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Technical Report no. 4

The adequacy of Montana's regulatory framework for water quality control

YELLOWSTONE IMPACT STUDY

TECHNICAL REPORT NO. 4

WATER RESOURCES DIVISION
REFERENCE COLLECTION

prepared for

THE
OLD WEST REGIONAL
COMMISSION

by

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DNRC MONTANA DEPARTMENT OF NATURAL RESOURCES & CONSERVATION

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The adequacy of Montana's regulatory framework for water quality control

by

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TECHNICAL REPORT NO. 4

YELLOWSTONE IMPACT STUDY

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April 1978

The Old West Regional Commission is a Federal-State partnership designed to solve regional economic problems and stimulate orderly economic growth in the states of Montana, Nebraska, North Dakota, South Dakota and Wyoming. Established in 1972 under the Public Works and Economic Development Act of 1965, it is one of seven identical commissions throughout the country engaged in formulating and carrying out coordinated action plans for regional economic development.

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FOREWORD

The Old West Regional Commission wishes to express its appreciation for this report to the Montana Department of Natural Resources and Conservation, and more specifically to those Department staff members who participated directly in the project and in preparation of various reports, to Dr. Kenneth A. Blackburn of the Commission staff who coordinated the project, and to the subcontractors who also participated. The Yellowstone Impact Study was one of the first major projects funded by the Commission that was directed at investigating the potential environmental impacts relating to energy development. The Commission is pleased to have been a part of this important research.

George D. McCarthy
Federal Cochairman

Contents

	Page
LIST OF ABBREVIATIONS	vi
PREFACE	1
INTRODUCTION	7
ISSUE NO. 1: What are the ramifications of the nondegradation policy contained in the Montana Water Pollution Control Act on large withdrawals of water?	9
Analysis	9
Nondegradation	11
Summary	13
Recommendation	14
ISSUE NO. 2: Can dewatering be effectively controlled under the Montana Water Pollution Control Act?	15
Analysis	15
Summary	20
Recommendation	20
ISSUE NO. 3: Can the State of Montana, through the Montana Pollutant Discharge Elimination System, prohibit the discharge of saline or other low-quality waters by requiring a zero-discharge limitation on point-source dischargers, and impose a temporal rate of discharge?	23
Analysis	23
Summary	28
Recommendation	29
ISSUE NO. 4: Does the State of Montana have the authority to control the construction and maintenance of ash and sludge ponds associated with large coal conversion facilities?	31
Analysis	31
Summary	34
Recommendation	35
ISSUE NO. 5: Do Montana's regulations address the impact of air pollutant emissions on the Yellowstone River basin watershed?	37
Analysis	37
Summary	37
Recommendation	38

ISSUE NO. 6: Do Montana's regulations adequately address the problem of irrigation return flow? 39

Analysis. 39
Summary 40
Recommendation. 40

ISSUE NO. 7: Does Montana have sufficient regulatory authority to control nonpoint sources of water pollution? 41

The FWPCA: Nonpoint Sources of Water Polution. 41
Analysis. 44
Summary 46
Recommendation. 47

ISSUE NO. 8: Does the State of Montana have sufficient control over the introduction of dissolved and suspended solids into surface waters and groundwater aquifers? 49

Analysis of Water Quality Regulations 49
Summary 55
Recommendation. 55
Analysis of Reclamation and Mining Regulations. 56
Summary 59
Recommendation. 60

ISSUE NO. 9: Does The Natural Streambed and Land Preservation Act of 1975 affect water quality control efforts? 61

Analysis. 61
Summary 63
Recommendation. 64

ISSUE NO. 10: Can water quality problems associated with impoundment or other developments which alter the hydrograph be controlled under the existing water quality rules? 65

Analysis. 65
Summary 68
Recommendation. 68

ISSUE NO. 11: What are the enforcement remedies provided by the MWPCA, and are they effective? 71

Analysis. 71
Summary 76
Recommendation. 76

CONCLUSION 77

LITERATURE CITED 79

Abbreviations used in this report

ARM	Administrative Rules of Montana
BHES	Board of Health and Environmental Sciences
BLC	Board of Land Commissioners
BNRC	Board of Natural Resources and Conservation
DHES	Department of Health and Environmental Sciences
DNRC	Department of Natural Resources and Conservation
DSL	Department of State Lands
FWPCAA	Federal Water Pollution Control Act Amendments of 1972 (33 U.S.C. 1251 et seq., Supp. 1973)
MPDES	Montana Pollutant Discharge Elimination System
MWPCA	Montana Water Pollution Control Act (Section 69-4801 et seq., R.C.M. 1947)
NPDES	National Pollutant Discharge Elimination System
Reclamation Act	The Strip and Underground Mine Reclamation Act (Section 50-1034 et seq., R.C.M. 1947)
Streambed Act	The Natural Streambed and Land Preservation Act of 1975 (Section 26-1510 et seq., R.C.M. 1947)
SUMSA	The Strip and Underground Mine Siting Act (Section 50-1601 et seq., R.C.M. 1947)

Preface

THE RIVER

The Yellowstone River Basin of southeastern Montana, northern Wyoming, and western North Dakota encompasses approximately 180,000 km^2 (71,000 square miles), 92,200 (35,600) of them in Montana. Montana's portion of the basin comprises 24 percent of the state's land; where the river crosses the border into North Dakota, it carries about 8.8 million acre-feet of water per year, 21 percent of the state's average annual outflow. The mainstem of the Yellowstone rises in northwestern Wyoming and flows generally northeast to its confluence with the Missouri River just east of the Montana-North Dakota border; the river flows through Montana for about 550 of its 680 miles. The major tributaries, the Boulder, Stillwater, Clarks Fork, Bighorn, Tongue, and Powder rivers, all flow in a northerly direction as shown in figure 1. The western part of the basin is part of the middle Rocky Mountains physiographic province; the eastern section is located in the northern Great Plains (Rocky Mountain Association of Geologists 1972).

THE CONFLICT

Historically, agriculture has been Montana's most important industry. In 1975, over 40 percent of the primary employment in Montana was provided by agriculture (Montana Department of Community Affairs 1976). In 1973, a good year for agriculture, the earnings of labor and proprietors involved in agricultural production in the fourteen counties that approximate the Yellowstone Basin were over $141 million, as opposed to $13 million for mining and $55 million for manufacturing. Cash receipts for Montana's agricultural products more than doubled from 1968 to 1973. Since that year, receipts have declined because of unfavorable market conditions; some improvement may be in sight, however. In 1970, over 75 percent of the Yellowstone Basin's land was in agricultural use (State Conservation Needs Committee 1970). Irrigated agriculture is the basin's largest water use, consuming annually about 1.5 million acre-feet (af) of water (Montana DNRC 1977).

There is another industry in the Yellowstone Basin which, though it consumes little water now, may require more in the future, and that is the coal development industry. In 1971, the North Central Power Study (North Central Power Study Coordinating Committee 1971) identified 42 potential power plant sites in the five-state (Montana, North and South Dakota, Wyoming, and Colorado) northern Great Plains region, 21 of them in Montana. These plants, all to be fired by northern Great Plains coal, would generate 200,000 megawatts (mw) of electricity, consume 3.4 million acre-feet per year (mmaf/y) of water, and result in a large population increase. Administrative, economic, legal,

and technological considerations have kept most of these conversion facilities, identified in the North Central Power Study as necessary for 1980, on the drawing board or in the courtroom. There is now no chance of their being completed by that date or even soon after, which will delay and diminish the economic benefits some basin residents had expected as a result of coal development. On the other hand, contracts have been signed for the mining of large amounts of Montana coal, and applications have been approved not only for new and expanded coal mines but also for Colstrip Units 3 and 4, twin 700-mw, coal-fired, electric generating plants.

In 1975, over 22 million tons of coal were mined in the state, up from 14 million in 1974, 11 million in 1973, and 1 million in 1969. By 1980, even if no new contracts are entered, Montana's annual coal production will exceed 40 million tons. Coal reserves, estimated at over 50 billion economically strippable tons (Montana Energy Advisory Council 1976), pose no serious constraint to the levels of development projected by this study, which range from 186.7 to 462.8 million tons stripped in the basin annually by the year 2000. Strip mining itself involves little use of water. How important the energy industry becomes as a water user in the basin will depend on: 1) how much of the coal mined in Montana is exported, and by what means, and 2) by what process and to what end product the remainder is converted within the state. If conversion follows the patterns projected in this study, the energy industry will use from 48,350 to 326,740 af of water annually by the year 2000.

A third consumptive use of water, municipal use, is also bound to increase as the basin population increases in response to increased employment opportunities in agriculture and the energy industry.

Can the Yellowstone River satisfy all of these demands for her water? Perhaps in the mainstem. But the tributary basins, especially the Bighorn, Tongue, and Powder, have much smaller flows, and it is in those basins that much of the increased agricultural and industrial water demand is expected.

Some impacts could occur even in the mainstem. What would happen to water quality after massive depletions? How would a change in water quality affect existing and future agricultural,industrial, and municipal users? What would happen to fish, furbearers, and migratory waterfowl that are dependent on a certain level of instream flow? Would the river be as attractive a place for recreation after dewatering?

One of the first manifestations of Montana's growing concern for water in the Yellowstone Basin and elsewhere in the state was the passage of significant legislation. The Water Use Act of 1973, which, among other things, mandates the adjudication of all existing water rights and makes possible the reservation of water for future beneficial use, was followed by the Water Moratorium Act of 1974, which delayed action on major applications for Yellowstone Basin water for three years. The moratorium, by any standard a bold action, was prompted by a steadily increasing rush of applications and filings for water (mostly for industrial use) which, in two tributary basins to the Yellowstone, exceeded supply. The DNRC's intention during the moratorium was to study the basin's water and related land resources, as well as existing and future need for the basin's water, so that

