing beneficial uses in the source of supply.
   d) The state's nondegradation policy, articulated in Section 75-5-303, MCA, will not be violated.
   e) DNRC should consider the "public interest" in all such transactions. The "public interest" could be left undefined or limited to a consideration of water quality.
   f) the groundwater allocation would not unreasonably interfere with beneficial use of the aquifer; and
   g) the application of quality criteria is technically and economically balanced.
5. Allow certain state agencies to object to new permits and changes on the basis of water quality.
6. Define minimum streamflows, by watershed, beyond which water use permits would be prohibited. This option could apply to:
   a) New water use permits only.
   b) Both new and existing water use permits.
7. Place a moratorium on new water use permits on "impaired" streams as identified in the biennial report prepared by DHES as required by section 305(b) of the federal Clean Water Act.
8. [1] Consider offstream storage alternatives.

b. Water Allocation in the MPDES

Under the Montana Pollution Discharge Elimination System (MPDES), DHES issues discharge permits for point sources of pollution on the basis of the 7-day/10-year low flow in a particular river or stream. Once the discharge permits are issued, however, DNRC is free to continue granting water use permits for diversionary uses. In some situations, these additional permits for diversionary uses may reduce the streamflow below the 7-day/10-year low flow. In such cases, it is not clear whether the amount of discharge should be reduced or the additional water use permits should be curtailed.

Options Recommended

1. Allow DNRC to condition or deny water use permits and change applications if the proposed use of water would reduce the ability of discharge permit holder(s) to satisfy effluent limitations. DNRC could deny or condition to limit the use of permits or changes when the streamflow falls below the 7-day/10-year low flow.

[1] This option was not recommended because it had already been addressed in the Water Storage section of the State Water Plan.

2. DHES shall notify water right holders of new applications for MPDES permits in the vicinity. (MPDES permits can not impair beneficial uses of prior appropriators.)
3. DHES shall consider present water use, existing water reservations, and planned future development on the stream when issuing MPDES permits.
4. Develop a state policy for source reduction of water pollution; and direct the Natural Resources Information System (NRIS) to work with the Environmental Protection Agency (EPA) technology transfer office to access scientific and technological developments to reduce and eliminate water pollutants.

Options Considered But Not Recommended

1. DHES should develop criteria for the issuance and review of water quality permits that take into account existing and future water uses and water rights.
   a) Require reevaluation of low flow values (7-day/10-year low flows) at the time each MPDES permit is renewed, which is every five years.
2. Require discharge permit holders to apply for an instream flow water use permit to maintain the level of flow necessary to satisfy effluent limitations.
3. Allow DHES to object to new water use permits and changes in existing water rights, and allow DNRC to condition or deny such applications if they would affect the ability of the discharge permit holder to satisfy effluent limitations.
4. Allow discharge permit holders to purchase or lease existing water rights to maintain the level of flow necessary to satisfy effluent limitations.
5.[1] Identify "stream segments of concern" (i.e., streams with low flow, water quality problems) and evaluate the impact of low flows on water quality.
6. Expand the water leasing program to abate MPDES problems.
7. Require an MPDES permit of any discharge with a discrete conveyance (e.g., tailings impoundments).
8. Expedite the water reservation process so that DHES would have reservations to protect water quality.

Issue 2—Administrative Coordination

There currently is no formal mechanism in place for integrating the management of water quantity and quality in Montana. DNRC is responsible for issuing and administering water use permits. DHES is responsible for issuing and enforcing water quality permits, and administering various programs designed to protect water quality. As mentioned previously, there is little to no coordination between these two state agencies in managing the state's water resources.

In addition to DNRC and DHES, several other local, state, federal, tribal, and regional governments play a role in the management of water quantity and quality. While these governments occasionally consult one another and work together on specific projects, no ongoing formal mechanism exists to integrate the management of water use and the protection of water quality between these various levels of government.

a. State Agency Coordination

Options Recommended

1. Initially, DHES and DNRC shall develop an administrative process to ensure that DNRC appropriately consult DHES during the water use permitting process, and that DHES appropriately consult DNRC during the water quality permitting process.
2. As a long term goal, merge the regulatory responsibilities for allocating water and protecting water quality, currently distributed among DHES, DNRC, and the departments of State Lands and Agriculture, into one department.

Options Considered But Not Recommended

1. Consolidate DNRC, DHES, and the Department of Fish, Wildlife and Parks (DFWP) into one department to reduce duplication and provide a more efficient system for managing the state's natural and environmental resources.
2. Develop a "referral system" that would require DNRC to submit applications for water use permits to DHES, and for DHES to submit applications for water quality permits to DNRC.
   a) At a minimum, each department would have an opportunity to review and comment on the pending permit applications.
   b) DNRC and DHES also could be required to reach an agreement on the issuance of potentially problematic permits.
   c) DNRC also could be allowed to veto water quality permits, and DHES could be allowed to veto water allocation permits.
   d) Another slightly different alternative is to create an interagency permit review committee, with adequate funding and staff, to review potentially problematic permits.

[1] This was not recommended because it is already being done.

e) The state could designate one permit coordinator, perhaps a shared position between DNRC and DHES, to facilitate both the water quantity and quality permitting processes.

3. Develop a Memorandum of Understanding between DHES and DNRC with the following agreements:
   a) Allow DHES to work with DNRC on groundwater right permit applications associated with subdivisions or other public water and sewer systems under evaluation by DHES.
   b) Allow DHES and DNRC to initiate planning with local or other government entities on groundwater quantity and quality issues.
   c) Require DHES to notify DNRC when violations of water quality standards have been detected in an aquifer that could impact beneficial uses.
   d) Require DNRC to inform permit applicants of known water quality standard violations.
   e) Provide for joint decisions on water allocation and water quality permits for aquifers designated as controlled groundwater areas.

b. Intergovernmental Coordination

Options Recommended

None. Continue existing efforts to coordinate water quantity and quality management efforts among federal, state, local, and other government agencies.

Options Considered But Not Recommended

1. DNRC and DHES should notify and consult appropriate agencies and interested parties whenever an application is being considered for a water quantity or quality permit.
   a) A "memorandum of understanding" may be required to facilitate this process.
2. Appoint one state agency to serve as a clearinghouse both for water quantity and quality permits and to ensure that all potentially affected interests are informed and have an opportunity to participate in the permitting processes. DNRC and DHES could create a joint position to serve in this capacity.
3. Create an interagency council, including the directors of appropriate agencies, to meet regularly to discuss and resolve problems with the coordination of water quantity and quality permits.
4. Adopt the "coordinated resource management" approach that is used in several local areas to coordinate the management of natural resources among multiple jurisdictions.

Subsection B: Surface Water Issues

Issue 3—Cumulative Impacts

The water allocation process does not recognize or consider the cumulative impact of each water use permit on water quality. Although each water use permit may have minimal impact on the water quality in a particular stream, the cumulative impact of all water use permits in a particular watershed may create a water quality problem.

Options Recommended

1. DHES and DNRC should continue ongoing watershed-specific investigations, including modeling, that facilitate streamflow/water quality management plans. DHES and DNRC should review current and planned investigations to ensure that those watersheds receiving attention are the highest priorities. Joint funding, development, and administration by DNRC, DHES, and federal agencies of such investigations should be pursued.

Options Considered But Not Recommended

1. Identify the maximum amount of allowable pollution for each watershed as a supplement to water quality standards.
2. Enact an efficiency of use criterion for consumptive uses of water. This option could apply to:
   a) New water use permits only.
   b) Both new and existing water use permits.
3. Include the consideration of cumulative impacts in the "public interest criteria."

Issue 4—Water Reservations

Although Montana water law allows water reservations for water quality purposes, the security of such reservations is not totally guaranteed. All water reservations, including those for water quality purposes, must be reviewed at least once every 10 years and, if it is adequately demonstrated in a contested case hearing that the objectives of the reservations are not being met, the Board of Natural Resources and Conservation (BNRC) may revoke or modify the reservation. In addition, if the board finds that the total amount of an instream flow reservation for water quality or any other purpose is not needed to fulfill its purpose, and if the board also finds that a qualified applicant can show that its need outweighs the need of the instream reservation holder, the excess water may be reallocated to the competing applicant. This also would involve a contested case hearing process. The board may not reallocate such instream flow reservations more than once every five years.

Options Recommended

None. DHES can and does seek water reservations for water quality protection purposes. The existing water reservation process is an effective mechanism for integrating water quantity and quality.

Options Considered But Not Recommended

1. Lengthen the 10-year time frame between reviews of water quality reservations, or eliminate these reviews altogether.
2. Develop specific criteria that have to be satisfied to show that a reservation for water quality is not needed.
   a) Clarify that the burden to reduce a reservation for water quality purposes must be at a high threshold.
   b) Clarify that the initial burden of proof should be on the competing applicant.
   c) Require some type of economic compensation if reservations for water quality are reduced.
3. Expand the number and type of entities that may apply for a water reservation — specifically to include industrial users. This would allow industry to apply for instream flow reservations to maintain the minimum flows necessary to satisfy effluent discharge requirements. It also would allow industry the opportunity to reserve instream flows to meet future discharge needs.
4. Eliminate the authority of the BNRC to reallocate water reserved for instream flow purposes not more than once every five years. If this provision of the water reservation law is retained, it should be applied equally and fairly to all reservations, whether they are for instream or out-of-stream purposes.
5. Make reservations for water quality superior to existing water rights.
6. Impose stronger due diligence requirements on consumptive use (i.e., out-of-stream) water reservations. That is, if such a water reservation is not perfected within say 10 years, it no longer would be valid.

Issue 5—Basin Closure

While basin closure provides one mechanism to integrate water use and water quality considerations, only individuals with water rights can initiate the process for closing a basin to further appropriations. Other potentially affected interests that do not have water rights, such as industries, municipalities, outfitters, and recreationists, cannot initiate this process to protect their interests in a given stream or river. It also is not clear what the criteria are for closing a basin, and whether water quality is and/or should be such a criterion.

Options Recommended

1. Allow DHES to petition DNRC to close basins on the basis of water quality concerns consistent with recommendations under Issue 1.

Options Considered But Not Recommended

1. Allow potentially affected interests to petition DNRC to close basins on the basis of water quality concerns.
2. Allow the Department of Fish, Wildlife and Parks to petition DNRC to close basins on the basis of water quality concerns.
3. Develop specific criteria for closing basins to further appropriations.
   a) The criteria should include, at a minimum, a reference to water quantity and quality, along with other considerations.
   b) Develop a proactive mechanism to "trigger" basin closure. For example, conduct a periodic review of the status of water quality in all watersheds to determine whether basin closure is appropriate.
4. Close all basins now.

Issue 6—Non-Point Source Pollution

The largest unregulated pollution of the state's water comes from non-point sources such as agriculture, mining, forestry, urban development, subdivision development, and construction. If the degraded water adversely affects a beneficial use of the receiving water, DHES has the authority under the Water Quality Act to regulate the user. It is less clear whether DNRC has the authority to regulate the water use or the water user.

DHES currently is implementing a voluntary non-point source management program utilizing (1) projects to demonstrate the application of "best management practices" adopted for each source of pollution; and (2) the implementation of education programs to control non-point source pollution. DHES is relying on voluntary approaches to reduce non-point sources of pollution; the most effective approaches to reduce non-point sources of pollution have not been determined. Each demonstration project is being monitored to determine the effectiveness of best management practices, but currently there is no comprehensive system in place for monitoring the impacts of non-point sources of pollution.

Options Recommended

1. Develop best management practices for all activities that contribute to non-point pollution, particularly

subdivisions and construction activities. The development of best management practices should include input by the affected industries, and generally follow the procedures used in the implementation of Montana's recently developed forestry best management practices.

2. Identify incentives to implement best management practices. Incentives could include:
   a) Educational programs.
   b) Technical assistance.
   c) Tax incentives.
3. Develop a comprehensive system to evaluate the compliance and effectiveness of best management practices. At a minimum, the system should include:
   a) A mechanism for determining whether best management practices have been applied. At a minimum, require annual best management practices audits, within priority watersheds identified under recommended Option 1 under Cumulative Impacts, for every category of non-point pollution, including forestry, mining, and agriculture. These audits should be conducted by an interdisciplinary committee that includes all affected interests, as currently occurs with audits of the timber industry best management practices.
   b) Criteria for determining the effectiveness of best management practices once they have been applied.
   c) Demonstration projects to evaluate best management practices.
   d) A mechanism to appropriately modify and improve the best management practices based upon the audits and evaluation process.
4. If the three steps previously outlined are not successful because of a lack of voluntary participation within the affected industries, institute a regulatory approach to the control of non-point sources of pollution.
5. Provide state funds to match federal funds to implement and expand existing non-point source protection programs, including monitoring and enforcement.

Options Considered But Not Recommended

1. Utilize existing groups in local watersheds, such as the conservation districts, to monitor and prevent non-point sources of pollution.
   a) The Natural Resource Information System (NRIS) could support these local watershed groups by developing a data base and associated maps showing the location and extent of non-point sources of pollution.
2. Support reauthorization of the Clean Water Act to fund non-point source assessment and demonstration projects and the Clark Fork River basin non-point source pollution projects.