Yellowstone River Basin

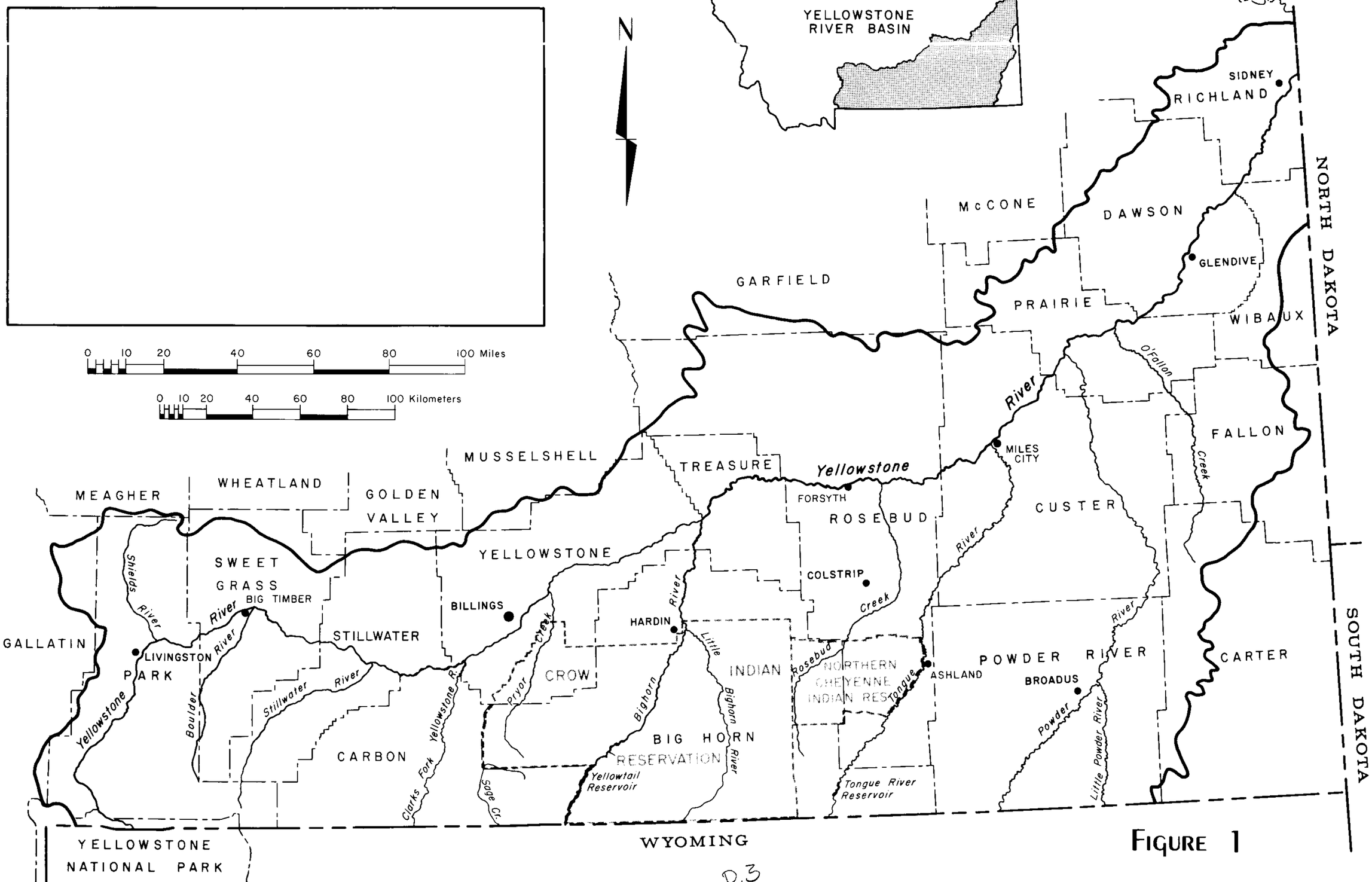

FIGURE 1

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the state would be able to proceed wisely with the allocation of that water. The study which resulted in this series of reports was one of the fruits of that intention. Several other Yellowstone water studies were undertaken during the moratorium at the state and federal levels. Early in 1977, the 45th Montana Legislature extended the moratorium to allow more time to consider reservations of water for future use in the basin.

THE STUDY

The Yellowstone Impact Study, conducted by the Water Resources Division of the Montana Department of Natural Resources and Conservation and financed by the Old West Regional Commission, was designed to evaluate the potential physical, biological, and water use impacts of water withdrawals and water development on the middle and lower reaches of the Yellowstone River Basin in Montana. The study's plan of operation was to project three possible levels of future agricultural, industrial, and municipal development in the Yellowstone Basin and the streamflow depletions associated with that development. Impacts on river morphology and water quality were then assessed, and, finally, the impacts of altered streamflow, morphology, and water quality on such factors as migratory birds, furbearers, recreation, and existing water users were analyzed.

The study began in the fall of 1974. By its conclusion in December of 1976, the information generated by the study had already been used for a number of moratorium-related projects--the EIS on reservations of water in the Yellowstone Basin, for example (Montana DNRC 1976). The study resulted in a final report summarizing all aspects of the study and in eleven specialized technical reports:

Report No. 1	Future Development Projections and Hydrologic Modeling in the Yellowstone River Basin, Montana.
Report No. 2	The Effect of Altered Streamflow on the Hydrology and Geomorphology of the Yellowstone River Basin, Montana.
Report No. 3	The Effect of Altered Streamflow on the Water Quality of the Yellowstone River Basin, Montana.
Report No. 4	The Adequacy of Montana's Regulatory Framework for Water Quality Control
Report No. 5	Aquatic Invertebrates of the Yellowstone River Basin, Montana.
Report No. 6	The Effect of Altered Streamflow on Furbearing Mammals of the Yellowstone River Basin, Montana.
Report No. 7	The Effect of Altered Streamflow on Migratory Birds of the Yellowstone River Basin, Montana.

Report No. 8	The Effect of Altered Streamflow on Fish of the Yellowstone and Tongue Rivers, Montana.
Report No. 9	The Effect of Altered Streamflow on Existing Municipal and Agricultural Users of the Yellowstone River Basin, Montana.
Report No. 10	The Effect of Altered Streamflow on Water-Based Recreation in the Yellowstone River Basin, Montana.
Report No. 11	The Economics of Altered Streamflow in the Yellowstone River Basin, Montana.

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AUTHOR'S NOTE

My biggest thank-you goes to my husband, Van. He inspired my becoming. He encouraged my acceptance of this project and strengthened my spirit during its completion.

Introduction

The purpose of this report was to assess the adequacy of Montana's existing water quality control laws. This is accomplished by determining the specific ramifications of policies such as the Montana Water Pollution Control Act, the Montana Pollutant Discharge Elimination System, and the Natural Streambed and Land Preservation Act. Montana's ability to effectively control specific water quality problems through the authority mandated by these and other regulations is addressed.

Each of the following 11 issues has an analysis, summary and recommendation on water quality problems such as large withdrawals of water, point and nonpoint sources of pollution, air pollutant emissions, irrigation return flow, the introduction of dissolved and suspended solids into surface waters, and impoundments. The last issue discusses the effectiveness of enforcement remedies.

Issue No. 1

What are the ramifications of the nondegradation policy contained in the Montana Water Pollution Control Act on large withdrawals of water and flow reservation to preserve and protect water quality?

ANALYSIS

The legislature defines pollution as the:

> Contamination, or other alteration of the physical, chemical, or biological properties of any state waters, which exceeds that permitted by Montana water quality standards, including, but not limited to, standards relating to change in temperature, taste, color, turbidity, or odor; or the discharge, seepage, drainage, infiltration or flow of any liquid, gaseous, solid, radioactive, or other substance into any state water which will or is likely to create a nuisance or render the waters harmful, detrimental, or injurious to public health, recreation, safety, welfare, livestock, wild animals, birds, fish, or other wildlife. A discharge, seepage, drainage, infiltration or flow which is authorized under the pollution discharge permit rules of the board is not "pollution" under this chapter [Sec. 69-4802(5), R.C.M. 1947].

Legally, therefore, water pollution is the alteration of various water properties. Pollution occurs when these alterations exceed those permitted by the water quality standards adopted by the BHES, and when discharges of substances into state waters adversely affect various uses or exceed authorized limits as set forth in MPDES permits.

Water quality standards set forth in ARM 16-2.14(10)-S14480 are rules which have been promulgated by the BHES pursuant to the MWPCA which comply with the requirements of the FWPCAA. Water quality standards have been adopted ". . . to establish maximum allowable changes in water quality and establish limits for pollutants which affect prescribed beneficial uses of state waters" [ARM 16-2.14(10)-S14480(1)].

A water quality standard is composed of many elements. Initially, state waters are given water use classifications; then water use descriptions enumerating uses to be made of the various state waters are assigned to the classifications. Next, specific water quality criteria are established to protect the designated water uses. The final component of a water quality standard incorporates the general water quality criteria which are applicable to all state waters except where the specific water quality criteria are designated more applicable to a specific water use classification [ARM 16-2.14 (10)-S14480(2)(a)]. The classifications assigned to various state waters are, therefore, indicative of their intended uses.

Pollution must occur in order for state waters to be protected by state law. The MWPCA defines state waters as:

> any body of water, irrigation system, or drainage system either surface or underground; however, this subsection does not apply to irrigation waters where the waters are used up within the irrigation system and the waters are not returned to any other state waters [Sec. 69-4802(9), R.C.M. 1947].

As defined by the MWPCA, very few, if any, bodies of water existing in the state would fall outside this definition. Thus, any pollution occurring in state waters falls within the jurisdiction of the MWPCA. Whether the department, however, can exercise authority over all incidents of pollution involves complex legal questions concerning the authority of the state on Indian reservations and the right of the state to regulate federal activities.

As articulated in the policy statement of the water quality standards rule, the standards quantify the maximum degree of degradation permissible within each classification. The water quality standards rule explicitly provides that:

> specific water quality criteria, along with criteria in section (6) protect the beneficial uses set forth in the water-use descriptions for the following classifications of water [ARM 16-2.14(10)-S14480(5)(a)].

Therefore, the principal inquiry becomes whether an apparent unsuitability of a reach of stream for its designated uses is sufficient evidence of water quality degradation. For example, one may question whether the disruption of fish and aquatic life is sufficient evidence of water quality degradation.

The water use classifications applicable to the Yellowstone River as set forth in ARM 16-2.14(10)-S14480(4) and the water use descriptions relating to fish and aquatic life relevant to each classification as set forth in ARM 16-2.14 (10)-S14480(5) are enumerated in table 1. Since the criteria for each water use description are designed to guarantee the suitability of the water for its designated uses, an inability to maintain the various uses would indicate that the criteria have not been maintained or met. Thus, an apparent unsuitability of a reach of stream for its designated uses would indicate water quality degradation.

For example, the Yellowstone River from the Yellowstone Park boundary to the Laurel water supply intake has been classified as B-D_1. Specific water quality criteria applicable to B-D_1 classification have been adopted and designed to protect and maintain the suitability of the water for growth and propagation of salmonid fishes and associated aquatic life [ARM 16-2.14(10)-S14480(5)(d)(iii)]. Should the absence of growth and propagation of salmonid fishes and associated aquatic life become apparent within this B-D_1 reach of the Yellowstone River, it would be reasonable to maintain that the specific water quality criteria are not being met, and that water quality degradation has occurred within this reach of stream. Thus, disruption of fish and aquatic life, using the applicable criteria, would provide substantial evidence of water quality degradation within this B-D_1 reach of the Yellowstone River.

TABLE 1. Water use classifications applicable to the Yellowstone River.

Classification	Water Use Description
A - Open - D_1	. . . water quality is to be maintained suitable for . . . growth and propagation of salmonid fishes and associated aquatic life . . .
B - D_1	The quality is to be maintained suitable for . . . growth and propagation of salmonid fishes and associated aquatic life
B - D_2	The quality is to be maintained suitable for . . . growth and marginal propagation of salmonid fishes and associated aquatic life
B - D_3	The quality is to be maintained suitable for . . . growth and propagation of nonsalmonid fishes and associated aquatic life . . .

NONDEGRADATION

The opening policy statement of the MWPCA declares as a goal the conservation of water through the protection, maintenance, and improvement of its quality [Sec. 69-4801(1)(a), R.C.M. 1947]. This statement implies a policy of nondegradation. Although the legislature has not directly defined nondegradation, it has done so indirectly through the provisions which delegate duties to the BHES. In Section 69-4808.2(1)(c)(ii), R.C.M. 1947, the legislature provides that:

> The board shall require that any state waters, whose existing quality is higher than the established water quality standards, be maintained at that high quality unless it has been affirmatively demonstrated to the board that a change is justifiable as a result of necessary economic or social development and will not preclude present and anticipated use of these waters. [Emphasis provided]

Moreover, the nondegradation policy has been adopted as a rule by the BHES in ARM 16-2.14(10)-S14480(6), which states:

> General Water Quality Criteria
> (a) The degree of waste treatment required to restore and maintain the standards is to be determined by the department and is to be based on the following:
> (1) The state's policy on nondegradation of existing high water quality as described in Section 49-4808.2, R.C.M. 1947.

Thus, state waters in which the existing quality surpasses that required by an applicable water quality standard cannot be degraded down to the applicable

water quality standard, and, in fact, must be maintained at that high level. Furthermore, the BHES has been expressly directed not to lower any previously adopted water quality standard except:

> . . . upon a finding that a particular state water has been classified under a standard or classification of water quality that is higher than the actual water quality that existed at the time of classification and only if the action is taken pursuant to 69-4814 [Sec. 69-4808.2(1)(c)(i), R.C.M. 1947].

Therefore, an applicable water quality standard serves not as a justification for degradation of existing high water quality, but as a minimum water quality standard to be maintained or achieved where it has not previously been attained.

In addition, the legislature has delegated to the BHES a statutory duty to regulate new and increased sources of water pollution. The statute provides that:

> The board shall require any industrial, public, or private project or development, which would constitute a new source of pollution or an increased source of pollution to high quality waters, referred to in subsection (1)(c)(ii), to provide the degree of waste treatment necessary to maintain that existing high water quality [Sec 69-4808.2(1)(c)(iii), R.C.M. 1947].

Thus, it can be demonstrated that a nondegradation policy is mandated by the MWPCA and affirmed by the BHES.

The nondegradation policy is enforceable in its present statutory form, although the Board's adoption of rules and standards would promote more effective implementation of this policy. Section 69-4808.2(1)(g), R.C.M. 1947, expressly states that the BHES shall: ". . . adopt rules for the administration of this chapter." Accordingly, in order for the DHES to effectively fulfill its duties under the MWPCA, particularly those pertaining to enforcement, the BHES must adopt rules implementing the nondegradation policy contained in the MWPCA.

The Strip and Underground Mine Reclamation Act (Sec. 50-1034 et seq., R.C.M. 1947; hereinafter referred to as the Reclamation Act), and the Strip and Underground Mine Siting Act (Sec. 50-1601 et seq., R.C.M. 1947; hereinafter referred to as SUMSA), administered by the DSL, include water quality control in reclamation activities [Sec. 50-1036(14) and Sec. 50-1602, R.C.M. 1947, respectively]. As required by statute, rules have been adopted to implement both acts.

The water quality segments of the rules adopted to implement the Reclamation Act and SUMSA proclaim a policy of nondegradation of waters. Specifically, the rules provide the following:

> Non-degradation of waters. Waters within the public domain of the state that possess a higher quality than that established on the effective date of established standards shall be maintained at their present high quality consistent with the powers granted to the board. Such high quality waters shall not be lowered in quality unless and until it is affirmatively demonstrated to the board through public

> hearing, that such a change is justifiable as a result of necessary economic or social development and that the change will not adversely affect the present and future uses of such waters . . . [ARM 26-2.10(10)-S10330(1)(a)].
>
> Nondegradation of waters. Waters within the public domain that possess a quality higher than established standards shall be maintained at their present high quality consistent with the powers granted to the board [ARM 26-2.10(18)-S10400(G.)(3.)(a.)].

Thus, if the introduction of pollutants into surface waters decreases the existing high quality of a particular body of water, the nondegradation policy has been violated. If such a situation occurs, the DSL is authorized to exercise its enforcement powers against the liable operator [Sec. 50-1038(1) and Sec. 50-1605(1), R.C.M. 1947].

In order for an operator to legally allow the introduction of pollutants into high quality surface waters, he must affirmatively exhibit to the BLC that such degradation is economically or socially necessary and that such introduction will not adversely affect the beneficial uses of the surface waters.

Since the DHES has explicit statutory jurisdiction over water quality and its enforcement, it is possible that the DSL reclamation and mining rules concerning water quality are outside the scope of the Reclamation Act and SUMSA, and are therefore unauthorized. The issue of potentially conflicting and overlapping jurisdiction between DHES and DSL, if ever raised, would ultimately be resolved by the Montana Supreme Court.

SUMMARY

The MWPCA defines pollution as anything causing alterations in state waters which exceed those permitted by the water quality standards, discharges of various substances into state waters which render the waters unsuitable for various beneficial uses, and discharges which exceed those permitted by an MPDES permit. The MWPCA furthermore prohibits such pollution and the placement of wastes in locations where they are likely to pollute state waters. State waters has been defined by the MWPCA as any body of water within the state, either surface or underground.

The water quality standards adopted by the BHES specify the maximum degree of water quality degradation allowed to exist within each water use classification. Various water uses are subsequently designated to the classifications. Specific water quality criteria are then established to protect the designated water uses assigned to the various water use classifications. Thus, an apparent unsuitability of a particular reach of stream for its designated uses indicates water quality degradation.

The legislature has established a nondegradation policy in the MWPCA, and such a policy has also been adopted as a rule by the BHES. The nondegradation policy requires that existing high water quality within a particular reach

of stream be maintained at that high level. A water quality standard, therefore, defines a minimum level of water quality to be maintained or achieved and not as a justification for degradation of state waters. Although the DHES is required to enforce the nondegradation policy set forth in the MWPCA, it may allow degradation of existing high water quality if it is demonstrated to the BHES that such degradation is economically or socially justifiable.

The Reclamation Act and SUMSA, administered by the DSL, also concern water quality control. A nondegradation policy, similar to the one contained in the MWPCA, has also been required of operators in the rules adopted to implement both acts.

Jurisdictional conflicts over nondegradation may exist between the DHES and the DSL. The judicial system could ultimately resolve this issue.

RECOMMENDATION

It is recommended that the BHES adopt rules implementing the nondegradation policy mandated by the MWPCA, including standards to be applied in determining whether economic or social development will be allowed to degrade existing high quality state waters. These rules would provide the DHES with a concrete framework upon which to enforce the policy.

The BLC, for purposes of implementing the Reclamation Act and SUMSA, should also adopt standards to determine if specific economic or social considerations will permit a violation of the nondegradation policy to occur. The BLC could adopt its own standards or, in order to minimize potential legal conflicts, adopt by rule the nondegradation standards promulgated by the BHES.

Issue No. 2

Can dewatering be effectively controlled under the Montana Water Pollution Control Act?

ANALYSIS

Pollution can be attributed to point-source discharges, nonpoint sources, or dewatering. Point-source discharges are effectively controlled by the Montana Pollutant Discharge Elimination System (MPDES) created by the MWPCA. Increases in nonpoint sources of pollution will be minimized by the implementation of the statewide 208 plan. Both the MPDES permit system and the 208 plan are under the jurisdiction of the DHES. Dewatering, however, is not addressed in the MWPCA. Therefore, the DHES has no authority to directly control water quality degradation caused by dewatering. Pollution caused by dewatering, however, can be significant.

A dewatered stream has been defined as a "perennial or intermittent stream whose water has been removed for one or more beneficial uses" [ARM 16-2.14(10)-S14480(3)]. Dewatering is a process which lowers the water level of a stream and which can cause numerous and substantial deleterious effects on water quality. Some of these are documented as follows:

> . . . possible results of dewatering, [include] reducing the stream's ability to transport and assimilate waste, decreasing the sediment carrying capacity, lowering the water level of the stream, and possibly increasing the water temperature . . . [Montana DNRC 1975].

These problems may constitute pollution if dewatering of the Yellowstone River causes changes in any of the specific water quality criteria cited in ARM 16-2.14 (10)-S14480(5): average number of organisms in the coliform group, dissolved oxygen concentration, total dissolved solids, sulfates, variation of hydrogen ion concentration (pH), turbidity, temperature, concentration of sediment, settleable solids, residues, toxic and other deleterious substances, and true color.

The DHES has authority to "prevent, abate, and control the pollution of state waters" [Sec. 69-4820.1(1)(a), R.C.M. 1947]. However, the scope of the DHES's authority in pollution control and enforcement is limited to discharges of pollutants into state waters and alterations of conditions in state waters which exceed those permitted by the water quality standards. The authority of the DHES under the MWPCA does not extend to the actual withdrawal of water from state waters.

Although dewatering may violate water quality standards, the DHES has no control over the amount of water withdrawn for beneficial uses. None of the acts under the jurisdiction of the DHES, or any of the rules adopted by the BHES, address regulation or control of water use rights.

The Montana Water Use Act (Sec. 80-865 et seq., R.C.M. 1947) determines a person's right to appropriate water and establishes the procedure to be followed in acquiring and perfecting a water right. The policies and purposes of this Act are stated in Section 89-866, R.C.M. 1947, which provides the following:

> (1) Pursuant to article IX of the Montana constitution, the legislature declares that any use of water is a public use and that the waters within the state are the property of the state for the use of its people and are subject to appropriation for beneficial uses as provided in this act.
>
> (2) A purpose of this act is to implement article IX, section 3(4) of the Montana constitution, which requires that the legislature provide for the administration, control, and regulation of water rights and establish a system of centralized records of all water rights . . . .
>
> (3) It is the policy of this state and a purpose of this act to encourage the wise use of the state's water resources by making them available for appropriation consistent with this act, and to provide for the wise utilization, development, and conservation of the waters of the state for the maximum benefit of its people with the least possible degredation of the natural aquatic ecosystems . . . [Sec. 89-866, R.C.M. 1947]. [Emphasis provided]

The BNRC has the authority to "adopt rules necessary to implement and carry out the purposes and provisions of this act" [Sec. 89-869(2), R.C.M. 1947]. The DNRC has the duty to enforce and administer the Montana Water Use Act and its rules [Sec. 69-868(1)(a), R.C.M. 1947].

The DNRC also has the duty to:

> prescribe procedures, forms, and requirements for applications, permits, certificates, declarations, and proceedings under this act, . . . [Sec. 89-868(1)(b), R.C.M. 1947].

After these technicalities and procedures have been established, the DNRC--not the DHES--must grant permits to appropriate water and construct withdrawal works. The Montana Water Use Act states that:

> . . . a person may not appropriate water or commence construction of diversion, impoundment, withdrawal, or distribution works therefor except by applying for and receiving a permit from the department [Sec. 89-880 (2), R.C.M. 1947]. [Emphasis provided]

The DNRC is required to issue a permit if certain conditions are met by the applicant. The criteria are set forth in Section 89-885, R.C.M. 1947, which states:

The department shall issue a permit if:

(1) there are unappropriated waters in the source of supply:

(a) at times when the water can be put to the use proposed by the applicant;
(b) in the amount the applicant seeks to appropriate; and
(c) throughout the period during which the applicant seeks to appropriate, the amount requested is available;

(2) the rights of a prior appropriator will not be adversely affected;

(3) the proposed means of diversion or construction are adequate;

(4) the proposed use of water is a beneficial use;

(5) the proposed use will not interfere unreasonably with other planned uses or developments for which a permit has been issued or for which water has been reserved;

(6) an applicant for an appropriation of 10,000 acre-feet a year or more or 15 cubic feet per second or more proves by clear and convincing evidence that the rights of a prior appropriator will not be adversely affected.