Subsection C: Ground Water Issues

Issue 7—Controlled Ground Water Areas

Controlled groundwater areas may be established by BNRC based on a proposal from the department or by a petition of at least 20 or one-fourth of the users (whichever is less) of groundwater in a groundwater area. In some instances, state or local agencies may have data which indicates a public health threat; however, these entities are not currently eligible to bring these concerns before BNRC.

Options Recommended

1. Amend the Water Use Act (Section 85-2-506, MCA) to allow state or local agencies, including local water quality districts, to petition BNRC, based on public health concerns, to establish a controlled groundwater area. The board shall give special consideration to aquifers designated as sole source aquifers.
2. Amend the controlled groundwater area statute (Section 85-2-506(2)(e), MCA) to broaden water quality considerations by allowing a petition based on a showing that excessive groundwater withdrawals would cause contaminant migration "or" that a degradation of groundwater quality exists within the groundwater area.

Options Considered But Not Recommended

1. Require all wells to obtain permits prior to drilling to allow review for water quality and quantity impacts.
2. Develop a process through which a local conservation district would be notified prior to a well being drilled. Through a coordinated effort among local, state, and federal agencies with input into groundwater management, the conservation district would issue a permit to proceed. This would create a local data base listing locations of drilled wells and abandoned wells, potential groundwater problems, and any drilling activities underway in the area. When water wells must be drilled under emergency conditions, a process would be developed that would not delay necessary drilling.

Issue 8—Long-term Planning

Montana, like many western states, historically has reacted to groundwater problems in a piecemeal fashion, creating a number of programs and regulatory responses that might duplicate each other. However, it is

more cost-effective to prevent groundwater problems than to react to overdrafts and contamination after the fact. A proactive approach to groundwater management is possible to varying degrees. The focus would be on prevention, public education, streamlining regulation, and more effective and efficient coordination of groundwater quality-quantity management.

Options Recommended

1. The state shall support the proposed State Ground Water Coordination Committee. The committee would include representatives of state agencies involved in groundwater-related activities, and should include federal and local governments, public and private interest groups, and interested citizens. The committee would work in conjunction with the state water planning process. The purpose of the committee would be to develop a state groundwater plan to coordinate groundwater management and identify and address management gaps. The goal would be to prevent groundwater pollution and aquifer overdraft in order to sustain current and future beneficial uses.

   a) The committee will participate in the new EPA process for developing a comprehensive state groundwater protection program. This process should ensure that Montana assumes the lead role and has final jurisdiction in implementing the program.

   b) The committee, through its member agencies, will coordinate with the conservation districts to develop and implement nonregulatory, local groundwater management plans.

2. The legislature should continue to support the intent and appropriate funding for implementation of the Montana Ground Water Assessment Act to facilitate groundwater management and planning.

Options Considered But Not Recommended

1. Legislate the creation of local groundwater management areas. The purpose of groundwater management areas would be to allow planning for specific aquifers in order to (1) protect the quality and quantity of groundwater; (2) meet future water needs while protecting existing water rights; and (3) provide for effective and coordinated management of the groundwater resource.

2. Amend the law to allow local water quality districts to request basin closure, and/or object to new permits based on water quantity or quality concerns.

3. Develop a comprehensive groundwater management plan by conducting a study to (1) evaluate existing Montana water laws, and (2) develop the most effective and efficient process and organizational structure for managing groundwater in Montana at the state and local levels (disregarding current agency responsibilities). A part of the study would evaluate those western states that have water resource agencies with both water quantity and quality jurisdiction. Based on these assessments, determine whether there is a better organizational framework for management of the state's groundwater resource.

Issue 9—Well Construction Enforcement

More than 2,000 water supply wells are drilled and constructed each year in Montana. If not properly constructed and grouted, wells may allow pollutants from land surfaces and from other aquifers to degrade or contaminate groundwater systems. The Board of Water Well Contractors has adopted minimum well construction standards to prevent contamination in order to protect the water supply of well users. DNRC water resources regional office staff are used to enforce well construction standards. Currently, DNRC staff must contact a driller in advance to determine the location for an evaluation. This procedure hinders groundwater quantity and quality management because it does not allow for unannounced random inspections or proper enforcement.

The Board of Water Well Contractors licenses well drillers and investigates complaints. During 1991, 23 written complaints were filed by well owners against 15 drillers. The complaints concerned improper grouting, pumping rates less than those shown on well logs, failure to case a hole, failure to complete a well properly, and muddy well water. Several job sites were closed down for failure to have a licensed individual on site. Approximately 50 construction standard violation letters were mailed as the result of a DNRC regional office review of well log reports.

Options Recommended

1. Direct the Board of Water Well Contractors to require all drillers known to have recently violated construction standards to report the location of all operations to DNRC prior to drilling. The Board of Water Well Contractors should require all drillers, on a rotating basis, to give prior notice of their drilling locations to allow for random inspections.

Options Considered But Not Recommended

1. Authorize an adequate number of well inspector positions that are independent and qualified. Place the positions in DNRC regional offices to enforce well construction standards. The inspectors will report to the Board of Water Well Contractors, which retains the authority for action against violators. Funding

options include the legislature (general fund), fees assessed on water well owners, or fees assessed on well drillers.

2. Require well drillers to call DNRC, toll free, prior to drilling and constructing a water well or to send in a notice card 72 hours in advance. This would allow the regional office staff to randomly check about 10 percent of the wells under construction to ensure compliance with well construction standards. The costs of implementing this option would be associated with the toll-free number and travel time for investigations.
3. Require local county governments to enforce compliance with well construction standards. This approach would be similar to that in place for lifting septic system restrictions and meeting drain field construction standards. Since more than 90 percent of water wells drilled are associated with domestic home use, local county inspectors would be responsible for ensuring compliance both with water well and septic system construction standards.
4. Provide a voluntary service where an authorized county or regional office official can, upon request, inspect and ensure compliance with proper water well construction standards for a fee.

Issue 10—Unplugged Holes

It is not known how many abandoned or unused mineral exploration, geotechnical, or seismic holes exist in Montana. Estimates vary greatly, but agencies and counties agree that thousands of unplugged bore holes exist throughout the state. Abandoned bore holes that penetrate more than one aquifer will result in the drawdown of one aquifer as it flows down gradient into another aquifer. The intermixing of aquifers results in water-level and hydrostatic-pressure declines in the up-gradient aquifer.

The aquifers commonly will have differing water quality and hydrostatic pressures, so more pristine groundwater systems can be degraded by mixing with an aquifer of lesser quality. Land use practices may degrade a shallow groundwater system that can flow down gradient through unplugged holes into a deeper system and introduce contaminants.

Currently, counties are responsible for locating and plugging abandoned holes when a liable company or individual cannot be found. Many times, holes were left by exploration operations from the early to mid-1900s, and the companies no longer exist. Counties do not have the resources to address abandoned bore holes.

The Department of State Lands and the Board of Oil and Gas do have hole-plugging regulations for current operations. However, plugging requirements vary greatly for different types of holes and are enforced inconsistently. Given the probable water quality and quantity impacts to aquifers throughout Montana, the state should take the lead in providing consistent regulations and in plugging holes to protect groundwater for current and future beneficial uses.

Options Recommended

1. Direct the Department of State Lands (DSL) in the area of mining, and the Board of Oil and Gas in the area of oil and gas, to ensure that abandoned or unused mineral exploration, geotechnical, and seismic holes are properly plugged. A high priority should be assigned to areas with known problems from unplugged holes. Incorporate information from public and private sources into an inventory of abandoned and unused bore holes.
2. Encourage use of the resource indemnity trust fund to address nonrenewable resource impacts.
3. The DSL and Board of Oil and Gas shall investigate all hole-plugging requirements and develop a recommendation for a consistent, statewide hole-plugging program. The recommendations should include developing plugging requirements for geotechnical holes and other holes when no regulations exist, and encouraging research into economically feasible and environmentally sound plugging methods and materials.

Options Considered But Not Recommended

None.

Issue 11—Protection from Mining Impacts

Protection of groundwater quality and quantity is an important issue associated with mining. Mining activities, if not properly conducted, have the potential to contaminate groundwater or deplete aquifers. Some mining operations use chemical reagents such as cyanide, acid bromide, and acid chloride, which can leach from the site and pose water quality problems. In addition, mine tailings can leach residual reagents as well as heavy metals such as arsenic.

Currently, mine groundwater discharge plans are reviewed by the Department of State Lands, with oversight by DHES. The Department of State Lands investigates complaints of water quantity and quality impacts related to mining. If a complaint related to a coal mine is filed, the Coal and Uranium Bureau must report its findings to the complainant within 90 days of receipt of the complaint. If mine-related activities are responsible for the loss either of water quantity or quality, suitable water must be provided immediately. If the unsuitable water is not permanently replaced, the operator's mine permit will be suspended until substitute water is made available.

If a complaint related to a hard rock mine is filed, the Hard Rock Bureau processes the complaint as rapidly as possible, although the Metal Mine Reclamation Act does not define time frames and does not require immediate water replacement. However, the Metal Mine Reclamation Act does provide for an owner to recover damages for a water loss of quantity or quality. The Hard Rock Bureau is required to investigate the complaint and may require the operator to conduct additional studies. If the finding concludes that the loss of water quality or quantity is caused by the operation, the operator must replace the water in like quality and quantity, and the owner can recover damages. If the water is not replaced, the operator's permits may be suspended until substitute water is supplied.

Due to the often-complex nature of the groundwater resource, ensuring its protection through statutes, regulations, and investigative procedures may be difficult. When investigating complaints, the agencies may find that baseline studies have not always been adequate to resolve specific questions of impacts to groundwater quality and quantity that arise after operations begin.

Options Recommended

1. Amend the administrative rules for the Metal Mine Reclamation Act (Section 26.4.100 et seq., ARM) to include the Hard Rock Bureau guidelines which define the scope and parameters of study for baseline investigations.
2. The Department of State Lands shall encourage mining companies to solicit citizen participation during the early stages of large-scale mining and exploration programs prior to application submittal. Public input during the development of baseline inventory plans may protect both mining companies and citizens during investigations of impacts to groundwater resources once activities begin. While it is recognized that the Department of State Lands must retain final approval of baseline data, public comments should be incorporated into the planning process.
3. Due to the complexity and late introduction of this issue in the planning process, amendments to the Metal Mine Reclamation Act are not recommended at this time. Recognizing the depth and importance of mining-related concerns, the following five options, considered but not recommended, should be taken up for further study in a future state water planning cycle or by a legislative body as appropriate.

Options Considered But Not Recommended

1. Amend the Metal Mine Reclamation Act to require adequate bonding to replace or restore the quantity or quality of water resources that are reasonably foreseen to be at risk.
2. Amend the Metal Mine Reclamation Act to establish appropriate time frames for hard rock complaint response and resolution.
3. Amend the Metal Mine Reclamation Act to establish proper limitation of the confidentiality clause pertaining to small miners exclusions and exploration licenses to specific proprietary geologic information. Define proprietary geologic information and large-scale exploration projects through the rule-making process.
4. Amend the Metal Mine Reclamation Act to allow the Department of State Lands to collect fees from mining companies to fund investigations of alleged mine-related groundwater damages.
5. Authorize the Department of State Lands to use interest on mining bonds to fund investigations of alleged groundwater damages from mining operations.

Issue 12—Information/Education

Home, ranch, and business owners throughout Montana are faced with many decisions that affect their water quality and quantity such as well location, proper well construction, quality testing, and septic system placement. It also may be difficult for citizens to comply with laws and regulations when they are not aware of pertinent information; for example, where to properly dispose of waste oil or how often they should pump their septic tanks. Widespread dissemination of resource-related information would assist individuals in protecting their water resources.

Options Recommended

1. The Montana Watercourse, in consultation with appropriate agencies, University Extension, Ground Water Information Center, and Natural Resources Information System, shall develop avenues for the dissemination of water-related information and for water resource public education. These strategies may include:
   a) Requesting the Water Education for Teachers (WET) program to incorporate information on groundwater protection strategies.
   b) Working with counties, conservation districts, realtors, county extension agents, and other local entities to distribute DNRC's well brochure and other informational materials.
   c) Developing radio and television public service announcements related to water quality and quantity conservation.

d) Providing a toll-free number to answer or direct water-related questions.

2. Require state agencies to deposit groundwater pollution data and information in the Natural Resources Information System for general access.

Options Considered But Not Recommended

1. Hire a water education/information specialist.

PLAN IMPLEMENTATION

Legislative Action

The legislature should amend Section 85-2-311, MCA, to specify that DNRC has the authority to condition or deny new water use permits or change applications based on a preponderance of the evidence and a consideration of whether and to what extent:

a) The water quality of another appropriator would be adversely affected; or

b) The use would result in a downgrading of the classification for state waters pursuant to 75-5-301 for that particular stream; or

c) The ability of discharge permit holder(s) to satisfy effluent limitations would be adversely affected.

Applications for new water use permits and changes would only be subject to consideration of these criteria if a valid objection is made accompanied by substantive evidence indicating that these criteria would not be met.