An interpretation of this section indicates that the duty to grant permits may be nondiscretionary if the criteria are successfully met.

One can argue, however, that a number of mechanisms exist by which the DNRC could justify denying water permits. The rights of a prior appropriator, as set forth in Section 89-885(2), reasonably include water quality. Therefore, if a prior appropriator's water quality will be degraded by the granting of a permit to an applicant, it could be argued that the DNRC is authorized to deny his permit. Since the DNRC has not denied permits on the basis of water quality degradation occurring at the expense of existing appropriators, the DNRC's actions indicate that it has adopted the position that the word "rights" includes only water quantity.[1] The Montana Environmental Policy Act (MEPA) may also give the DNRC authority to deny a permit to an applicant. If the MEPA process establishes that adverse environmental impacts will occur should a permit

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[1]However, in response to the author, the DNRC takes the position that in some cases water quality can be an attribute or element of a water right, and in such cases it may deny a permit if the water quality element of an existing water right would be adversely affected. It has not done so to date.

be granted, the DNRC could justifiably deny a permit. Currently, no permits have been denied on the basis of resulting adverse environmental impacts.

The water-permitting procedure therefore remains nondiscretionary. It is through the "Reservation of Waters" provision of the Montana Water Use Act [Sec. 89-890, R.C.M. 1947] that the DHES may become instrumental in controlling pollution caused by various activities such as dewatering. The actual authority to grant reservation of waters, however, lies with the BNRC. As a state agency, the DHES is permitted to apply to the BNRC to reserve waters [Sec. 89-890(1), R.C.M. 1947]. Pursuant to statute, the DHES may apply to reserve waters:

> . . . for existing or future beneficial uses, or to maintain a minimum flow, level, or quality of water throughout the year or at such periods or for such length of time as the board designates [Sec. 89-890(1), R.C.M. 1947].

In order for the BNRC to adopt an order reserving water for the DHES, the DHES must first satisfactorily establish:

(a) the purpose of the reservation;

(b) the need for the reservation;

(c) the amount of water necessary for the purpose of the reservation;

(d) that the reservation is in the public interest [Sec. 89-890(3), R.C.M. 1947].

Therefore, it is encumbent upon the DHES to establish the above requirements to the satisfaction of the BNRC before an order reserving water for the DHES can be issued. The DHES has the express authority to:

> . . . (d) Collect and furnish information relating to the prevention and control of water pollution;
>
> (e) Conduct or encourage necessary research and demonstrations concerning water pollution; [Sec. 69-4809.1(1), R.C.M. 1947].

Thus, the BHES is statutorily authorized to fulfill the reservation essentials set forth in Section 89-890(2) of the Montana Water Use Act. Through its research authority, the DHES can establish its need to reserve waters for the maintenance of water quality. For example, the DHES can establish that dewatering degrades water quality by increasing stream concentrations of total dissolved solids (TDS) and that certain minimum flows are required in order to prevent this pollution.

Pursuant to Section 89-890(4), R.C.M. 1947, the DNRC is authorized to ". . . reject an application and refuse a permit for the appropriation of reserved waters, . . ." only after the DHES has satisfactorily met the above enumerated criteria, and has been granted a water reservation by the BNRC.

Although this procedure seems rather circuitous as a means of preventing water pollution caused by dewatering, the MWPCA and the Montana Water Use Act presently preclude the DHES from taking any other course. In the final analysis, however, only the BNRC can prevent pollution caused by dewatering since it is the body authorized to grant water reservation.

An exception to the seemingly mandatory duty of the DNRC to issue water appropriation permits can be found in the Montana Water Use Act. This exception specifically pertains to the Yellowstone River Basin (Sec. 89-8-103 et seq., R.C.M. 1947) and is often referred to as the "Yellowstone Moratorium." Section 89-8-103, R.C.M. 1947, of the Moratorium states that because the number of applications for water appropriation from the Yellowstone River Basin threatens the "depletion of Montana's water resources to the significant detriment of existing and projected agricultural, municipal, recreational and other uses, and of wildlife and aquatic habitat," and that because the legislature further finds that "these appropriations foreclose the options . . . for other future beneficial purposes," the legislature declares:

> . . . that it is the policy of this state that before these proposed appropriations are acted upon existing rights to water in the Yellowstone basin must be accurately determined for their protection, and that reservations of water within the basin must be established as rapidly as possible for the preservation and protection of existing and future beneficial uses.

Section 89-8-105, R.C.M. 1947, mandates the DNRC to suspend applications to appropriate surface water in the Yellowstone River basin which exceed 14,000 af or 20 cfs. This section of the Montana Water Use Act states the following:

> (1) The department may not grant or otherwise take any action on an application until one of the following first occurs:
>
> (a) The board of natural resources and conservation makes a final determination on the applications for reservations of water in the basin filed before January 1, 1977, in accordance with 89-890;
>
> (b) A final determination of existing rights has been made in the source of supply in accordance with the Montana Water Use Act; or
>
> (c) January 1, 1978; however, if a court stays or enjoins the continuance of proceedings on any pending application for reservation of water in the basin filed before January 1, 1977, and such stay or injunction prevents the board from making a final determination on such application before January 1, 1978, the court shall extend this date by the length of delay incurred. The court may not extend this date beyond January 15, 1979.

Permits may be granted, therefore, in the Yellowstone River Basin after January 1, 1978, or upon a final adjudication of existing rights in the basin, or upon a decision by the BNRC on the reservation applications, whichever occurs first, unless the Moratorium is extended by court order. (Subsequent to the writing of this report, the Moratorium was extended by court order in December 1977 until mid-summer 1978.)

Since the MWPCA does not authorize the DHES to regulate water quality degradation caused by dewatering, the DHES has filed an application for reservation of water in the Yellowstone River. The basis of the DHES's request is to ensure that water quality in the Yellowstone River is not degraded. If the BNRC grants the DHES's reservation request, water quality in the Yellowstone River will be maintained.

SUMMARY

A dewatered stream is one in which the water has been removed for one or more beneficial uses. The process of dewatering lowers the water level of the stream and may ultimately result in its degradation.

The DNRC exercises jurisdiction over water appropriations and withdrawals. Since the DHES has no jurisdiction in the water appropriation process, it is not directly authorized to regulate water quality degradation caused by dewatering. The DHES, however, is authorized to apply for flow reservations. Accordingly, the DHES has applied for a reservation on the Yellowstone River to maintain the minimum flow necessary to guarantee the maintenance of the water quality standards.

The flow reservation process provides the DHES with an indirect method of controlling water quality degradation caused by dewatering. The BNRC grants or denies applications for reservations of waters. Thus, the DHES's control over water quality degradation caused by dewatering is inadequate since the reservation process does not guarantee that the flow reservations applied for will be granted.

RECOMMENDATION

It is incongruous that two different state agencies preside over water quality and water appropriations. The DHES's jurisdiction encompasses water quality and that of the DNRC encompasses water withdrawals. Neither agency has the authority to involve itself with the other's jurisdiction.

Legislative action is necessary to involve the DNRC in water quality as it relates specifically to water withdrawals, or the DHES in water appropriations as it relates specifically to water quality. Perhaps a procedure similar to the certification process used in the Major Facility Siting Act [Sec. 70-801 et seq., R.C.M. 1947] could be legislatively established in which applications for withdrawals considered by the DNRC could also be evaluated for effects on water quality by the DHES.

Another alternative is to consolidate jurisdiction over water quality and withdrawals under one department. The implementation of either alternative would greatly enhance the control and maintenance of water quality in the State of Montana.

It is strongly urged that the BNRC grant the DHES's reservation request in the Yellowstone River. If the DHES flow reservation is granted, the water quality of the Yellowstone River will remain suitable for prescribed beneficial uses.

Issue No. 3

Can the State of Montana, through the Montana Pollutant Discharge Elimination System, prohibit the discharge of saline or other low-quality waters by requiring a zero-discharge limitation on point-source discharges, and impose a temporal rate of discharge?

ANALYSIS

Section 402(b) of the FWPCAA enables states to administer their own permit systems under certain conditions. Accordingly, the State of Montana has established the MPDES pursuant to Section 402(b) of the FWPCAA and Section 69-4801 et seq., R.C.M. 1947 in ARM 16-2.14(10)-S14460(1).

The purpose of the MPDES rule is to implement a uniform system for issuing permits for point-source discharges [ARM 16-2.14(10)-S14460(1)]. An MPDES permit is:

> any permit or equivalent document or requirements issued by the department to regulate the discharge of pollutants from point sources into state waters [ARM 16-2.14(10)-S14460(2)].

A discharge into state waters may constitute pollution, but if it is authorized in an MPDES permit, it will not be considered pollution under the MWPCA [Sec. 69-4802(5), R.C.M. 1947]. In order for an owner or operator to maintain or acquire rights to discharge pollutants into state waters without violating the law, he must secure an MPDES permit from the DHES. The permit system, therefore, is the primary regulatory tool used in the enforcement of the effluent and water quality standards.

The FWPCAA establishes two levels of effluent standards that existing point-source dischargers must minimally meet. The effluent standards are basically technologically oriented, aside from the standards specifically applicable to toxic pollutants. Effluent limitations for point sources "require the application of the best practicable control technology currently available" by July 1, 1977 [Sec. 301(b)(1)(A)]. The second level of effluent standards mandates that "effluent limitations for categories and classes of point sources. . .require application of the best available technology economically achievable for such category or class. . ." by July 1, 1983 [Sec. 301(b)(2)(A)].

"Effluent standards" as defined by ARM 16-2.14(10)-S14460(2) means:

> any restriction or prohibition on quantities, rates and concentrations of chemical, physical, biological and other constituents which are discharged from point sources into state waters.

"Applicable water quality standards" has been defined by ARM 16-2.14(10)-S14460(2) to mean:

> that portion of the state's water quality standards, MAC 16-2.14(10)-S14480 promulgated by the department and approved by the regional administrator, which apply water-use classifications and descriptions and general and specific water quality criteria to the state waters receiving the discharge of pollutants.

"Standards of performance" as defined by ARM 16-2.14(10)-S14460(2) means:

> a standard adopted by the department for the control of the discharge of pollutants which reflects the greatest degree of effluent reduction achievable through application of the best available demonstrated control technology, processes, operating methods or other alternatives, including, where applicable, a standard permitting no discharge of pollutants.

The DHES is statutorily vested with the authority to impose effluent limitations applicable to a discharger in his MPDES permit. The MWPCA states in Section 69-4809.1(1)(c) that:

> The department shall clearly specify in any permit any limitations imposed as to the volume, strength, and other significant characteristics of the waste to be discharged.

All issued MPDES permits, as required by ARM 16-2.14(10)-S14460(7)(a), must contain the following general condition:

> (i) . . .
> (ii) The discharge of pollutants to state waters more frequently than or at a level in excess of that identified and authorized by an MPDES permit shall constitute a violation of the conditions of the permit.
> (iii) . . .

This rule provides that discharges exceeding permitted levels or occurring more often than authorized constitute violations of the MPDES permit.