The legislature should adopt legislation that allows DNRC to deny or condition water use permits and change of use applications if the proposed use of water would reduce the ability of discharge permit holder(s) to satisfy effluent limitations. The legislation should specify that DNRC could deny or condition to limit the exercise of the permits or changes when the streamflow falls below the 7-day/10-year low flow.

The legislature should develop a state policy for source reduction of water pollution.

In a future session as appropriate, the legislature should reorganize state agency duties to merge the regulatory responsibilities for allocating water and protecting water quality, currently distributed among DHES, DNRC, and the departments of State Lands and Agriculture, into one department.

The legislature should amend Section 85-2-319, MCA, to allow DHES to petition DNRC to close basins to additional appropriations on the basis of water quality concerns.

The legislature should provide appropriate funding to expand the state's non-point source pollution program, including monitoring and enforcement.

The legislature needs to amend the Water Use Act (Section 85-2-506, MCA) to allow state and local agencies and local water quality districts to petition BNRC to establish a controlled groundwater area.

The legislature needs to amend the Water Use Act (Section 85-2-506(2)(e), MCA) so that a petition for a controlled groundwater area may be based on a showing that excessive groundwater withdrawals would cause contaminant migration or that a degradation of groundwater quality exists.

The legislature needs to support the intent of and appropriate funding for implementation of the Montana Ground Water Assessment Act.

The legislature needs to direct the Board of Water Well Contractors to require all drillers known to have recently violated construction standards to report the location of all operations to DNRC prior to drilling, and further require all drillers, on a rotating basis, to give prior notice of their drilling locations to allow for random inspections.

The legislature needs to allocate appropriate resource indemnity trust funds to address nonrenewable resource impacts including a plugging program for abandoned and unused bore holes.

Administrative Action

DNRC shall develop a process to notify discharge permit holders of new water use permit or change of use applications in the vicinity.

DHES shall develop a process to notify water right holders of new MPDES applications in the vicinity.

DHES shall develop a process to consider present water use, existing water reservations, and planned future development on the stream when issuing MPDES permits.

DHES and DNRC shall develop an administrative process to ensure that DNRC appropriately consult DHES during the water use permitting process, and that DHES appropriately consult DNRC during the water quality permitting process.

The Natural Resources Information System shall work with the EPA technology transfer office to access and make available information on new scientific and technological developments to reduce and eliminate water pollutants.

DHES and DNRC shall continue ongoing watershed-specific investigations, including modeling, that facilitate streamflow/water quality management plans. The departments shall review current and planned investigations to

ensure that investigations are conducted in the highest priority watersheds.

DHES, in cooperation with affected industries, shall develop "best management practices" for all activities that contribute to non-point source pollution; identify incentives to implement "best management practices;" develop a comprehensive system to evaluate the effectiveness of "best management practices;" and implement a regulatory approach to controlling non-point sources of pollution if the voluntary measures previously outlined are not adequately implemented by affected industries.

BNRC needs to give special consideration to sole source aquifers in establishing controlled groundwater areas.

DHES and DNRC need to create a State Ground Water Coordination Committee. The committee would include representatives of state agencies involved in groundwater-related activities, and should include federal and local governments, public and private interest groups, and interested citizens. The committee would work in conjunction with the state water planning process.

The State Ground Water Coordination Committee shall develop a state groundwater plan to coordinate groundwater management, and identify and address management gaps. The initial tasks of the committee are to:

1. Participate in the EPA groundwater initiative by facilitating the development of a comprehensive state groundwater protection program.
2. Cooperate with conservation districts in the development and implementation of local groundwater management plans.

The Board of Water Well Contractors shall establish a system requiring all drillers known to have recently violated construction standards to report the location of all operations to DNRC prior to drilling. The Board should require all drillers, on a rotating basis, to give prior notice of their drilling locations for a specified time to allow for random inspections.

DNRC needs to develop an efficient system to receive drilling locations from well drillers for use by well inspectors.

The Department of State Lands and the Board of Oil and Gas shall initiate a program to plug abandoned or unused mineral exploration, geotechnical, and seismic holes. Efforts should focus on areas with known problems from unplugged holes. The department and board will collect information from public and private sources to inventory abandoned and unused holes.

The Department of State Lands and Board of Oil and Gas shall investigate mineral exploration, geotechnical, and seismic hole-plugging requirements, and develop recommendations for consistent standards. The recommendations should include plugging requirements for geotechnical and other holes when no regulations exist. The department and board should encourage research into economically feasible and environmentally sound plugging materials.

The Department of State Lands shall amend the Metal Mine Reclamation Act rules (Section 26.4.100 et seq., Administrative Rules of Montana (ARM)) to include the Hard Rock Bureau guidelines for hydrologic studies.

The Department of State Lands shall encourage mining companies to involve the public at the earliest stages of large-scale mining and exploration programs prior to application submittal.

The Montana Water Course needs to request the Water Education for Teachers program to incorporate information on groundwater protection strategies; work with counties, conservation districts, realtors, county extension agents, and other local entities to distribute DNRC's well brochure to new home builders and other citizens; develop public service announcements related to groundwater quality and quantity conservation; and provide a central contact to direct water-related questions.

DHES , DNRC, the Department of State Lands, and the Department of Agriculture need to deposit groundwater pollution data in the Natural Resources Information System for general access.

Financial Requirements and Funding Strategies

The State of Montana's current fiscal problems were recognized in the development of these recommendations. Recommendations were made to resolve the issues as effectively and inexpensively as possible. Also considered was whether doing less now could lead to much greater costs in the future. For example, there is some federal interest in addressing this issue if state water management efforts are found lacking. If nothing is done, more drastic federal measures, with larger accompanying costs, could be imposed.

Many of the costs associated with implementing these recommendations will have to be absorbed within existing budgets, but some of the recommendations cannot be implemented without additional permanent staff. Two new positions are proposed at an additional cost of about $100,000 per year, including benefits. It will be up to the Legislature to decide whether the public benefits are worth this and other less tangible costs.

The first new position is proposed to implement the recommendations for coordinating the water use and MPDES permitting processes. This position would be

jointly funded by DNRC and DHES, and initially would develop processes for notification of water rights and discharge permit holders, considering future water use in the MPDES permitting, and state agency coordination. In the long term, this position would provide technical expertise for the consideration of water quality impacts in the evaluation of water use permit applications, and future water use considerations in the evaluation of MPDES permit applications.

The second new position is proposed to implement the recommendations for Issue 6, Non-Point Source Pollution. This position would be assigned to DHES. Almost all of the funds currently provided for non-point source pollution programs come from the federal government as EPA "319" grants. These 319 monies should be used to develop, implement, and audit the success of BMPs. State funds used for this new position would be used to match additional EPA grants and eliminate the need for DHES to compete for state grant funds through the DNRC-administered Water Development, Renewable Resource, or Reclamation and Development programs.

One-half of an FTE within DHES has already been reallocated to implement some of the recommendations under Issue 8; specifically, to develop the Comprehensive State Ground Water Plan. This position will provide staff assistance to the State Ground Water Coordination Committee, and is being funded with EPA grant funds.

Other recommendations should be implemented with existing funding from the Water Development, Renewable Resource, and Reclamation and Development programs, or from direct appropriations from the RIT interest account. These include the recommendations to address issues 3, 8, 10 and 12 for watershed specific investigations, general resource assessment, abandoned hole plugging, and public education projects.

There will be some definite but unmeasurable costs associated with implementing the other recommendations, but no funding increases are requested for doing so. Examples of these are the costs to revise permit application forms, additional notification costs (mail), staff time to resolve objections related to adverse water quality affects related to new water use permits and changes (depending on the number of objections), and hearings costs to consider additional basin closures and controlled groundwater areas (depending on the number of petitions). Costs will also be absorbed by private individuals for such things as complying with additional information requirements in completing and defending permit applications, delays in processing permits because of additional review requirements, and for well drillers having to notify DNRC for random inspections.

BIBLIOGRAPHY

Department of Health and Environmental Sciences. 1991. *State of Montana Nonpoint Source Management Plan.*

Getches, David H., Lawrence J. MacDonnell, and Teresa A. Rice. 1991. *Controlling Water Use: The Unfinished Business of Water Quality Protection.* Natural Resources Law Center, University of Colorado School of Law.

Hobbs, Gregory and Bennett W. Raley. 1989. "Water Quality Versus Water Quantity: A Delicate Balance," *Thirty-fourth Annual Rocky Mountain Mineral Law Institute* .

_____. 1989. "Water Rights Protection in Water Quality Law." *University of Colorado Law Review* 60:841-900.

Tarlock, A. Dan. 1991. *Law of Water Rights and Resources.* Clark Boardman Company.

Plan Implementation Summary

Action	Responsibility	Deadline
SUBSECTION A: General Integration Issues		
Issue 1—Coordinate Permitting		
Clarify DNRC authority to consider adverse water quality affects in permit and change process	Legislature	May 1993
Develop process to notify discharge permit holders and water right holders of new applications when appropriate	DNRC and DHES	Dec. 1993
Develop a source reduction pollution policy	Legislature	May 1993
Access EPA technology transfer office	NRIS	July 1993
Develop process to consider present and future water uses in DHES permit decisions	DHES and DNRC	Mar. 1994
Issue 2—Administrative Coordination		
Develop consultation process	DNRC and DHES	Sept. 1993
Merge all water regulatory responsibilities	DHES,DNRC,DoAg, and DSL	May 1995
SUBSECTION B: Surface Water Issues		
Issue 3—Cumulative Impacts		
Continue watershed-specific investigations and planning	DHES and DNRC	Ongoing
Issue 4—Water Reservations		
Continue existing process	BNRC	Ongoing
Issue 5—Basin Closure		
Allow DHES to petition to close basins	Legislature	May 1993
Issue 6—Non-point source pollution		
Develop best management practices (BMP)	DHES	Mar. 1994
Identify BMP incentives	DHES	Mar. 1994
Develop BMP evaluation system	DHES	Mar. 1994
Implement BMP regulation	DHES	As Needed
Provide state funding for NPS program	Legislature	May 1993
SUBSECTION C: Ground Water Issues		
Issue 7—Controlled Ground Water Areas (CGWA)		
Allow state and local agencies to petition for CGWA	Legislature	May 1993
Allow CGWA petition based on migration "or" degradation	Legislature	May 1993
Issue 8—Long-term planning		
Establish State Ground Water Coordination Committee (SGWCC)	DHES and DNRC	Dec. 1992
Develop a state comprehensive groundwater plan	SGWCC	Dec. 1994
Assist conservation districts with local groundwater planning	SGWCC	As needed
Support funding for groundwater assessment program	Legislature	May 1993
Issue 9—Well Construction Enforcement		
Develop drilling notification system	BWWC and DNRC	Mar. 1993
Issue 10—Unplugged Holes		
Initiate hole-plugging program and inventory	DSL and Board of Oil & Gas	Dec. 1992
Encourage use of RIT funds for nonrenewable resource impacts	Legislature	May 1993
Develop consistent hole-plugging requirements	DSL and Board of Oil & Gas	Dec. 1993
Issue 11—Protection from mining		
Amend rules to reflect hydrologic study guidelines	DSL	Mar. 1993
Encourage mining companies to obtain early public input	DSL	Ongoing
Issue 12—Information/Education		
Initiate increased avenues for water-related information/education	Montana Water Course	Dec. 1992
Initiate reporting of groundwater data to NRIS	All agencies & NRIS	Dec. 1992

APPENDIX A:
Background

BACKGROUND

Water Use Law

Water use in Montana is guided by the Prior Appropriation Doctrine—that is, first in time is first in right. A person's property right to a specific quantity of water depends on when the use of water began. The first person to use water from a source established the first right, the second person could establish a right from the water left, and so on. During dry years, the person with the first right has the first chance at available water to the get the full amount of that right. The holder of the second right would have the next chance, and so on. In addition, the water user's water right is limited to the amount of water that is beneficially used.

The 1973 Montana Water Use Act significantly changed the water rights laws in a number of ways. First, all water rights existing prior to July 1, 1973 were to be finalized through an adjudication process in state courts. Second, a permit system was established for obtaining water rights for new or additional water developments. Third, a centralized records system for all water rights was established. (Prior to 1973, water rights were recorded, but not comprehensively or consistently, in county courthouses throughout the state.) Finally, a system was provided for public entities to reserve water for future beneficial uses or to maintain minimum streamflows.

In 1979, the legislature passed Senate Bill 76, modifying the statutes that governed how the pre-1973 water rights would be adjudicated. The new law required that everyone claiming those existing water rights had to submit those claims to the Department of Natural Resources and Conservation (DNRC). More than 200,000 claims were received. Since all of these claims cannot be adjudicated at once, the claims are being decreed systematically by drainage basin. Each claim is examined by DNRC and the Montana Water Court for completeness and accuracy prior to issuance of a decree (or decision).

New water users must apply for a permit from DNRC, with certain exceptions. The permit must be applied for and received before construction of diversion begins or water is diverted from any surface water source. The applicant must provide evidence concerning the proposed system design and operation, water availability, and the effects on existing water rights.

The exceptions to the general permitting requirements have to do with the amount of water being used. Small livestock reservoirs or pits holding less than 15 acre-feet of water and located on non-perennial flowing streams may be constructed first and applied for within 60 days of completion. A permit then will be issued. Also, no permit is required to develop a well or spring producing 35 gallons per minute or less, however, a notice of completion must be filed on these wells to establish a water right.

Large new appropriations have to meet more stringent approval requirements. Groundwater appropriations of more than 3,000 acre-feet per year, except for municipal or other public water supplies or for irrigation of cropland owned and operated by the applicant, must be approved by the legislature. Applications to appropriate 4,000 acre-feet a year and 5.5 cubic feet per second or more assume a higher burden of proof and, in addition to being a beneficial use, must be a "reasonable" use, subject to more stringent criteria.

It also is possible to change a water right to a new or different use and transfer it to another person. Changes in water rights must be approved by DNRC, with that approval dependent on the applicant proving that criteria similar to those for a new appropriation will be met. Again, except for very large new appropriations or changes, those criteria do not include a consideration of water quality effects.

Public entities, such as the Department of Health and Environmental Sciences (DHES), can apply for water reservations for future uses, including needs for maintaining a minimum instream flow for water quality dilution purposes. Such water reservations have priority as of the date a correct and complete application is received, unless special legislative provisions apply. Instream flow reservations also are subject to a statutory limit of one-half the average annual streamflow on gauged streams.

As water supplies become fully appropriated, there are mechanisms in the law to limit new appropriations further. Basins can be "closed" to new appropriations by the legislature or through rulemaking by DNRC upon receipt of a petition by the current water users. The petition must show, and DNRC must determine, that there are no unappropriated waters in the source of supply, the rights of prior appropriators will be adversely affected by further appropriations, or that further uses will interfere unreasonably with other planned uses or developments for which a permit has been issued or for which water has been reserved.

The second mechanism for placing greater controls over heavily appropriated waters is through controlled groundwater areas. It is possible to close an aquifer to further appropriations or restrict or condition water allocations. Controlled groundwater areas can be created by the Board of Natural Resources and Conservation by petition of water users or upon the suggestion of DNRC. Controlled groundwater areas may be created if groundwater withdrawals are in excess of recharge, excessive withdrawals are expected in the future because of recent consistent and significant increases in withdrawals, disputes in priority rights or amounts of use are in progress, groundwater levels are declining or have declined excessively, or if contaminant migration and a degradation of groundwater quality are occurring because of excessive withdrawals.

Water Quality Protection Law

Numerous laws and regulatory programs in Montana control activities to protect water quality. There are laws that regulate discharges to surface water, streambed disturbance, mining operations, hazardous waste, underground storage tanks, septic systems, and almost every other activity that poses a threat to water quality. Most of these laws and programs are administered by DHES.

The Water Quality Act (Section 75-5-101, MCA) is the primary water pollution control authority in Montana. The Act states that it is public policy to

> conserve water by protecting, maintaining, and improving the quality and potability of water for public water supplies, wildlife, fish and aquatic life, agriculture, industry, recreation and other beneficial uses; and to provide a comprehensive program for the prevention, abatement and control of water pollution.

To help implement water quality protection programs, DHES has adopted water quality standards. The standards establish maximum allowable changes in surface water quality based on the uses of that water, and establish a basis for limiting the discharge of pollutants. The water quality standards are designed to protect existing and future beneficial uses of water.

The Montana Pollution Discharge Elimination System (MPDES) focuses on point sources of pollution to surface water. Under this system, DHES issues permits for point sources of pollution to ensure compliance with water quality standards.

The non-point source pollution program addresses non-point sources of pollution resulting from land-use activities. Under this program, DHES has developed a non-point source pollution management program as required by Section 319 of the federal Clean Water Act. The management program, which has been approved by the Environmental Protection Agency (EPA), emphasizes demonstration projects and education on the implementation of "best management practices" and other methods to reduce non-point sources of pollution. DHES is actively implementing the program, including monitoring and evaluating best management practices.

DHES also is responsible for administering Section 401 of the federal Clean Water Act. This means that any activity requiring a federal permit or license must be certified by DHES as in compliance with Montana's water quality standards. For the most part, this authority applies to federal dredge and fill permits (404 permits) and activities requiring licenses from the Federal Energy Regulatory Commission, such as hydroelectric dams.

Private activities that disturb the banks or beds of streams are regulated by local conservation districts under the "310" law. Such activities include temporary disturbances, such as construction or maintenance activities for irrigation diversions.

The 1991 Legislature also provided for creation of local water quality districts. Such districts have limited regulatory authority, and are primarily intended to provide funding to locally monitor and plan for the protection of water quality sources of particular concern to the people in those areas.

The Montana Ground Water Pollution Control System (MGWPCS) (Section 16.20.1001, ARM) is a regulatory program to control all otherwise unregulated sources of groundwater pollution. Important aspects of the MGWPCS rules are groundwater quality standards, a nondegradation requirement, and a permit system. Sources of groundwater pollution that obtain permits from other programs or agencies, such as for hazardous waste treatment facilities or mines, are not required to obtain a MGWPCS permit. However, those operations must satisfy the MGWPCS standards and the nondegradation policy. While the nondegradation policy applies to groundwater, existing data is inadequate to determine the quality of groundwater on a regional basis.

The laws protecting the quality of domestic (or drinking) water are administered by DHES and include the Public Water Supply Act (Section 75-6-101, MCA) and the Sanitation in Subdivisions Act (76-4-101, MCA). Water systems that serve 10 or more families or 25 or more persons at least 60 days a year are considered public water supplies and must be approved under the first act. Individual and multiple-family water supply systems constructed on subdivided parcels of less than 20 acres are subject to DHES review under the latter act.

Groundwater quality also is addressed in the Agricultural Chemical Ground Water Protection Act passed by the 1989 Legislature. Under this Act, DHES is responsible for

developing and enforcing groundwater quality standards for agricultural chemicals. DHES also is charged under this Act with monitoring, promoting research, and providing public education in cooperation with universities and other state agencies. The Department of Agriculture is to develop and enforce agricultural chemical groundwater management plans aimed at preventing groundwater contamination from agricultural chemicals. Both agencies are publishing rules to implement their respective responsibilities under this Act.

The Department of State Lands regulates mining operations to minimize and reclaim impacts to groundwater quality and quantity. Both the Department of State Lands and DHES ensure that mining operations are conducted in compliance with the Montana Environmental Policy Act and the Water Quality Act. Coal mining permit applications must include a detailed description of pre-mine hydrology and a reclamation plan that minimizes "disturbance to the hydrologic balance at the mine site and in associated off-site areas and to the quality and quantity of water in surface water and groundwater systems both during and after..." mining (Section 82-4-231, MCA). Coal and uranium prospecting operations must be conducted to completely avoid degradation or diminution of any existing or potential water supply.

Hard rock mining in Montana is regulated under the Metal Mine Reclamation Act (82-4-301, MCA) and the Water Quality Act. As with coal applications, hard rock permit applications must include baseline studies that characterize the existing hydrologic regime. In addition, hard rock applications must include operating and reclamation plans that demonstrate how surface and groundwater will be protected to ensure long-term compliance with Montana's Water Quality Act. These plans are supplemented by monitoring requirements that agencies use to track the effectiveness of prior planning and implementation. Recovery of damages for a water loss in quantity or quality is provided for if an investigation establishes that a hard rock mining operation is responsible for the loss.

Water Quality Considerations in Water Quantity Allocation

Water quality is integrated into the allocation of water in three specific ways. The first is through the reasonable use criteria (Sections 85-2-311 and 402, MCA). DNRC must consider impacts to water quality for any water use permit or change applications involving more than 4,000 acre-feet per year and 5.5 cubic feet per second. The reasonable use criteria have not been used to deny or condition any new permits or changes.

The second way in which water quality is integrated into the water allocation process is through the water reservation process. The water reservation process allows unappropriated water to be reserved for a variety of purposes, including water quality (Section 85-2-316, MCA). DHES applied for and received a water reservation for water quality purposes in the Yellowstone River basin, and in the upper Missouri River basin above Fort Peck Reservoir.

It also is possible to close a groundwater aquifer to further appropriations or restrict or condition groundwater allocations on the basis of water quality concerns by establishing a controlled groundwater area. Only two controlled groundwater areas have been created sine the law was passed in 1967: South Pines near Terry and Larson Creek in the Bitterroot drainage. No controlled groundwater areas have been created due to water quality concerns.

Water Quantity Considerations in Water Quality Protection

Water use considerations are integrated into water quality protection considerations in limited ways. Generally, water quality protection considers the levels and amounts of existing water use, but does not consider the needs for additional water consumption in the future.

Surface water quality standards for specific stream reaches are classified by the types of beneficial uses the water is intended to support. Waters that currently support uses requiring higher qualities of water assume higher standards of protection. Over time, it is intended that all waters will meet the highest standards for uses which they would naturally be able to support. But in attaining the highest capabilities of use, the possibility of actual use for some consumptive purposes may be further restricted.

Discharge permits are issued assuming there will be some dilution by streamflow. The amount of flow is calculated based on the 7-day/10-year low flow, and stream depletions for existing uses are assumed to continue as part of the low flow calculation. However, there is no consideration given to the possibility that additional depletions could occur in the future, reducing the dilution factor and conceivably putting dischargers in the position of violating the terms of their discharge permits as new uses and dry periods occur.

Public Water Supply Act standards require that public supply wells be tested to demonstrate not only that the water is of adequate quality, but that it can produce a sufficient quantity of one and one-half times the desired low flow rate. Small water systems covered under the Sanitation in Subdivision Act must provide a sustained yield of at least eight gallons per minute over a two-hour period or five gallons per minute over a four-hour period. The approval or disapproval of a domestic water supply system by DHES is independent of a water right decision by DNRC.

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ENVIRONMENTAL
QUALITY COUNCIL

A PLAN

for the

RESTRUCTURING

of the

MONTANA UNIVERSITY SYSTEM

WATER RESOURCES CENTER

Prepared for the

WATER POLICY COMMITTEE

by the

MONTANA UNIVERSITY SYSTEM

October 1992

BACKGROUND

The Montana University System Water Resources Center was established by the Board of Regents in 1964 and rechartered in 1985. As established by the charter, the objectives of the Center are to "carry out a program of research, information transfer and other educational activities to benefit persons and organizations involved in the management, use and/or conservation of water in Montana". The Montana Water Center is one of 54 such institutes provided for under Section 104 of the Water Resources Research Act and located at Land Grant Universities in each of the 50 states, District of Columbia and U.S. Trust Territories.

The Water Policy Committee of the Montana Legislature is responsible for the oversight of many program elements relating to water resources in Montana, including programs in water research. The 1990-91 biennial report of the Water Policy Committee requested that the University System restructure the Water Center to make it more responsive to the water research and education needs of the state. Specifically, the Water Policy Committee recommended that the Water Resources Center should:

- Become vitally involved in all water issues in Montana.
- Foster and nurture a network of water researchers and water research users in the state.
- Become the focus of water research in Montana.
- Pursue externally funded research through an aggressive grant proposal writing program.
- Facilitate the development of academic programs in Water Resources.
- Maintain an aggressive information transfer program.

The plan described in the following pages of this document was developed jointly by the Vice Presidents responsible for research at Montana State University, the University of Montana and Montana College of Mineral Science and Technology, and represents the University System's response to the Water Policy Committee's request.

In developing this plan, the Vice Presidents incorporated much of the work of the MSU Water Initiatives Committee. This Committee was appointed by the MSU Vice President for Research in January, 1991, to review the role of MSU in water resources in Montana. The Committee produced a report entitled **REPORT OF THE WATER INITIATIVE COMMITTEE** dated June 1992, which should be considered a companion document to this current proposal. The Goals and Objectives established for MSU by the Water Initiatives Committee were considered appropriate for the University System effort by the Vice Presidents and are incorporated as the Goals and Objectives of this plan. These Goals and Objectives are restated as follows:

EDUCATION GOAL: Develop strong, well-known, coordinated, on- and off-campus educational programs for students, faculty, agencies, and the public.

Objective 1: Develop strong, integrated, multi-disciplinary undergraduate and graduate water education programs taking maximum advantage of current faculty resources at each campus..

Objective 2: Develop a continuing water-education program for scientists, engineers, technologists, managers, decision makers, and water users.

Objective 3: Formulate a plan to fund development of long-term water education.

RESEARCH GOAL: Develop strong disciplinary and multi-disciplinary, basic and applied research programs relevant to important problems in the state, region and nation.

Objective 1: Develop proactive grant-proposal-assistance programs.

Objective 2: Develop plans to facilitate issue-oriented water research.

Objective 3: Facilitate the development of multi-disciplinary research teams.

COMMUNICATION GOAL: Enhance a strong communication and coordination network for water education and research programs between the campus, the public, and state and federal agencies to stimulate the educational and research goals.

Objective 1: Foster a two-way communication system with the public, state, and federal agencies to identify issues, concerns, research, and education needs and results.

Objective 2: Identify a structure to foster exchange of information, needs, and opportunities regarding water to faculty, students, water users, managers, and decision makers in the state.