Thus, MPDES conditions pertaining to discharge restrictions, prohibitions, and frequency must be adhered to by the permittee. Should the permittee violate any of the limitations or conditions designated in his MPDES permit, he will be held in violation of the MWPCA [Sec. 69-4806(3), R.C.M. 1947] and subject to its enforcement remedies [Sec. 69-4809.1(1)(g), R.C.M. 1947].

The function of an MPDES permit is to explicitly enumerate the discharger's obligations under the MWPCA. More specifically, the permit:

> will serve the role of translating the . . . effluent standards into limitations tailored to the discharger's particular operation. In addition, water quality requirements do not readily translate into effluent limitations for particular dischargers; the permit will serve the role of performing this translation. Finally, the permits will serve to define the schedule [Anderson 1974, p. 728].

Before the DHES renders its tentative determination regarding issuance or denial of an MPDES permit, it must first determine whether the applicant will comply with:

> (i) Effluent standards, effluent limitations, standards of performance for new sources of pollutants, toxic effluent standards and prohibitions, and pretreatment standards
> (ii) Water quality standards established pursuant to Section 69-4808.2, R.C.M. 1947
> (iii) - (v). . .
> (vi) Prohibition of any discharge which is in conflict with a plan or amendment thereto approved pursuant to Section 208(b) of the act
> (vii) Any additional requirements that the department determines are necessary to carry out the provisions of Section 69-4801 et seq., R.C.M. 1947 [ARM 16-2.14(10)-S14460(5)(a)].

Moreover, all MPDES permits issued must contain special conditions guaranteeing compliance with the requirements set forth in ARM 16-2.14(10)-S14460(5)(a)(i) through (5)(a)(vii) [see ARM 16-2.14(10)-S14460(7)].

MPDES permits must also contain special conditions which authorize the discharge of pollutants into state waters [ARM 16-2.14(10)-S14460(7)(b)(i)] and the "prohibition of certain discharges without prior approval from the department" [Arm 16-2.14(10)-S14460(7)(b)(iv)]. The MPDES permit must also designate special conditions pertaining to:

> Effluent standards and, if necessary, compliance schedules on each authorized discharge of pollutants into state waters [ARM 16-2.24(10)-S14460(7)(b)(ii)].

Thus, if dischargers are unable to comply with the effluent limitations, the DHES must establish compliance schedules indicating the dates by which compliance with the limitations will be required.

A permit can be issued by the DHES only when it has determined that the applicant owner or operator will be able to comply with the applicable water quality standards [ARM 16-2.14(10)-S14460(7)]. Should a water quality assessment indicate that any additional discharges would violate the applicable water quality standards, the DHES would be compelled to impose effluent limitations upon the source which would guarantee compliance with water quality standards, including, if necessary, a "zero-discharge" limitation.

The relationship between effluent and water quality standards is articulated by Anderson (1974, p. 694):

> The basic scheme of the FWPCA is to require all dischargers to meet uniform technology-based effluent standards as a minimum. However, each body of water also has water quality standards, and a discharger may be required to achieve a greater reduction in his effluent than the applicable effluent standard would require if such a reduction is necessary to meet the water quality standards applicable to the body of water that receives his effluent.

The water quality rules explicitly bind the discharge to quantitative and qualitative discharge limits. Specifically:

> Permittees having authorized discharges of pollutants into state waters shall be required to take necessary steps to meet the most stringent schedule of compliance contained in applicable effluent standards, water quality standards, and legal requirements developed pursuant to section 5 [ARM 16-2.14(10)-S14460(7)(b)(ii)(aa)].

The term "applicable effluent standards," which defines limitations on discharges, means:

> All state effluent standards to which a discharge of pollutants is subject under this rule and including, but not limited to, effluent limitations, standards of performance, toxic effluent standards and prohibitions, and pretreatment standards. <u>The minimum state applicable effluent standards will be those standards adopted by the U.S. Environmental Protection Agency</u> [ARM 16-2.14(10)-S14460(2)]. [Emphasis provided]

Effluent standards promulgated by the EPA are published in the Code of Federal Regulations (CFR). These effluent standards establish the minimum effluent standards that can be enforced by the State of Montana.

If the DHES determines, however, that the effluent standards adopted by the EPA will not guarantee compliance with the applicable Montana water quality standards, the DHES is authorized to impose limitations on dischargers that will guarantee water quality maintenance [ARM 16-2.14(10)-S14460(5)(a)]. In many cases, therefore, effluent limitations imposed on dischargers will be more stringent than those adopted by the EPA.

It is also conceivable that an effluent limitation developed to meet water quality standards will require a zero-discharge. The water quality standards, therefore, may dictate the imposition of zero-discharges on point sources in certain situations.

The FWPCAA also supports the imposition of zero-discharges on point sources. Before the discharge-permit program can be transferred to a state, a state must establish to the satisfaction of the EPA administration

that it has the authority to issue permits which guarantee compliance with applicable water quality standards [Sec. 420(b), FWPCAA]. Furthermore, a state must establish that it has the authority to impose effluent limitations on point-source discharges that contribute to water quality maintenance where the discharge would otherwise interefere with water quality maintenance [Sec. 402(b), FWPCAA].

The importance of water quality maintenance in the development of MPDES permit limitations is further emphasized by ARM 16-2.14(10)-S14460(7)(a)iii). This rule provides that:

> An MPDES permit may be modified, suspended, or revoked in whole or in part during its term under provisions of Section 69-4807.1, R.C.M. 1947 for cause, including but not limited to, any of the following:
>
> (aa) Violation of any conditions of the permit
>
> (ab) . . .
>
> (ac) A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge

Pursuant to this rule, the DHES would be authorized to require the elimination of a discharge which was previously restricted if changed conditions indicated that permanent elimination were necessary. However, the DHES can administratively modify, suspend, or revoke a discharger's permit should any effluent limitation or condition established to assure compliance be violated.

As demonstrated by the Hoerner-Waldorf Corporation permit (No. MT-0000035), issued on December 2, 1974, the DHES may modify a permit if it deems such action necessary in order to guarantee compliance with the water quality standards. The permit provides the following:

> OTHER REQUIREMENTS
>
> Violation of Water Quality Standards
>
> If river data resulting from the water quality monitoring program show violation of established water quality standards, including the introduction of taste and odor problems, this permit may be modified to specify additional control measures to ensure compliance with water quality standards.

Therefore, water quality standards may function as an additional effluent limitation in certain circumstances. Even if the effluent limitations imposed upon a source can be met, the applicable water quality standards may operate to severely restrict or prohibit point-source discharges.

In addition, the water quality standards rule specifically provides that the DHES's determination regarding the degree of waste treatment required of an owner or operator to maintain the water quality standards be based on the state's policy of nondegradation of existing high water quality [ARM 16-2.14(10)-S14480(6)(a)(i)]. The degree of waste treatment required must protect and maintain the already existing high water quality.

There is a way, however, to circumvent mandatory compliance to the nondegradation policy. According to Section 69-4808.2(1)(c)(ii), R.C.M. 1947, an owner or operator may demonstrate to the BHES that (1) the degradation of existing high water quality is socially or economically justifiable, and (2) that the proposed degradation will not preclude present and future beneficial use of the waters in question. If the discharger cannot satisfy these requirements, the discharge of saline water or other pollutants into state waters can be prohibited. The justification for such a prohibition would be the nondegradation policy.

Just as the state can quantitatively and qualitatively limit discharges, it is also authorized to impose temporal or seasonal limitations on discharges [Sec. 69-4809.1(1)(c), R.C.M. 1947, and ARM 16-2.14(10)-S14460(5)(a)]. If the imposition of temporal restrictions will guarantee compliance with the effluent and water quality standards, the DHES has the authority to require a permittee to store his waste during part of the year and release it only during high-flow or other approved times. The MPDES permit issued to the Hoernor-Waldorf Corporation (Permit No. MT-0000035) on December 2, 1974, illustrates the operation of these rules. The permit states the following:

> Immediate Effluent Limitations
>
> Such discharges shall be limited by the permittee as specified below:
>
> Discharges 001, 002, and 003 (direct discharges). There shall be no discharge from these outfalls except during the spring high-flow period. Discharges shall not commence until written permission is given by the department. Discharge shall be terminated when requested orally or in writing by the department.
>
> Specific discharge requirements following the granting of permission to discharge are as follows:
>
> 1. 96-hour TL_{50}--The combined rate of direct discharge shall not exceed the following formula: . . .

As illustrated, through the implementation of the MWPCA and the rules, the DHES is authorized to impose a temporal or seasonal discharge requirement on any permittee, including, but not limited to owners or operators of power, gasification, and liquefaction plants. These regulations enable the DHES to limit the impact and degree of contamination on state waters.

SUMMARY

Before an owner or operator may discharge into state waters, he is required by the MWPCA and the MPDES rule to secure an MPDES permit from the DHES, making the MPDES system the primary enforcement tool of the DHES in regulating point-source discharges of pollutants into state waters. Discharges authorized by an MPDES permit do not constitute pollution under the MWPCA.

An MPDES permit specifies a discharger's obligations under the MWPCA and sets effluent limitations for an individual discharger. The DHES has several methods to ensure compliance with the MWPCA: it may prohibit point-source discharges altogether, it may impose temporal or seasonal discharges upon permittees, or it may require temporary or permanent reductions or eliminations of previously authorized discharges if existing water quality conditions warrant such a change.

Maintenance and achievement of water quality standards offer the strongest justifications for imposing "zero-discharge" limitations on various pollutants. Thus, water quality standards can function as effluent standards in some circumstances.

The nondegradation policy also justifies imposing a zero-discharge limitation upon a permittee. An owner will be permitted to discharge in violation of the nondegradation policy only if he demonstrates to the BHES that such degradation is socially or economically justifiable.

RECOMMENDATION

As recommended in Issue No. 1, the BHES should adopt rules implementing the nondegradation policy contained in the MWPCA. Specifically, these rules should enumerate the standards to be used by the BHES in determining when economic or social development will justify degradation of existing high water quality.

Issue No. 4

Does the State of Montana have the authority to control the construction and maintenance of ash and sludge ponds associated with large coal conversion facilities?

ANALYSIS

The State of Montana has the authority to control the construction and maintenance of ash and sludge ponds associated with large coal conversion facilities. The DHES, BHES, and BNRC exercise jurisdiction in this area. An understanding of each agency's jurisdiction pertaining to the construction and maintenance of ash and sludge ponds will better describe the State of Montana's authority in this area.

The following statutory provisions and administrative rules are useful in understanding the DHES's and BHES's roles in this matter. Section 69-4802(8), R.C.M. 1947, and ARM 16-2.14(10)-S14460(2) define "disposal system" as:

> . . . a system for disposing of sewage, industrial, or other wastes and includes sewerage systems and treatment works.

The term "sewerage system" is similarly defined by both the MWPCA and the MPDES rule to mean:

> . . . any device for collecting or conducting sewage, industrial wastes, or other wastes to an ultimate disposal point [Sec. 69-4802(6), R.C.M. 1947, and ARM 16-2.14(10)-S14460(2)].

"Industrial waste" is defined in Section 69-4802(2), R.C.M. 1947, as meaning:

> . . . any waste substance from the process of business or industry, or from the development of any natural resource together with any sewage that may be present; . . .

In addition, ARM 16-2.14(10)-S14460(2) provides that "industrial waste" and "other wastes," as defined in Section 69-4802, R.C.M. 1947, be interpreted as having the same meaning as pollutant.