The plan presented in this document addresses the restructuring of the Water Center as a means of implementing these Goals and Objectives. The proposed system-wide organizational structure is outlined in Figure 1 on the following page. This structure contains both new and existing functions and is designed to forge a stronger partnership between the state water community and the University System. The structure is arranged in three tiers relating to: (1) policy development, (2) University System programs, and (3) individual campus programs. A more detailed description of this organizational structure is presented in the following sections of this plan.

POLICY LEVEL

Policy development and oversight is a new element designed to provide coordination, to insure relevance to state priorities, and to monitor progress toward the goals stated above. With this element in place, policy for Water Center programs will be developed by university administration with direct input from top administration in the state agencies.

EXECUTIVE COUNCIL

The Water Center will be governed by an Executive Council composed of the:

* Vice Pres. for Research and Creative Activity (MSU), Chair
* Assoc. Provost for Research and Economic Development (UM)
* Vice Pres. for Academic Affairs and Research (Tech)

The Executive Council will establish policy for the Water Center and will provide overall guidance and oversight to the Water Center's programs. The Executive Council will meet as often as necessary to carry out its functions, but will meet no less than annually with the Policy Advisory Committee. The Water Center will provide staff for the Executive Council.

Fig. 1 PROPOSED ORGANIZATIONAL STRUCTURE MONTANA University System WATER CENTER

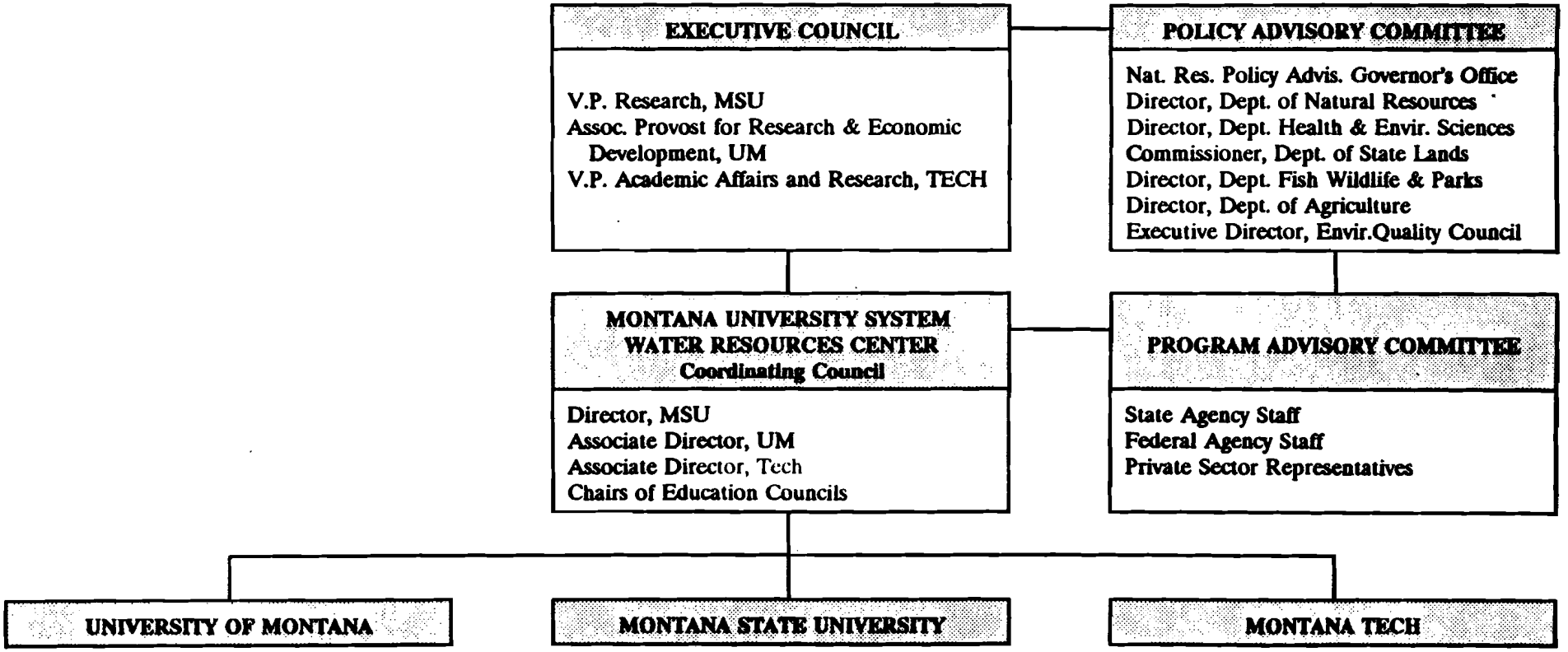
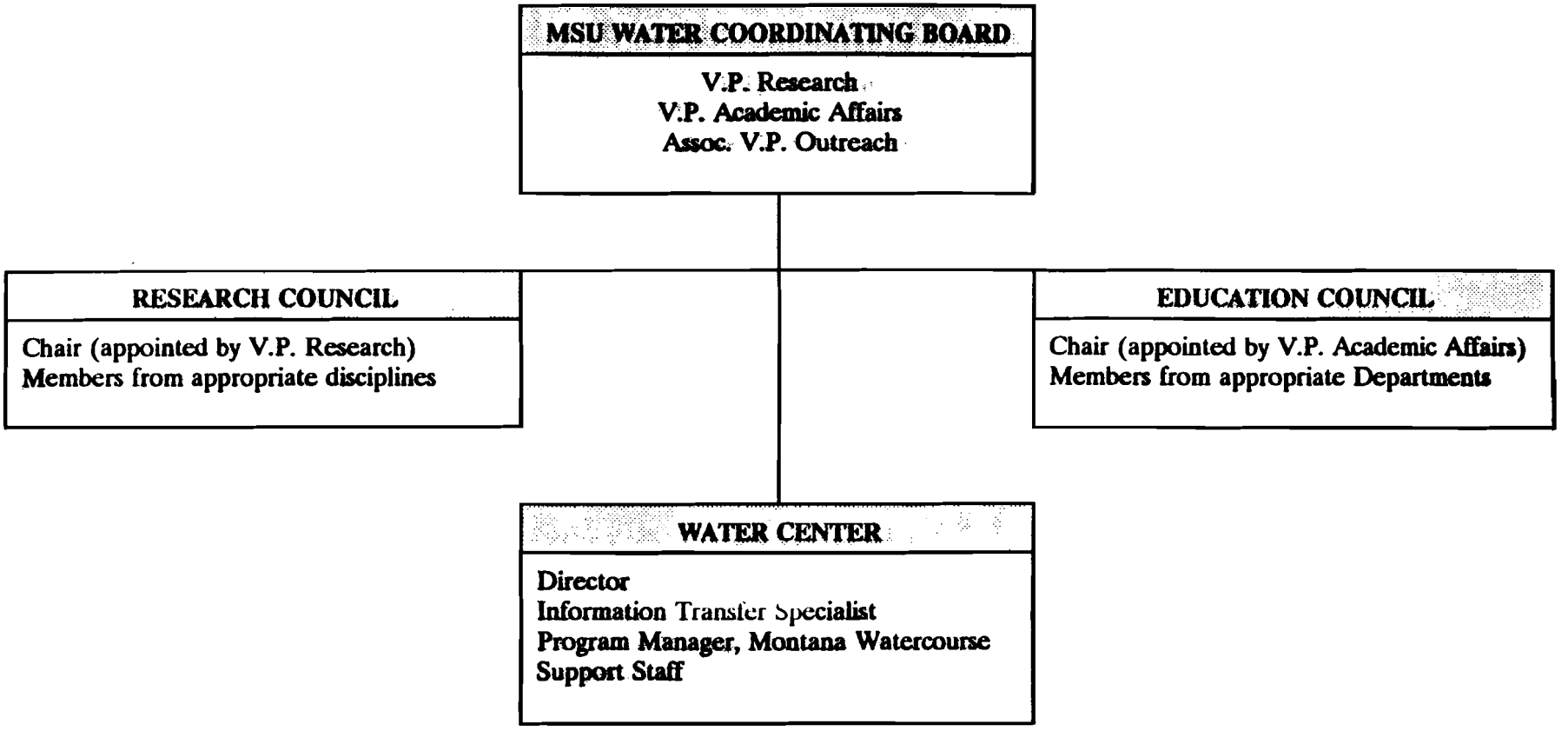


Fig. 2 PROPOSED ON-CAMPUS STRUCTURE FOR MONTANA STATE UNIVERSITY



Similar structure will be developed by UM and MT TECH.

POLICY ADVISORY COMMITTEE

In performing its policy and oversight functions, the Executive Council will seek advice and council from a Policy Advisory Committee composed of the following:

* Natural Resources Policy Advisor, Office of the Governor
* Director, Dept. of Natural Resources and Conservation
* Director, Dept. of Health and Environmental Sciences
* Commissioner of State Lands
* Director, Dept. of Fish Wildlife and Parks
* Director, Dept. of Agriculture
* Executive Director, Environmental Quality Council

The Policy Advisory Committee will assist the Executive Council in identifying areas where university/agency cooperation and coordination can be most fruitful and in determining priority areas for concentrating Water Center activities. The Agency Directors may choose to designate an appropriate Division Administrator within their agency to serve in their place as the agency representative on the Policy Advisory Board.

UNIVERSITY SYSTEM LEVEL

The Water Center program will be developed at the University System level by a Coordinating Council. Implementation of the program will be accomplished by the Water Center staff working with and through program elements on the campuses.

COORDINATING COUNCIL

The existing Coordinating Council composed of the Water Center Director and Associate Directors will be enlarged to include the Chairs of the new Education Councils at each Campus, an information transfer specialist and the manager of the Montana Watercourse. The Coordinating Council will be chaired by the Water Center Director and will meet as often as necessary to develop and maintain a program plan consistent with the directions from the Executive Council.

PROGRAM ADVISORY COMMITTEE

In pursuing its planning and management functions, the Coordinating Council will seek the advice and council of a Program Advisory Committee. This existing Committee will be reconstituted to consist of staff from state and federal water related agencies in Montana, representatives of private sector water organizations, and selected faculty from the University System. The Program Advisory Committee will assist the Coordinating Council in establishing a list of research, information transfer and educational needs relating to water in Montana. Selected members of the Program Advisory Committee may also assist in the review and/or preparation of proposals and in identifying potential external participants and funding sources.

MONTANA University System WATER RESOURCES CENTER

The professional staff of the Water Center includes a Director located on the MSU campus and Associate Directors on the UM and Tech campuses. It is proposed to add a new Information Transfer Specialist to the Director's office. The duties of each are outlined below.

Director

The Director's position will be upgraded to a full-time position from approximately 0.4 FTE. The Director will continue to be responsible for the day-to-day affairs of the Water Center and for managing the federal portion of the program, including coordination with state entities and with other water centers in the national network. These are existing functions of the Director, but will be expanded with the additional FTE.

With assistance from the Associate Directors, the Director will initiate and aggressively pursue activities necessary to implement the goals and objectives as outlined earlier. In addition to the current duties of the Director in developing and managing the federally sponsored program, these activities will include the following new responsibilities:

- **Develop a proactive research program.** Through extensive communication with agencies and organizations at both the state and national levels, the Director will alert university faculty to upcoming water research and education funding opportunities. Emphasis will be given to (1) developing a system to notify faculty at all campuses of research funding opportunities, (2) providing an "early warning" system whereby faculty have adequate lead time to develop sound proposals, (3) matching faculty expertise with research opportunities, and (4) assisting where possible with proposal writing.

- **Develop issue-oriented research projects.** The Director will aggressively seek outside funding from federal, state and private sources for projects that address priority areas identified through the efforts of the Executive and Coordinating Councils. As a part of this effort, the Director will (1) coordinate with state agencies and others to identify matching and leverage funds for priority research, and (2) implement programs (meetings, brochures, announcements) which will make campus researchers aware of priority needs.

- **Promote multidisciplinary research projects.** The Director will facilitate the development of multidisciplinary teams to respond to unique research opportunities. Where appropriate, these teams may be drawn from two or more units of the university system. The Director will (1) call initial meetings to discuss multidisciplinary research initiatives, (2) coordinate subsequent meetings to develop proposals, and (3) when appropriate, the Water Center will provide assistance in developing/writing/submitting proposals and in tracking them through the potential funding organizations.

- **Provide technical assistance to the information transfer program.** The Director will assist the Information Transfer Specialist in reviewing current and recently completed research for items relevant to Montana issues, and in effectively and accurately summarizing that information for public distribution.

The Director will also maintain a leadership role in water-related efforts on the MSU campus as outlined in a subsequent section of this proposal.

Associate Directors

The Associate Director positions at UM and Tech will be upgraded from approximately 0.1 FTE to 0.5 FTE. The additional time will be devoted to assisting the Director in implementing the new programs outlined above and in providing materials for the new information transfer program described below. The additional time will also allow the Associate Directors to expand their involvement with water activities on their campuses and within the state.

Information Transfer Specialist

Over $15 million in basic and applied water-related research is currently being conducted within the University System. However, the water user/manager community in Montana, which has no direct access (or input) to most university research, has the perception that this research is not relevant to state needs. In all probability, there are significant amounts of research results that do have application to Montana water problems and issues, the problem is that there has been no organized effort to bring this research to the attention of the state water community. The purpose of the proposed new information transfer program is to identify and communicate relevant research to the water user/manager community in Montana, and to help connect the results of this research to Montana water problems and issues.

The proposed Information Transfer Specialist position is a new, professional appointment that should be funded at 1.0 FTE. The person filling this position should have both technical training and writing ability. With assistance and supervision from the Director and Associate Directors, the duties of this position will be to screen all water-related research funded through the university system for relevance to specific Montana problems and issues. Relevant research in progress will be brought to the attention of the water community through newsletters and special flyers. Relevant portions of completed project reports will be abstracted or summarized and made available to targeted audiences through a series of special publications. Annual reports describing research in progress and recently completed research will be published. Symposia, forums, workshops and other means of disseminating information and of fostering discussion on research needs and results will also be pursued.

Montana Watercourse

The Montana Watercourse is an educational program begun a few years ago with support from both state and federal water agencies and from private sector organizations. The program has two educational thrusts. One, called Adult Water Awareness, is targeted to adult water users throughout the state while the other, called Project WET (Water Education for Teachers), is targeted to Montana's youth through teachers of grades K - 12. Montana Watercourse personnel, consisting of a Program Manager and a Project WET Coordinator, is administratively housed in the Water Center and continues to be operated on "soft" money.

The Montana Watercourse has gained significant visibility throughout the state and is widely cited as an example of the type of water education needed in Montana. This program should be strengthened through interactions with the Education Councils and other elements of the reorganized Water Center. A "hard money" base of financial support should be sought for the Montana Watercourse.

INDIVIDUAL CAMPUS LEVEL

Considerable effort has been expended by a Water Initiative Committee at MSU to design programs that build on the water-related interest and resources of that campus. The recommendations of this group is contained in the report previously cited and will not be repeated in full here. Montana State University intends to go forward with most of the elements recommended by that group, and UM and Tech plan to implement similar programs tailored to their campuses. These programs include research, education and outreach and are shown in Figure 2 on page 4. These efforts will have oversight from a Coordinating Board on each campus. All of these activities represent new efforts on the part of the campuses. These activities will be implemented with University resources, no additional funds are being sought for their support.

CAMPUS COORDINATING BOARDS

The Coordinating Boards will be composed of top-level administrators of research, academics and outreach on each campus. These boards will function in essentially the same manner for the campus as the Executive Council functions for the Water Center. Coordination and communication between the three campuses will be facilitated through both the Executive Council and the Coordinating Council.

RESEARCH COUNCILS

The Research Councils on each campus will be composed of faculty involved in water research. The MSU Chair will be appointed by V.P. Research. These Councils will assist in the implementation on each campus of the new research objectives outlined earlier. Specifically, the research council will:

- Help set goals and objectives for the pursuit of externally funded research.
- Assist in identifying multidisciplinary research needs and opportunities.
- Assist in the preparation of multidisciplinary research proposals.

The Research Councils at MSU, U of M and Tech will hold at least one joint meeting each year to develop inter-unit projects.

EDUCATION COUNCILS

The Education Councils will be drawn from academic areas that either teach courses relating to water, or that have water-related outreach programs. At MSU, the following Colleges will appoint representatives with water interests to the Water Education Council: College of Agriculture (two), College of Business (two), College of Engineering (two), College of Letters and Science (three: two from science departments and one from humanities and social science departments), Extension Service (one) and Montana Watercourse (one). The MSU Chair will be appointed by the V.P. for Academic Affairs. (The U of M and Tech will develop a structure appropriate for their campuses.) The Council will meet as necessary to conduct its business, but no less than once per semester. Academically, the Council will perform several functions including the following:

- **Review all faculty hires in areas that relate to water.** The objective of this review is to help focus hiring in the water resources area/discipline where expertise is needed, and to open interdisciplinary dialogue regarding positions in water resources that will promote strong, non-duplicative, integrated water education. This review is advisory only.
- **Promote the development of a strong multidisciplinary water-policy faculty.**
- **Develop both undergraduate and graduate minors in Water Resources.** These minors should take advantage of existing course work where ever possible. The Council should take an active role in the development of courses in such areas as water resources ethics, water policy, conflict resolution, and a capstone course. These minors will be reviewed and approved by the appropriate university office and will be listed in the University Catalogue. The successful completion of a minor will be noted on the student's transcript.

As the opportunity arises, these may be upgraded to majors within appropriate colleges.

The Water Education Council will also assume a leadership role in the coordination of water-related outreach education. The Council will:

- Identify educational needs, and develop programs to meet those needs, for professional scientists, engineers, technologists, managers, decision makers, water users, and the public.
- Identify and develop needed/desired professional short courses in water subjects.
- Assist the Montana Watercourse to develop a more technologically- and scientifically-rich curricula for K-12 teachers.
- Develop a media outreach water education program to better inform the public regarding water initiatives. These should include news releases regarding water research advances, and television spots on water research and education. In addition, Montana-relevant short courses for the public should be developed for delivery through outlets such as KUSM TV and KEMC Radio.

WATER POLICY FACULTY

One of the major needs identified by the MSU Water Initiative Committee was for faculty expertise in the area of Water Policy. This problem exists not only in the academic area, but also in the areas of research and outreach. In order to fill this void, it is recommended that three new faculty positions in water policy, one at each of the campuses, be established. One-half of each position should be new funding from the State, and the effort supported by these funds should be dedicated totally to research and outreach functions approved by the Executive Council. Appropriate academic programs on each campus will pick up the other 0.5 FTE and will develop water policy course work. The hiring of these faculty will be coordinated so that the academic backgrounds of the three are different but complementary, thus adding a nucleus for the University System to develop a strong water policy program to serve the State needs in this most important area.

BUDGET JUSTIFICATION

The restructuring of the Water Center and the implementation of the plan described above cannot be accomplished without the commitment of additional resources. Financial resources are needed to increase the level of personnel and for operating budgets.

PERSONNEL

Funds are requested to increase the FTE of the Director, and the Associate Directors of the Water Center. Additionally funds are requested to add a full time Information Transfer Specialist and for Water Policy Faculty.

Director

In order to be effective, the Director of such a restructured Water Center must be able to devote his/her full attention to the program and to expend his/her full energy in its implementation. Typical university faculty duties such as teaching, research and student advising impose rigid time and place schedules and are thus inconsistent with the need for the Director be involved in off-campus water related events and to build and maintain networks within the agency, campus and water user communities. The assignment of a full time Director is therefore absolutely essential to the success of the proposed program.

Associate Directors

The assignment of additional time to the Associate Director positions is necessary to provided leadership to the Research and Educating Councils, and to assist in proposal preparation and information transfer activities on their campuses. Due to the large number of water related organizations and activities within the State, and due to the extensive out of state travel required of the Director, the Associate Directors must also assume responsibility for much of the instate coordination. This will require the allocation of 0.5 FTE at each of the two campuses.

Information Transfer Specialist

The information transfer program could well be the most cost effective element proposed in this plan. This activity can bring the results of millions of dollars of existing water research to the attention of the water users and managers in the state. Additionally, having the results of this research scrutinized for relevance to Montana issues can save many people in the water community countless hours of searching through technical documents for useful material. Given the volume of material that must be sought out and analyzed, this effort will require the dedication of a full time Information Transfer Specialist and a substantial effort by the Director and Associate Directors.

Water Policy Faculty

It has been consistently pointed out in studies commissioned by the Water Policy Committee and by the Environmental Quality Council, as well as the Water Initiatives Committee at MSU, that there is a strong need for a unified academic program in water resources within the Montana University System. It is pointed out that this need is especially critical in the water policy area. In order to address this need, it is necessary to dedicate faculty appointments and to give those faculty a clearly defined charge and mandate in this area. The allocation of 0.5 FTE at each of three campuses for water policy research and outreach, with oversight from the Executive Council, is necessary to insure relevance of this activity to state needs. These faculty will form a necessary core around which to build both a research and an academic program.

OPERATIONS

All of the activities described in this plan will require extensive operational support in order to accomplish their objectives. The nature of the activities necessary to accomplish goals and objectives of this program will require extensive travel for research development and extensive communication within a large community of water users and managers in Montana. Without adequate funds for this program support, the program cannot be expected to meet its intended goals.

SOURCES OF FUNDS

Montana State University, the University of Montana and Montana College of Mineral Science and Technology have a strong commitment to the programs outlined in the above plan. However, the current budgetary constraints make it impossible for the University System to assume the full financial burden of implementing this program. Where ever possible, the Units will support on-campus activities relating to education and research activities. However, additional funds will be necessary to implement the inter-campus and the external portion of the effort outlined in this plan.

The additional funds necessary to implement system-wide aspects of this plan are shown in the proposed budget on the last page. These funds will also provide the two-to-one non-federal match required for the federally appropriated Water Center dollars. It is proposed that the federal funds (approximately 100K per year) be used as seed money to initiate high priority research and education projects identified by the

Coordinating Council and approved by the Executive Council. Implementation of the on-campus activities, estimated to cost approximately $112,000 per year (including the 1/2 match on the water policy faculty) will be borne by the university units, as will the current level of support of the Director and Associate Directors (approximately $58,000 per year). Thus, as shown in the itemized budget, the total University input to the program would be approximately $170,000 per year.

SUMMARY AND CONCLUSIONS

In its Final Report to the 52nd Legislature, the Water Policy Committee endorsed a "strong and effective" Water Resources Center and recommended that the University System restructure the Center to pursue a specified set of goals. In response, the University System has spent considerable time and effort developing a plan to meet those goals. Specifically, this plan identifies the areas of: (1) education, (2) research, and (3) communication. These goals, and the objectives to accomplish them, are stated on pages 1 and 2.

In order to achieve these goals, it is necessary to provide policy input and oversight from upper level administration within both the University System and state agencies, and to define procedures by which this policy gets implemented. The administrative structure to provide this oversight is shown in Figures 1 and 2 on pages 3 and 4 of this document.

It is necessary to increase the staff commitment to the program if the goals and objectives of this plan are to be met. Specifically it is recommended that:

- The FTE of the Director be increased form 0.4 to 1.0 and the Associate Directors increased from 0.1 to 0.5, with the job descriptions for each being redefined to reflect the expanded mission of the Montana Water Center.

- A full time Information Transfer Specialist be added to analyze the results of ongoing, water-related research being conducted within the university units, and to communicate the results of this results to the water user/manager community in Montana.

- One faculty position in water policy be added at MSU, UM and Tech. Each position should be equally divided between research/outreach relative to state water issues and the establishment of academic programs in water policy.

The financial resources necessary to implement all of the above recommendations are not available within the University System's current budget. It is proposed that the University System Units will provide approximately $170,00 for implementing campus specific portions of the program while the State provide additional funds of approximately $280,000 to implement the system-wide part of the program. A specific budget is provided on the following page.

PROPOSED BUDGET

MONTANA STATE UNIVERSITY		ADDITIONAL APPROPRIATIONS	UNIVERSITY FUNDS
Personnel			
Director (0.5 FTE State, 0.5 FTE MSU)		35000.00	35000.00
Information Transfer Specialist (1.0 FTE)		24000.00	0.00
Secretary (1.0 FTE)		14400.00	0.00
Benefits (24%)		18336.00	8400.00
	Subtotal	$91,736.00	$43,4000.00
Support for Water Education Council			10000.00
Operations			
Contracted Services		14314.00	0.00
Technical Writer (200 hrs @ $18/hr)$3600			
Printing $10,714 (1st yr.), $13,529 (2nd yr.)			
Supplies		5000.00	0.00
Communications		4800.00	0.00
Travel (in and out of state)		12000.00	0.00
Capital		4000.00	0.00
Repairs & Maintenance		1000.00	0.00
	Subtotal	$41,114.00	0.00
	Total MONTANA STATE UNIVERSITY	$132,850.00	$53,400.00
UNIVERSITY OF MONTANA			
Personnel			
Associate Director (0.4 FTE State, 0.1 FTE UM)		25000.00	6250.00
Benefits (17.5%)		4375.00	1094.00
	Subtotal	$29,375.00	$7344.00
Support for Water Education Council		0.0	$10000.00
Operations:		1200.00	0.00
Communication			
Travel (in and out of state)		3000.00	0.00
	Subtotal	$4,200.00	0.00
	Total UNIVERSITY OF MONTANA	$33,575.00	$17,344.00
MONTANA TECH			
Personnel:			
Associate Director (0.4 FTE State, 0.1 FTE TECH)		22086.00	5522.00
Benefits (33%)		7289.00	1822.00
	Subtotal	$29,375.00	$7344.00
Support for Water Education Council		0.0	$10,000.00
Operations:			
Communication		1200.00	0.00
Travel (in and out of state)		3000.00	0.00
	Subtotal	$4,200.00	0.00
	Total MONTANA TECH	$33,575.00	$17,344.00
NEW WATER POLICY FACULTY (1.5 FTE State, 1.5 FTE University)		65323.00	65323.00
Benefits (estimated at 24%)		15677.00	15677.00
	Total NEW SYSTEM FACULTY	$81,000.00	$81,000.00
	GRAND TOTAL	$281,000.00	$169,088.00

WATER POLICY COMMITTEE

Montana State Legislature

SENATE MEMBERS
Esther G. Bengtson, Vice Chairman
Tom Beck
Lorents Grosfield
Lawrence G. Stimatz

HOUSE MEMBERS
Hal Harper, Chairman
Vivian M. Brooke
Russell Fagg
Thomas N. Lee

COMMITTEE STAFF
Environmental Quality Council
Capitol Station
Helena, Montana 59620
(406) 444-3742

July 1, 1992

Dennis Iverson, Director,
Department of Health
and Environmental Sciences
Room C108, Cogswell Building
Helena, MT 59620-0701

Dear Director Iverson:

The Water Policy Committee is seriously concerned about the existing and potential impacts of Montana's continuing drought. The Committee believes that the window of opportunity for the state to effectively mitigate the impacts of the drought is rapidly closing. To assist the Committee and the public in understanding exactly what is being done, and what can be done, to reduce drought impacts, the Committee requests the following information:

* information regarding the most seriously dewatered water courses in the state. This information should include the water course name, location, normal, existing and potential flows, and particular stream reaches affected if relevant;

* the name, nature, and number of discharge permits issued or under consideration in the identified water courses;

* what are the specific health concerns in the identified water courses;

* what is currently being done by the Department to mitigate those concerns;

* what are the potential mitigation measures the agency could take;

* what changes to state law, if any, does the Department consider necessary to enable the agency to take effective drought mitigation measures.