According to the above definitions, the ponds used to dispose of industrial wastes consisting of ash and sludge are disposal systems. Therefore, in whatever manner the MWPCA and the rules direct themselves to the issue of disposal systems, they similarly address themselves to sludge and ash ponds.

Under the MPWCA, the BHES has been delegated the duty to:

> adopt rules governing application for permits to discharge sewage, industrial wastes, or other wastes into state waters including rules requiring the filing of plans and specifications relating to the construction, modification, or operation of disposal systems [Sec. 69-4808.2(1)(d), R.C.M. 1947].

Pursuant to this section, the BHES is required to adopt rules for the filing of disposal system plans, which are to include rules relating to the construction, maintenance, and operation of disposal systems. Nothing in this provision gives the BHES control, however, over the actual construction of disposal systems. The DHES has been delegated the duty to:

> Examine plans and other information needed to determine whether a permit should be issued or suggest changes in plans as a condition to the issuance of a permit [Sec. 69-4809.1(1)(b), R.C.M. 1947].

This provision permits the DHES to make suggestions and recommendations pertaining to the plans submitted by an MPDES permit applicant. Plans and other information may be interpreted to include disposal system plans. This statutory provision does not give the DHES the actual authority to control the construction or maintenance of a disposal unit, or the power to require that the applicant choose one disposal system design over another. The DHES's role is limited to making suggestions. As the section indicates, adoption of the suggestions offered by the DHES may be required before an applicant is issued an MPDES permit. Therefore, these suggestions exert authoritative influence over MPDES applicants.

It may be reasoned that this provision allows the DHES to suggest changes which constitute actual construction design plans. Such an argument could be proposed only if Section 69-4809.1(1)(b), R.C.M. 1947, were very broadly interpreted. When read in conjunction with other provisions of the MWPCA, such an interpretation appears to be overly broad. Moreover, a broad interpretation would give the DHES the burden of determining which disposal system achieves maximum "no-seepage" efficiency and would ultimately require the DHES to design various operational systems for energy facilities. In addition, the DHES's enforcement powers under the MWPCA would be severely restricted as the DHES would become primarily liable for the particular disposal system constructed. Such authority is clearly outside the scope of the DHES's statutory duties as set forth in Section 69-4809.1, R.C.M. 1947.

An interpretation more consistent with the total character of the MWPCA is that the DHES must offer suggestions which assure compliance with other provisions of the MWPCA and the MPDES permit rules as set forth in ARM 16-2.14(10)-S14460(4), adopted by the BHES pursuant to Section 69-4808.2(1)(d), R.C.M. 1947.

For example, ARM 16-2.14(10)-S14460(4)(h) lists the minimum requirements to be included in all reports submitted to the DHES by an MPDES applicant. If the submitted plans do not contain the requirements specified

and mandated by the rule, the DHES would be authorized to deny an MPDES permit to the applicant.

Construction plans are addressed in ARM 16-2.14(10)-S14460(4)(i). This rule states that:

> Construction plans and specifications should cover the sewerage system and all unit operations associated with the treatment works and disposal system, including appurtenant items such as flow measuring devices and river outlet structure.

If the DHES's review of the applicant's plans reveals that the construction plans and specifications do not include the material required by this rule, the DHES would be authorized to point out such deficiences and suggest that until such plan deficiencies were remedied, an MPDES permit would not be issued. The DHES, however, is not authorized by this rule to require a specific type of disposal system.

It should be noted that the DHES's statutory authority to make suggestions and recommendations regarding an applicant's plans [Sec. 69-4809.1(1)(b), R.C.M. 1947] is separate from its authority to require an applicant to construct no-seepage ash and sludge ponds. The authority to demand requirements other than those specifically enumerated in the rules is apparently conferred upon the DHES in ARM 16-2.14(10)-S14460(5)(a)(vii) and confirmed in ARM 16-2.14(10)-S14460(7), which states the following:

> (5) <u>Processing procedure for MPDES permit applications</u>
>
> (a) Upon receipt of a completed MPDES permit application and requested supplemental information, the department shall make a tentative determination with respect to issuance or denial of an MPDES permit. The tentative determination shall be made based on apparent compliance or noncompliance with all of the following whenever applicable:
> (i) - (vi) . . .
> (vii) <u>Any additional requirements that the department determines are necessary to carry out the provisions of Section 69-4801 et seq., R.C.M. 1947</u>.
>
> (6) . . .
>
> (7) <u>Conditions and terms of MPDES permits</u>
>
> All issued MPDES permits shall contain special conditions which will assure compliance with the requirements discussed in subsections (5)(a)(i) through (5)(a)(vii). [Emphasis provided]

If the DHES determines that no-seepage ponds are necessary to effectively implement the MWPCA, it may require their construction and maintenance. The

burden of performance, or the burden of demonstrating that the ponds are seepage-proof, is carried by the applicant. If the applicant adequately demonstrates that seepage will not occur, the DHES may tentatively determine to issue the applicant an MPDES permit. Pursuant to this rule, the DHES has not designed a no-seepage pond, but has demanded such from the applicant.

Recognition should be taken of the fact that the BNRC has the express authority to control the construction and maintenance of ash and sludge ponds and other facilities associated with large coal conversion facilities. Specifically, the Major Facility Siting Act [Sec. 70-801 et seq., R.C.M. 1947] provides that:

> within ninety (90) days after the last day of the hearing, the board shall make complete findings, issue an opinion, and render a decision upon the record, either granting or denying the application as filed, or granting it upon such terms, conditions, or modifications of the construction, operation or maintenance of the facility as the board considers appropriate [Sec. 70-810(1), R.C.M. 1947]. [Emphasis provided]

Under this section, the BNRC is given extremely broad powers regarding the granting of certificates of environmental compatibility and public need (hereinafter referred to as certificates). This section clearly indicates that the BNRC may condition the granting of a certificate upon whatever terms, conditions, or modifications that it deems necessary. A reasonable interpretation of "terms, conditions, or modifications of the construction, operation, or maintenance of the facility" implies that the BNRC has the power to specifically design parts of coal conversion facilities, including, but not limited to, ash and sludge ponds. Unlike the power given to the DHES and BHES, the BNRC is not limited to merely adopting rules for the filing of plans or requiring that certain operational limitations be imposed. The BNRC possesses a clear statutory mandate to grant certificates upon whatever conditions, terms, or modifications it deems necessary. The major distinction between the authority of the DHES, BHES, and BNRC is that while the first two may require a specific type of facility to be constructed, such as a no-seepage pond, the latter has authority to establish construction and design specifications in the certificate it grants to an applicant.

SUMMARY

A reasonable interpretation of the MWPCA indicates that the BHES and DHES do not possess the authority to control the actual construction and maintenance of disposal systems. They do, however, have the authority to adopt rules regarding the filing of plans, make suggestions pertaining to construction, and to require certain operational limitations.

Specifically, the BHES has the duty to adopt rules governing applications for MPDES permits, including rules pertaining to the filing of plans and specifications related to the construction of disposal systems.

Nothing in the pertinent ARM rule authorizes the BHES to adopt rules regarding actual construction or maintenance of disposal systems.

The DHES has been delegated the duty to make suggestions exerting authoritative influence over the contents of the plans submitted by MPDES permit applicants. These suggestions should be intended only to place the discharger in compliance with the MWPCA and rules adopted by the BHES. The DHES, by regulation, has also been given the power to require what is necessary of a permittee. Thus, while the DHES is authorized to request the construction of a no-seepage pond, and make suggestions regarding plan contents, it is not authorized to design the no-seepage pond.

The BNRC, however, has express authority to control the construction and maintenance of ash and sludge ponds along with other facilities associated with large coal conversion facilities. The BNRC may condition a certificate of environmental compatibility and public need upon whatever terms, conditions, or modifications it deems necessary for the construction, operation, or maintenance of a facility. While the DHES and BHES are limited to an advisory role regarding the construction and maintenance of ash and sludge ponds, the BNRC is not so limited. Thus, whereas the DHES may require a no-seepage pond to be constructed, the BNRC may actually set forth the design specifications it requires.

RECOMMENDATIONS

If the State of Montana, through the DHES or BHES, desires to control the actual construction of ash and sludge ponds, the MWPCA should be amended to provide the DHES with such authority.

It is recommended that the DHES and BHES <u>not</u> pursue a statutory amendment providing for "design" authority as <u>its</u> passage would make them, and not the permittee, primarily liable for disposal system deficiencies. Furthermore, the BNRC is expressly given the power to design various energy-related facilities. An amendment conferring such authority on the DHES would unnecessarily duplicate the authority already conferred upon the BNRC and would possibly create jurisdictional conflicts.

Issue No. 5

Do Montana's regulations address the impact of air pollutant emissions on the Yellowstone River basin watershed?

ANALYSIS

The most significant rules promulgated by the BHES pursuant to the MWPCA involve water quality standards and the Montana Pollutant Discharge Elimination System [ARM 16-2.14(10)-S14480 and ARM 16-2.14(10)-S14460, respectively]. Neither of these rules addresses water pollution caused by indirect sources such as stack emissions.

A relationship between air and water pollution has, however, been established. Rainfall carries various pollutants into streams, rivers, lakes, and other bodies of water which support human needs and activities (Wilbur 1969, p. 245). The DHES recognizes that energy development creates and increases indirect sources of water pollution (Montana DNRC 1975, p. 90). Although insufficient data have been accumulated concerning the specific effects of such sources on water quality, various general effects of certain sources are known. For example, the following has been acknowledged:

> Drift from wet cooling devices containing dissolved and suspended salts will adversely affect plants, animals, and water quality within a few hundred feet of the cooling facility.
>
> Also unknown is the fate of trace elements in coal; part remain in the ashes (where they may contaminate local ground water); the rest leave via the stack and are dispersed (Montana DNRC 1975, p. 90).

Air pollutant emissions are directly addressed in the Montana Clean Air Act [Sec. 69-3904, et seq., R.C.M. 1947] and the Federal Clean Air Act Amendments of 1970 [42 U.S.C. 1857, et seq.]. As the MWPCA does not address itself to the impact of air pollutant emissions on water quality, the DHES has no enforcement authority in that area. The Montana Clean Air Act and the federal clean Air Act amendments of 1970 should be analyzed if air pollutant emissions cause or increase water quality degradation. An analysis of both acts will enumerate the standards and controls placed on air pollutant emissions, whether they originate from energy-related facilities or other sources.

SUMMARY

The MPDES and water quality standards rules do not address water pollution caused by indirect sources. Air pollutant emissions, however,

are addressed in the Montana Clean Air Act and the Federal Clean Air Act Amendments of 1970, which enumerate the standards and controls placed on air pollutant emissions originating from energy-related facilities and other sources. Both clean air acts should be consulted if air pollutant emissions contribute to or cause water quality degradation.

RECOMMENDATION

It is recommended that control of indirect sources of water pollution continue to remain within the exclusive jurisdiction of the Montana Clean Air Act and the Federal Clean Air Act Amendments of 1970.

Issue No. 6

Do Montana's regulations adequately address the problem of irrigation return flow?