The continuing drought is a challenge to the state's leadership in natural resource management and public health protection. Only by working together, along with the citizens of Montana, can the different branches of state government ensure that all that should be done is being done. Your assistance in this matter is appreciated.

Sincerely,

Hal Harper
Chairman

WATER POLICY COMMITTEE
Montana State Legislature

SENATE MEMBERS
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Lorents Grosfield
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COMMITTEE STAFF
Environmental Quality Council
Capitol Station
Helena, Montana 59620
(406) 444-3742

July 6, 1992

Dennis Iverson, Director,
Department of Health
and Environmental Sciences
Room C108, Cogswell Building
Helena, MT 59620-0701

Dear Director Iverson:

In addition to the drought impact and impact mitigation information requested by the Water Policy Committee in our July 1, 1992 letter, the Committee would also like to know the minimum stream flows required to address the public health concerns you were asked to identify in our initial request.

We have enclosed a copy of our July 1, 1992 letter for your reference. Your assistance in this matter is appreciated.

Sincerely,

Hal Harper
Chairman

WATER POLICY COMMITTEE
Montana State Legislature

SENATE MEMBERS
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Tom Beck
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COMMITTEE STAFF
Environmental Quality Council
Capitol Station
Helena, Montana 59620
(406) 444-3742

July 1, 1992

K. L. Cool, Director,
Department of Fish, Wildlife,
and Parks
1420 East Sixth Avenue
Helena, MT 59620-0701

Dear Director Cool:

The Water Policy Committee is seriously concerned about the existing and potential impacts of Montana's continuing drought. The Committee believes that the window of opportunity for the state to effectively mitigate the impacts of the drought is rapidly closing. To assist the Committee and the public in understanding exactly what is being done, and what can be done, to reduce drought impacts, the Committee requests the following information as soon as possible:

* information regarding the most seriously dewatered water courses in the state. This information should include the water course name, location, normal, existing and potential flows and particular stream reaches affected if relevant;

* what are the species of concern in the identified water courses and what are the existing and potential impacts to those species;

* what is currently being done by the DFWP to mitigate those impacts;

* what are the potential mitigation measures the DFWP could take;

* what changes to state law, if any, does the DFWP consider necessary to enable the DFWP to take effective drought mitigation measures.

The continuing drought is a challenge to the state's leadership in natural resource management. Only by working together, along with the citizens of Montana, can the different branches of state government ensure that all that should be done is being done. Your assistance in this matter is appreciated.

Sincerely,

Hal Harper
Chairman

WATER POLICY COMMITTEE
Montana State Legislature

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COMMITTEE STAFF
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Helena, Montana 59620
(406) 444-3742

July 6, 1992

K. L. Cool, Director,
Department of Fish, Wildlife,
and Parks
1420 East Sixth Avenue
Helena, MT 59620-0701

Dear Director Cool:

In addition to the drought impact and impact mitigation information requested by the Water Policy Committee in our July 1, 1992 letter, the Committee would also like to know the minimum stream flows required to preserve the threatened aquatic life you were asked to identify in our initial request.

We have enclosed a copy of our July 1, 1992 letter for your reference. Your assistance in this matter is appreciated.

Sincerely,

Hal Harper
Chairman

Montana Department of Fish, Wildlife & Parks

1420 East Sixth Avenue
Helena, MT 59620
July 23, 1992

Rep. Hal Harper
Chairman
Water Policy Committee
Montana State Legislature
Capitol Station
Helena, MT 59620

Dear Mr. Harper:

Director Cool has asked me to respond to your letters of July 1 and July 6, 1992, requesting information on the effect of low stream flows on streams in the state. Your request was for information on the most seriously dewatered water courses. This definition pertains to those streams the Department considers to be chronically dewatered (i.e., streams where dewatering is a significant problem in virtually all years). There are also a number of streams considered to have periodic dewatering problems (i.e. dewatering is significant only in drought or water-short years).

In 1991, the Department put together a preliminary list of Montana streams that support important fisheries or provide spawning and rearing habitats that we consider to be dewatered either chronically or periodically. That list is enclosed. You can see that the list is rather extensive and includes both large and small streams. This list is currently being updated. We do not have available all of the information you requested on all of those streams on the list and have taken the option of providing the information on selected rivers or streams where it was available. Table 1 contains the information you requested in your letters regarding water course name, location, flow levels, minimum flows required and species that are affected by low flows.

Regarding existing and potential impacts of low flows on fish species in these streams, we can provide some general comments:

- Most of the low flow problems which are most significant occur in streams having various species of trout. Although low flows also can affect warm water fish species, some of those species are better able to tolerate low flows and warm water

temperatures. There are, however, some significant effects of drought on warm water species.

Some of these effects include loss of sport fisheries in irrigation reservoirs such as Fresno and Nelson which are virtually drained during severe drought conditions, lack of high spring flows to stimulate spawning and allow passage for paddlefish and sturgeon and loss of fisheries in scores of farm ponds in central and eastern Montana. If you would like additional information on the effects of drought on our warm water fisheries, please let me know.

- The general reaction of the trout population to extremely low flows, particularly over an extended period of time, is a loss in the total size of that population. Depending on the physical characteristics of the stream and the types of habitats available to all sizes of fish, the low-flow effects will vary between streams. For example, winter dewatering in the Beaverhead River has resulted in a loss of large fish probably due to overcrowding in remaining pools in the stream. DFWP monitors several stream reaches on an annual basis and this monitoring program has identified the effects of low flows on the numbers and age structures of the fish populations.

- Another effect of drought on fish populations is through lack of recruitment of young fish into the population. This can occur due to dewatering of spawning areas after eggs have been deposited and/or hatched, causing mortality of young fish which would enter the fishery. Some small fish are lost to irrigation diversions as they migrate downstream. Other instances of small fish being lost occur when streams are dewatered and the shallower areas where these young fish reside no longer exist and they are forced into the deeper, larger pool areas occupied by larger fish. In addition to overcrowding, these young fish are lost to excessive predation by the larger fish. The result of the loss of these small fish is that two or three years later when these fish would enter the fishery as catchable fish, they are not present or are reduced in numbers. There is, therefore, a void or weak year class of fish available to the angler. We have seen these conditions occur on the Missouri River below Holter Dam, Rock Creek near Missoula, and Big Hole River due to the 1988 drought.

- In cases where large adult fish are lost due to low flow conditions, there is a subsequent reduction in the numbers of mature spawners. As you are aware, Montana's stream trout fisheries are maintained by wild stocks and we are, therefore, dependent upon the wild fish population to maintain itself through natural reproduction in either the stream of residence or in tributaries to the stream. When these streams are dewatered excessively, this part of the life cycle is limited and this affects the numbers of fish available to the angler.

What is DFWP currently doing to mitigate the above impacts on the fisheries due to low flows?

- DFWP has developed a drought contingency plan which contains actions the Department is able to take under drought conditions. These actions include: 1) protecting our existing instream rights in the Yellowstone River Basin and on 12 Murphy Right streams; 2) supplementing stream flows through the purchase of stored water, leasing of consumptive rights and other innovative methods; 3) obtaining reservoir operations on state and federal reservoirs which will minimize impacts to the fisheries and recreation; 4) monitoring streamflow, fish populations and fishing use and harvest to ensure carryover of wild stream fisheries while at the same time maintaining a reasonable opportunity for harvest in all suitable waters; 5) implementing emergency fishing regulations on streams and lakes, as needed.

  DFWP has limited options to mitigate the effects of low flows unless it has some form of water right. As you know, older existing water uses take priority over most of the instream water rights and reservations held by DFWP. However, during these drought years, and if low flows actually do occur, DFWP notifies those consumptive water users who are junior to any Murphy Rights or Yellowstone reservations held by DFWP that they may have to cease using their water if flow conditions deteriorate. The last time this was done by DFWP was during the 1988 drought when flows deteriorated to a point that some junior users were asked to cease using their water rights that were junior to DFWP's Murphy Rights and reservations.

  During previous droughts and during the 1992 season, we work with the Bureau of Reclamation to provide minimum flows below Canyon Ferry, Yellowtail and Tiber reservoirs to minimize impacts to the fishery. We are also working with water users in the Townsend area to provide flows in two tributary streams to the Missouri River to improve spawning. Through previous discussions with the Ruby River water users, efforts are being made by them to prevent severe dewatering in the Ruby River which, in 1985 and 1987, resulted in significant fish kills. We are also looking at the possibility of special fishing regulations in 1992 such as were implemented during the 1988 drought to protect wild trout stocks. If the rains continue, this may not be necessary.

  DFWP purchases water from Painted Rocks Reservoir to maintain flows in the Bitterroot River, and we are currently negotiating with the Newlan Creek water users to purchase water from Newlan Creek Reservoir to supplement low flows in the Smith River. DFWP is working towards acquiring water leases on several streams to improve streamflow conditions where existing water uses severely dewater streams and inhibit the maintenance of adequate fish populations and spawning areas. We are also working with irrigators to gradually shut

off their irrigation ditches to allow fish to move back to the stream and we have produced and distributed a brochure explaining this program.

What are the potential mitigation measures the DFWP could take?

- Under normal flow conditions, there are about 2,500 miles of streams which are chronically dewatered. During extended droughts, we expect an additional 1,200 miles of streams to be affected. Low flows will become more severe and occur earlier. The extent of this problem will depend on the length and severity of the drought. The late June and early July rains across the state have kept streamflow levels up on most streams and are, therefore, deferring the effects of the drought on streamflows and fish populations. If the rains continue, streamflows should maintain themselves. If the rains stop for any length of time, streamflows will drop to very low levels because of the lack of mountain snowpack. The length and severity of the drought will depend on these future events.

  Because of DFWP's limited authority in water allocations and enforcement of water rights, any other potential mitigation measures other than those just described are limited. We have the ability to assess in a general sense the impacts on fisheries from low flows before, during and after drought conditions. But the solution to the dewatering problem lies in other areas of responsibility. DFWP can enforce its own instream flows against junior water users. We can monitor fish populations and determine impacts of low flows. We can implement special regulations as necessary. But we have limited ability to improve flow conditions in rivers and streams other than through water leasing, cooperation with reservoir operators and arrangements with individual irrigators. From a fisheries standpoint, the only solution to low streamflows is to provide additional water for streams and rivers during the irrigation season when nearly all the impacts occur (The Beaverhead River below Clark Canyon Reservoir is an exception--low <u>winter</u> flows are the problem on that stream).

What changes to state law, if any, does the DFWP consider necessary to enable the DFWP to take effective drought mitigation measures?

We believe the best way to mitigate the effects of possible low flow conditions is to better manage the water resources. We need better management of the quantities of water diverted from rivers and streams and a means to enforce water rights on streams whether the stream is decreed or not. At the present time, water commissioners can be appointed only on streams with old decrees or streams where preliminary decrees have been granted during the adjudication process. This places a limitation on the number of streams where commissioners could administer water rights. Water users are also reluctant to go to the expense of paying for a water

commissioner on many streams. There may be less reluctance on the part of those water users if they did not have to pay for a commissioner to administer water rights. A possible solution would be for the state to provide water commissioners for the water users. However, DFWP is well aware that better measurement and enforcement of water rights will not be easily accepted by many water users. Finally, implementation of mitigation measures during drought conditions is not just the purview of DFWP. DNRC is also in a position to assist in this effort.

I hope this is a satisfactory reply to your inquiry. Please do not hesitate to call if you have further questions.