ANALYSIS

The MPDES regulates discharges originating from point sources, including, but not limited to, irrigation return flow, sewerage systems, treatment works, disposal systems, animal confinement facilities, and industries [ARM 16-2.14(10)-S14460(4)]. The problem of irrigation return flow originating from point sources is specifically covered in the MPDES rule. ARM 16-2.14(10)-S14460(4) states the following:

> Application for an MPDES permit
>
> (a) - (c) . . .
>
> (d) MPDES requirements shall apply to those discharges of irrigation return flow under NPDES requirements as described in regulations in or subsequent revisions to the Federal Register, July 5, 1973, Vol. 38, No. 128, Part III.

In order to ascertain the point-source discharges of irrigation return flow that are subject to MPDES control, an examination of NPDES requirements as set forth in federal regulations is mandatory. Other than this particular reference to NPDES requirements, the MPDES rule does not offer any additional control specifics relating to point-source discharges of irrigation return flow.

Regulations have been promulgated by the EPA which require the application of the NPDES permit program to various agricultural activities. These regulations were adopted pursuant to the court order issued in the case of NRDC v. Train, 396 F. Supp. 1393, 7 ERC 1881 (D.D.C. 1975).

The regulations clarify the jurisdictional scope of the NPDES and thus, the MPDES, as they specifically relate to the discharge of pollutants from agricultural activities. The EPA clarifies the scope of the permit systems by defining "which sources of pollutants are point sources, and thus subject to the NPDES permit program" (41 Fed. Reg. 28493).

Accordingly, "agricultural point source" has been defined as:

> any discernible, confined, and discrete conveyance from which any irrigation return flow is discharged into navigable waters [41 Fed. Reg. 28496].

"Irrigation return flow" has been defined as:

> surface water, other than navigable waters, containing pollutants which result from the controlled application of water by any person to land used primarily for crops, forage growth, or nursery operations [41 Fed. Reg. 38496].

In addition, "surface waters" has been defined as:

> water that flows exclusively across the surface of the land from the point of application to the point of discharge [41 Fed. Reg. 28496].

Sources in Montana which qualify as agricultural point sources will be subject to an areawide general permit system which will soon be finalized by the EPA and published. Pursuant to ARM 15-2.14(10)-S14460, the general permit system for agricultural point sources to be established by the EPA and applicable to the NPDES, will also apply to the MPDES. In Montana, "agricultural point sources" would basically be limited to waters that move across the surface of the land and are discharged through discernible, discrete conveyances into state waters.

If a discharge from agricultural land, however, does not qualify as an "agricultural point source," it would be considered a nonpoint source, and not subject to the areawide general permit system to be developed.

SUMMARY

The MPDES regulates discharges, including irrigation return flow, originating from point sources. By reference, the pertinent ARM rule adopts NPDES requirements as set forth in the Code of Federal Regulations; these requirements indicate the type of controls agricultural point sources must adhere to.

The EPA has recently published regulations which require the application of the NPDES permit program, and thus the MPDES permit program, to various agricultural point sources. Agricultural point sources in Montana would be limited to waters that travel across land surfaces and are discharged through discernible conveyances into state waters. Discharges from agricultural land which do not qualify as agricultural point sources are considered nonpoint sources, and are therefore not regulated by the MPDES permit system.

RECOMMENDATION

It is recommended that the DHES, as soon as practicable, implement the "agricultural point-source" permit requirements that will soon be finalized by the EPA and published in the Code of Federal Regulations. A failure to expeditiously act may jeopardize the continuance of Montana's MPDES permit program.

Issue No. 7

Does Montana have sufficient regulatory authority to control nonpoint sources of water pollution?

THE FWPCAA: NONPOINT SOURCES OF WATER POLLUTION

The National Pollutant Discharge Elimination System (NPDES) is the national system developed for the issuance of permits under Section 402 of the FWPCAA and includes any state or interstate program approved by the administrator of the EPA in whole or in part, pursuant to Section 402(b) of the FWPCAA [40 C.F.R. 124.1(g)(1975)]. Section 402(b) of the FWPCAA transfers jurisdiction of the FWPCAA from the EPA to states choosing to administer their own permit programs. In order for a state to excerise this prerogative, it must demonstrate that it possesses the statutory authority necessary to administer and enforce such a program, and that its program meets certain other additional requirements [Sec. 402(b)].

The FWPCAA prohibits the discharge of any pollutant unless such discharge complies with the permit requirements of the FWPCAA [Sec. 301(a)]. The NPDES authorized the issuance of permits "for the discharge of any pollutant" [Sec. 402(a)(1)]. The term "discharge of pollutant" is defined by the FWPCAA as the discharge of pollutants from point sources [Sec. 502(12)]. Thus, the FWPCAA restricts the application of its permit system to point-source discharges of pollutants only.

Although pollution originating from nonpoint sources is outside the bounds of the NPDES, the FWPCAA explicitly deals with nonpoint sources of pollution. Section 208 is the provision which requires states to formulate regulatory programs which control nonpoint sources of pollution. Gnerally, Section 208 conveys to various agencies the authority to establish areawide treatment management plans. Pursuant to Section 208, these areawide waste treatment management plans should address both point and nonpoint sources of pollution.

Pursuant to the FWPCAA, the states retain, under certain conditions, the primary responsibility of controlling water pollution [Sec. 101(b)]. One condition imposed upon the states is that they must submit a continuing planning process as mandated by Section 303(3) of the FWPCAA. The continuing planning process must incorporate all the elements "of any applicable area-wide waste management plans under Section 208, and applicable basin plans under Section 209 of the Act" [Sec. 303(e)(e)(b)].

The EPA has adopted rules pertaining to 208 plans and requirements. These rules are published in 40 Federal Register 55334 (1975), parts 130 and 131 respectively entitled "Policies and Procedures for Continuing Planning Process" and "Preparation of Water Quality Management Plans."

The preamble to these proposed regulations provides that:

> These amended regulations describe the necessary elements of, and provide procedures for review, revision, and approval of a state's continuing planning process. In addition, these regulations now provide the mechanism for states to satisfy the statewide requirements of Section 208 (40 Fed. Reg. 55335).

Compliance with these regulations assures compliance with the requirements of both Sections 303(e) and 208.

Policies and procedures to be embodied within the state's continuing planning process are set forth in 40 Federal Register 55337 (Pt. 130). This part provides that:

> the broad goals of the continuing planning process are to assure that the necessary institutional arrangements and management programs are established to make and implement coordinated decisions designed to achieve water quality goals and standards; to develop a statewide (state and areawide) water quality assessment; and to establish water quality goals and state water quality standards which take into account overall state and local policies and programs, including those for management of land and other natural resources; and to develop the strategic guidance for preparing the annual state program plan required under Section 106 of the Act.

The regulations further provide that the state and the EPA administrator shall agree to a schedule and the level of detail to be incorporated in a state's water quality management program (40 Fed. Reg. 55338). Such agreement:

> shall provide a sequence for phasing of planning, at the appropriate level of detail and in sufficient time to meet the 1983 national water quality goal specified in Section 101(a)(2) of the Act. . .(40 Fed. Reg. 55338).

The regulations include nonpoint-source management within their mandate, and require that nonpoint-source management planning be effectuated so that the 1983 goal of swimmable waters and protected aquatic life be achieved.

The regulations require that a state comply with the continuing planning process requirements if it desires to acquire or retain jurisdiction over its permit system. On point, 40 Federal Register 55342 provides that:

> state participation in the National Pollutant Discharge Elimination System pursuant to Section 402(b) of the Act shall not be approved for any state which does not have a continuing planning process approved by the Regional Administrator pursuant to Part 130.41.

Consequently, NPDES participation can be denied to a state if it does not have an approved continuing planning process. Most important, federal control over nonpoint sources is exerted by this regulation since the continuing planning process in Section 303(e) must include the Section 208 waste treatment management plan [Sec. 303(e)(3)(B)], which in turn must include a nonpoint-source management plan [Sec. 208(b)(2)(F-K)].

Since the State of Montana has developed the MPDES pursuant to Section 402(b) of the FWPCA, 40 Federal Register 55342 is particularly pertinent. This rule provides that:

> approval of state participation in the National Pollutant Discharge Elimination System pursuant to Section 402(b) of the Act may be withdrawn in accordance with the provisions of Section 402(c)(3) of the Act and Section 124-93 of this chapter from any state if approval of the continuing planning process is withdrawn pursuant to Section 130.42.

Therefore, in order for a state to retain jurisdiction over its permit system, its water quality management plan must comply with the planning process requirements; the continuing planning process must include waste treatment management plans which must in turn include a nonpoint-source management plan.

The federal regulations specifically deal with the preparation of a state water quality management program which serves as a:

> management document which identifies the water quality problems of a particular approved state planning area or designated areawide planning area and sets forth an effective management program to alleviate those problems and to achieve and preserve water quality for all intended uses. . .[40 Fed. Reg. 55344].

A state's water quality management plan is required to identify point and nonpoint sources of pollution and provide for orderly water quality management [40 Fed. Reg. 55344]. The state water quality management plan to be submitted by November 1, 1978, for pre-adoption review by the administrator, must include "an assessment of water quality problems caused by nonpoint sources of pollutants" [40 Fed. Reg. 55345]. This federal requirement, along with the MWPCA and the rules adopted pursuant thereto, compel the State of Montana to develop a comprehensive program addressing nonpoint sources of pollution.

Specifically, the elements of the state water quality management plan must include:

> . . .a description of the type of problem, an identification of the waters affected . . . an evaluation of the seriousness of the effects on those waters, and an identification of nonpoint sources (by category as defined in Sec. 131.11(j)) contributing to the problem (40 Fed. Reg. 55345).

Pursuant to 40 Federal Register 55346 [Pt. 131.11(j)], the state must then identify and evaluate for each category of nonpoint-source pollutants, the measures necessary to achieve the desired level of control through application of best management practices. The regulation further requires that the evaluation include:

> an assessment of non-point source control measures applied thus far, the period of time required to achieve the desired control . . . the proposed regulatory programs to achieve the controls . . . the management agencies needed to achieve the controls . . . and the costs by agency and activity, presented by 5-year increments, to achieve the desired controls, and a description of the proposed actions necessary to achieve such controls.

Forty Federal Register 55346 [Pt. 131.11(j)(3)] then proceeds to enumerate the various nonpoint sources which must be included in this assessment and evaluation. These categories include, but are not limited to, nonpoint sources related to agriculture, silviculture, mining, construction, subsurface disposal activities, salt water infusion, and hydrologic modification.

ANALYSIS

The Montana Pollutant Discharge Elimination System (MPDES) has been defined as:

> the system developed by the State of Montana for issuing permits for the discharge of pollutants from point sources into state waters [ARM 16-2.14(10)-S14460(2)].

The MPDES was adopted pursuant to Section 402(b) of the FWPCAA and Section 69-4801, et seq., R.C.M. 1947 [ARM 16-2.14(10)-S14460(1)], and provides the basic tool by which the state can regulate the discharge of pollutants into state waters. An analysis of the MPDES rule shows that nonpoint-source pollution is not encompassed within the confines of the state's permit system; the rule's purpose being to implement a system for issuing permits for point-source discharges [ARM 16-2.14(10)-S14460(1)]. For additional clarification, ARM 16-2.14(10)-S14460(2) has defined "discharge of pollutant" as "any addition of any pollutant to state waters from any point source." Specifically, point source is defined in ARM 16-2.14(10)-S14460(2) as:

> any discernible, confined or discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, or vessel or other floating craft, from which pollutants are or may be discharged. In this rule, the term "point source" also includes animal confinement facilities.