Sincerely,

Larry B. Peterman

Larry Peterman
Administrator
Fisheries Division

Enclosures (2)

DEPARTMENT OF
HEALTH AND ENVIRONMENTAL SCIENCES

STAN STEPHENS, GOVERNOR

COGSWELL BUILDING

STATE OF MONTANA

FAX # (406) 444-1374

HELENA, MONTANA 59620

September 11, 1992

Representative Hal Harper, Chairman
Water Policy Committee
Montana State Legislature
Capitol Station
Helena, MT 59620

Re: Information regarding Montana's continuing drought.

Dear Representative Harper:

This letter is written in response to your request for information directed to Dennis Iverson dated July 1, 1992.

* information regarding the most seriously dewatered water courses in the state. This information should include the water course name, location, normal, existing and potential flows, and particular stream reaches affected if relevant;

A: See attached list (attachment A) of $\leq$ 1988 flows.

* the name, nature, and number of discharge permits issued or under consideration in the identified water courses:

A: See attached list (attachment B).

* What are the specific health concerns in the identified water courses:

A: There should be no health concerns because NPDES permits protect all uses, including drinking water, to the 7Q10. All streams are well above that flow.

* what is currently being done by the Department to mitigate those concerns:

A: See above response.

* what are the potential mitigation measures the agency could take:

A: If streams were to drop below 7Q10 the department would follow the procedures in the Drought Annex discussion, i.e., withhold discharges or extra release flows as appropriate. As a general rule we would work with dischargers to mitigate public heath and environmental impacts on a case-by-case

basis.

* what changes to state law, if any, does the Department consider necessary to enable the agency to take effective drought mitigation measures.

A: We haven't honestly put a lot of thought into this but presently believe no changes are needed.

In response to your July 6, 1992 letter, our permits protect uses, including drinking water, at the 7 day, 10 year low flow.

I apologize for the tardy response. If you have any questions don't hesitate to call me or Fred Shewman at 444-2406.

Sincerely yours,

Dan L. Fraser, P.E., Chief
Water Quality Bureau

WATER POLICY COMMITTEE

Montana State Legislature

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Helena, Montana 59620
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March 17, 1992

Mr. Doug Glevanik
U.S. Forest Service, Region 1
P.O. Box 7669
Missoula, MT 59807

Dear Mr. Glevanik:

Thank you for accepting and considering these comments on the newly proposed federal policy regarding the use of motorized equipment in wilderness areas. This is an important issue involving not only individual water rights and Montana water law but, most importantly, the safety of Montana citizens and out-of-state tourists.

After considering the comments of all affected interests and much debate, the Committee generally supports the Forest Service's attempt to develop a concise, uniform policy for making decisions regarding the use of motorized equipment on dams in wilderness areas. Forest Service personnel turn-over in the area is high, and a clear written policy, consistently implemented, would be a great help to all who benefit from these dams.

However, the Committee does wish to emphasize certain concerns expressed during the testimony and Committee deliberations on this topic.

The Committee understands that the use of motorized equipment to maintain dams in wilderness areas is necessary to successfully complete certain maintenance projects. Mechanical vibration of cement during concrete repair, and the need for an arc welder when repairing outlet systems, are common examples.

The Committee believes that permits for these normal maintenance projects should be issued in a timely manner. Due to the very short seasonal work periods, permit delay may force a dam owner to postpone needed maintenance work until next season, thereby increasing an already potentially hazardous situation.

The Committee suggests that strong consideration should be given to the comments submitted by the Montana Department of Natural Resources and Conservation (DNRC) regarding the use of multi-year maintenance plans. As discussed by the DNRC, these maintenance plans could serve both the Forest Service's desire for a case-by-case review of projects and the dam owners' desire for a longer term permit.

Ideally, the Committee envisions the Forest Service and the dam owners developing a maintenance plan detailing what maintenance work needs to be completed, when that work can be accomplished, and how the work can be accomplished. The plan would thus specify what motorized equipment can be used. This plan would require a project-by-project review for each dam, but not on an annual basis. A maintenance plan agreed to by the Forest Service and the dam owner would then grant the dam owner permission to use whatever motorized equipment the maintenance plan specifies to complete a particular project for the length of the plan.

This planning process appears to grant sufficient flexibility to the Forest Service to ensure that the wilderness values are maintained and that public safety is protected, as well as preventing unnecessary delays in dam owners' completion of required maintenance projects.

These wilderness dams provide a multitude of benefits, including benefits to the wilderness, agriculture, recreation and aquatic ecosystems. The right to store and use the water is guaranteed by state law and constitution. These dams must be maintained in the most efficient manner allowable to protect these benefits and public safety.

Sincerely,

Representative Hal Harper
Chairman

DEPARTMENT OF NATURAL RESOURCES
AND CONSERVATION

STAN STEPHENS, GOVERNOR

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STATE OF MONTANA

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HELENA, MONTANA 59620-2301

March 5, 1992

Mr. Doug Glevanick
U.S. Forest Service, Region 1
P.O. Box 7669
Missoula, MT 59807

Dear Mr. Glevanick:

Thank you for the opportunity to comment on the questions addressed in your November 22 letter concerning wilderness dams. The Dam Safety Program supervisor, Michael Oelrich, has already responded to your specific questions, but I will reemphasize some main points.

1. The highest priority must be placed on protecting the lives of Montanans. Deferring maintenance and repair on unsafe dams while wilderness impacts are studied is unacceptable if it threatens the safety of downstream residents.

2. Proper and timely repair and maintenance of unsafe wilderness dams, in many instances, requires mechanized equipment.

3. It is appropriate to provide a distinction in maintenance standards between dams that present a probable threat to life and dams that do not present a probable threat to life. Before this distinction can be made, an analysis of this threat must be completed.

4. Although a case-by-case review of wilderness dam repair needs may be in order, such a requirement for annual maintenance is too restrictive.

In order to specifically address the importance of mechanized equipment for proper maintenance of dams, my staff has prepared an operation and maintenance plan for Tin Cup Lake Dam, one of the high-hazard wilderness dams. This plan, which is attached, is intended to describe the items of work that are required to properly maintain the dam and to identify items of work that may require mechanized equipment to be properly performed.

Once approved by your agency, it is our intention that this plan would authorize the owners to do the required work without seeking permission for every type of routine maintenance. However, as the plan clearly states, the District Ranger would be notified prior to any use of mechanized equipment. Plans like this for each of the high-hazard dams would clarify when mechanized equipment is allowable for maintenance and when it is not.

Sincerely,

Gary Fritz
Administrator
Water Resources Division

Enclosure
MO:cw

United States Department of Agriculture | Forest Service | Region 1 | Federal Building P.O. Box 7669 Missoula, MT 59807

Reply to: 2320/2720

Date: June 3, 1992

Dear Friend:

Thank you for your participation in the public involvement effort associated with the review of wilderness dam management in the Northern Region. I have met with the Task Force several times since the close of the public comment period. We have discussed the myriad of legal, social, and administrative issues surrounding wilderness dam management and the concerns raised by the many interested and involved citizens. The complexity of mixing the management of wilderness with the management of dams is further compounded by the heartfelt and diverse concerns expressed by numerous individuals, such as yourself.

The Task Force was formulated to examine existing direction on the management of wilderness dams, thereby assisting me in establishing coordinated, responsive direction for management of those dams within Wilderness boundaries. Since the vast majority of these dams lie in the Selway-Bitterroot Wilderness (SBW), the existing direction contained in the Selway-Bitterroot General Management Direction was the basis for much of the review. The Task Force also reviewed the Wilderness Act of 1964, the House and Senate Subcommittee reports on the Wilderness Act, the act establishing the Rattlesnake Wilderness, two rounds of public comment, other existing Regional and National direction on wilderness dam management, the Big Creek Work Project (video footage, photos, and cost information), and historical and current information on the dams/reservoirs located in wilderness in the Northern Region. While this listing is not all-inclusive, a great deal of time and effort was devoted to analysis of this important issue.

It is my determination that the following be incorporated as Regional direction on the management of wilderness dams:

1) decisions on the use and transport of motorized/mechanized equipment must be made on a case-by-case basis. I cannot institute a "blanket policy" which routinely, however consistently, denies or allows this use; each site, situation, and action is different and must be treated as such. However, we have developed Regional Forest Service Manual direction which clarifies the types of decisions relevant to Wilderness dams, and identifies some criteria to consider in project level decisions, and
2) that each Forest managing wilderness dams in the Region will approve maintenance activities for a five year period for each wilderness dam when permits are renewed. These activities will be reviewed annually, along with the dam operations plans, if there is no change in dam condition or activity, then no additional analysis need occur to continue implementation of the approved activities.
3) the current Forest Plan direction (Selway-Bitterroot General Management Direction) found on page M-2 is sufficient for those Forests which include portions of the SBW, except the direction inappropriately removes authority from the Regional Forester to approve "reconstruction of any structure which will increase its size or change its profile..." I propose to amend the Forest Plans so this authority will remain within the Region and I am redelegating this authority to the Forest Supervisor,
4) the Supervisors of the Beaverhead and Custer National Forests will review the direction contained in the Selway-Bitterroot General Management Direction and include similar direction for wilderness dams into their respective Forest Plans,

5) the Lolo National Forest has specific direction in the Rattlesnake National Recreation Area and Wilderness Act of 1980 (Public Law 96-476) for those dams/reservoirs within the boundaries of that wilderness.

Approximately 150 letters or cards were received from the public indicating some opinion, suggestion, or fact that they felt was pertinent and important to note in our decisionmaking process. We value that input and we have included, as an attachment, the summary of those comments along with our response.

The values of the American public are as diverse as the people themselves. Any action which benefits one segment tends to adversely impact another. As manager of some of the Nation's most precious, yet finite, resources, I have tried to take all of these conflicting and valid issues to determine reasonable direction. A direction which will cause the least amount of hardship for the largest number of people, while doing what I believe is right for the land and meets the intent of law.

Thank you for assisting us in this process. We appreciate the time and effort you invested and hope that you will continue your involvement in the management of your National Forests.

DAVID F. JOLLY
Regional Forester

Enclosure

FSM 2322.03 Policy

Planning and Decisionmaking for Wilderness Dams: There are two levels of planning and decisionmaking relating to Wilderness Dams: Programmatic and Site Specific (or project level) decisions. To insure consistency of direction and decisionmaking affecting wilderness dams across the region, the following paragraphs describe the kinds of decisions made at each level.

Programmatic: The Forest Plan shall include broad overall direction for wilderness dam management. Examples of direction appropriate in the Forest Plan are:

Management Area direction and prescriptions, including goals and objectives, standards and guidelines, which provide broad criteria and requirements for how areas which include dams, within the wilderness, should be managed.

Direction and criteria to consider when authorizing maintenance or reconstruction activities of Dams.

Monitoring and Evaluation requirements relative to the dam and activities associated with it.

Changes to the Forest Plan are made through the Forest Plan amendment process which requires compliance with the National Environmental Policy Act (NEPA) process including public participation.

Project level: Project level decisions will apply to site specific conditions and the management situation of the dam. Compliance with the NEPA process is also required for these decisions. Examples are:

Renewing Permits which authorize the use of federal land for the Dams.

Reconstruction activities.

Dam operational requirements including water level adjustments and any necessary instream flow requirements.

Maintenance activities. When permits are renewed, anticipated maintenance activities for a five year period will be approved.

Operations and Maintenance Activities: The five year schedule of probable operations and maintenance activities from previous project level NEPA decisions will be reviewed annually. Also, the condition of the dam is reviewed. If there is no change in activity or condition, then the activity can proceed as planned with no additional NEPA necessary. However, if there is a need to change a previous decision because conditions are different than assummed, then NEPA will apply. Also, the five year schedule of activities may be updated annually with possible projects for future years (years 6 and beyond) by the permittee. Once NEPA is completed, these projects can be implemented.

Project Costs: Costs associated with the planning and decisionmaking process will normally be borne by the agency, however, agency funding may not be adequate in any specific year to proceed in a timely manner with the analysis process. In these cases, the cost may be borne in part or totally by the permittee(s). The cost of accomplishing the actual maintanance or reconstruction activities will be borne by the permittee(s).

FSM 2322.04 Responsibilities

Delegations of Authority for Project Level decisions:

Forest Supervisors are responsible for decisions concerning maintenance or reconstruction activities necessary to comply with the Dam Safety Act, which may include but are not limited to enlarging the spillway or increasing the freeboard of the Dam.

District Rangers are responsible for decisions concerning routine maintenance, which may include but is not limited to annual debris removal.

FSM 2326.1–8 Maintenance of Wilderness Dams

Use of motorized/mechanized equipment for maintenance or reconstruction of dams in designated wilderness will be permitted when one or more of the following conditions apply:

1. Emergencies (Immediate threat to life and property)

2. Where impacts to Wilderness and/or resources therein would be greater using non-motorized/non-mechanical methods (includes duration of impacts)

3. When physically infeasible to use non-motorized methods.

4. When costs make the use of primitive methods infeasible.

The determinations required above will be made by the responsible Forest Service Official through the NEPA process.

The intent of documenting these conditions is more consistent decisions amoung Forest Service Officials making decisions on Wilderness Dam activities.