Diffuse or nondiscernible sources of pollution are not considered point sources by this rule.

Although nonpoint-source pollution is outside the scope of the MPDES, the MWPCA and the water quality standards rule address the issue of nonpoint-source pollution. These legal provisions provide the authority by which the State of Montana can control pollution originating from nonpoint sources. The declared policy of the State of Montana regarding water pollution is to:

> provide a comprehensive program for the prevention, abatement, and control of water pollution [Sec. 69-4801(1)(b), R.C.M. 1947].

A distinction is not drawn between point source and nonpoint sources of pollution. Therefore, a nonpoint-source regulatory program is clearly mandated by this policy declaration.

"Pollution" has been defined by the MWPCA as:

> contamination, or other alteration of the physical, chemical, or biological properties of any state waters, which exceeds that permitted by Montana water quality standards, . . . or the discharge, seepage, drainage, infiltration or flow of any liquid, gaseous, solid, radioactive, or other substance into any state water which will or is likely to create a nuisance or render the waters harmful, detrimental, or injurious . . . [Sec. 69-4802(5), R.C.M. 1947].

Again, no distinction is drawn between point and nonpoint sources of pollution. Wastes originating from nonpoint sources can be as causative of pollution as wastes discharged from point sources. The only qualifying limitations placed on a source is that it alter or contaminate state waters beyond the levels permitted by water quality standards or render the waters unsuitable for beneficial use.

Additional authority to control nonpoint sources of pollution can also be found in the water quality standards rule. By regulation, the BHES has conferred upon the DHES the authority to eliminate or minimize pollution resulting from nonpoint sources. ARM 16-2.14(10)-S14480(6)(0) states that:

> Pollution resulting from storm drainage, storm sewer discharges, and non-point sources, including irrigation practices, road building, construction, logging practices, overgrazing and other practices, are to be eliminated or minimized as ordered by the department.

Authority to adopt a nonpoint-source program, therefore, is firmly established by both statute and regulation.

Pursuant to its federal mandate, the State of Montana, through the DHES, has developed a statewide 208 plan to regulate nonpoint-source pollution. The DHES has adopted objectives for its statewide 208 plan which are set forth in Montana's Statewide 208 Planning: Final Work Plan Summary (Summary), which includes the following:

(1) Development of a water quality management plan to achieve the 1983 goals of protection and propagation of fish and wildlife, and full body contact recreation in all waters insofar as socially, economically, and environmentally possible

(2) Determination of effluent limitations needed to meet applicable water quality standards

(3) Development of a plan with recommended abatement measure and proposed funding methods for solutions

(4) Evaluation of existing regulatory programs, and, if necessary, development of new programs to prevent and control point and nonpoint sources of pollution

The DHES has determined that 208 emphasis should be on nonpoint source problems such as dewatering, salinity, and sediment because they are the greatest obstacles to attaining the 1983 federal goal of swimmable waters. Since these problems are primarily associated with agricultural activities, development of an agricultural nonpoint-source management program has the highest priority under the statewide 208 plan.

As stated previously, federal requirements for 208 plans necessitate the development and implementation of regulatory programs for all nonpoint sources of pollution. For each nonpoint-source problem, 208 plans are required to define and implement best management practices. Best management practices specifically refers to a practice or combination of practices determined to be the most effective, practicable means of preventing or reducing nonpoint-source problems to levels compatible with the 1983 federal water quality goals.

Total elimination of all nonpoint-source pollution through the application of best management practices is unrealistic. The most that can be hoped for is a slight reduction of existing nonpoint-source pollution and minimization of increases. As stated in the summary, segments of streams with low flows, which do or may deplete water quality, will be identified. The summary has recommended flow reservations as a method of protecting water quality in these streams.

SUMMARY

Section 208 of the FWPCAA requires states to develop a 208 plan which must include areawide waste treatment management plans for nonpoint sources of pollution. It is the policy of the State of Montana to provide comprehensive programs for the prevention, abatement, and control of water pollution. This policy does not differentiate between point and nonpoint sources of pollution. Therefore, the nonpoint-source program required by Section 208 of the FWPCAA is statutorily justified as a comprehensive program for the prevention, abatement, and control of water pollution in Montana.

The statewide 208 plan strives for the development of water quality management plans, determination of effluent limitations, and development of new programs to prevent and control point and nonpoint-source pollution. For each nonpoint-source problem, 208 plans will define and implement best management practices. The best management practices developed will reduce and minimize increases in nonpoint-source pollution.

All nonpoint-source pollution problems will not be eliminated by the implementation of the statewide 208 plan and its best management practices. Where low flows may affect water quality maintenance, the Statewide 208 Planning: Final Work Plan Summary recommends that flow reservations be adopted.

RECOMMENDATION

In order that increases in nonpoint-source pollution be minimized and possible reduction achieved, it is recommended that the statewide 208 plan be implemented as soon as practicable. Since the statewide 208 plan and its best management practices will not eliminate all nonpoint-source pollution, it is recommended that the BNRC grant the flow reservation applied for by the DHES on the Yellowstone River.

Issue No. 8

Does the State of Montana have sufficient control over the introduction of dissolved and suspended solids into surface waters and groundwater aquifers?

WATER QUALITY REGULATIONS ANALYSIS

Pursuant to its duties as set forth in Section 69-4808.2(1), R.C.M. 1947, the BHES has adopted water quality standards. The water quality standards apply to state waters [ARM 16-2.14(10)-S14480(1)]. The definition of state waters as set forth in ARM 16-2.14(10)-S14480(3) denotes the jurisdictional scope of the water quality standards. As defined by the rule, "state waters" means:

> any body of water, irrigation system or drainage system, either surface or underground. This section shall not apply to irrigation waters where the waters are used up within the irrigation system and said waters are not returned to any other state waters. <u>The term "state waters" as used in this rule does not include underground water</u>. [Emphasis provided]

An examination of the definition reveals that groundwater is specifically excluded from the concept of state waters. As a result of this exclusion, the water quality standards which have been adopted pursuant to the MWPCA are inapplicable to groundwater. Furthermore, the BHES has not exercised its power under the MWPCA to promulgate specific groundwater quality standards. Inasmuch as groundwater quality rules do not exist, regulatory standards have not been imposed on the introduction of dissolved solids and other pollutants into groundwater aquifers.

The MWPCA, however, establishes a statutory basis on which the State of Montana can regulate the quality of groundwater. Pollution as defined by the MWPCA includes:

> . . . the discharge, seepage, drainage, infiltration or flow of any liquid, gaseous, solid, radioactive, or other substance into any state water which will or is likely to create a nuisance or render the waters harmful, detrimental, or injurious to public health, recreation, safety, welfare, livestock, wild animals, birds, fish, or other wildlife . . . [Sec. 69-4802(5), R.C.M. 1947].

Because "state waters" includes groundwater [Sec. 69-4802(9), R.C.M. 1947], pollution cannot be limited to surface waters under the MWPCA. Thus, should a discharge, seepage, drainage, infiltration, or flow of a substance into groundwater deleteriously affect its beneficial uses, pollution of groundwater could be established and held unlawful under Section 69-4806(1), R.C.M. 1947.

Although groundwater is excluded from the definition of state waters and is free from water quality control under the water quality standards rule of the MWPCA, surface waters are explicitly included in the definition. Therefore, the water quality standards which have been adopted to "establish maximum allowable changes in water quality and establish limits for pollutants which affect prescribed beneficial uses" expressly apply to surface waters [ARM 16-2.14(10)-S14480(1)].

The water quality standards are composed of water use classifications, water use descriptions, and specific and general water quality criteria [(ARM 16-2.14(10)-S14480(2)]. The general water quality criteria enumerated in the rule apply to all state waters except where the rule indicates that the specific water quality criteria should be applied [ARM 16-2.14(10)-S14480 (2)(a)]. The specific and general water quality criteria which are set forth in the rule have been developed to protect the designated beneficial water uses assigned to the various water use classifications [ARM 16-2.14(10)-S14480 (5)].

A survey of the water quality standards clarifies the manner in which the introduction of suspended and dissolved solids into surface waters is addressed. The specific and general water quality criteria adopted describe water quality properties and conditions, including, but not limited to, turbidity, concentrations of total dissolved solids, sediment, settleable solids, sulfates, toxic, and other deleterious substances. In order to achieve a better understanding of the specific and general water quality criteria adopted, the following definitions have been set forth. "Sediment" means:

> solid material settled from suspension in a liquid; mineral or organic solid material that is being transported or has been moved from its site of origin by air, water or ice and has come to rest on the earth's surface, either above or below sea level; or inorganic or organic particles originating from weathering, chemical precipitation or biological activity [ARM 16-2.14(10)-S14480(3)].

"Settleable solids" means:

> inorganic or organic particles that are being transported or have been transported by water from the site or sites of origin and are settled or are capable of being settled from suspension [ARM 16-2.14(10)-S14480 (3)].

And, "turbidity" has been defined by the rule as:

> a condition in water or wastewater caused by the presence of suspended matter resulting in the scattering and absorption of light rays [ARM 16-2.14(10)-S14480(3)].

As previously stated, each water use classification contains specific water quality criteria which have been designated to protect the classification's designated uses. The specific water quality criteria adopted concern

sediment and settleable solids. The pertinent criteria provide that:

> (af) no increases above naturally occurring concentrations of sediment, settleable solids or residues, which adversely affect the uses indicated, are allowed [ARM 16-2.14(10)-S14480(5)(b)(ii); (5)(c)(ii); (5)(d)(ii); (5)(e)(ii); (5)(f)(ii); (5)(g)(ii); (5)(h)(ii)].

Pursuant to this rule, an increase in sediment is disallowed if it exceeds the concentrations naturally occurring within a stretch of stream, and if at the same time it adversely affects the beneficial uses described. The standard of "naturally occurring" has been defined as:

> conditions or material present from runoff or percolation over which man has no control or from developed land where all reasonable land, soil and water conservation practices have been applied. Conditions resulting from dams in existence as of July 1, 1971 are natural [ARM 16.2.14(10)-S14480(3)].

The term "natural" as used in the MWPCA has the same meaning as "naturally occurring" which is employed in the rule [Sec. 69-4801(2), R.C.M. 1947]. Once rules have been established to determine the parameters of "all reasonable land, soil, and water conservation practices," the standard of "naturally occurring" will become more precisely defined and capable of more effective application.

When the concentration of sediment exceeds that concentration naturally occurring in a stretch of stream, and such concentration adversely affects the water uses described, the applicable water quality standard has been violated.

There is no standard for total suspended solids in the water quality standards rule. There is a standard for turbidity. Since there is a relationship between turbidity and concentrations of suspended solids (Wilbur 1969, p. 264), suspended solids do not escape regulation. Since the water quality standards apply to surface waters only, however, the criteria pertaining to turbidity do not apply to groundwater.

The specific water quality criteria established within each classification pertaining to turbidity are more differentiated than the criteria relating to sediment and settleable solids. Two of the classifications contain specific water quality criteria requiring that:

> (ad) no increase above naturally occurring turbidity is allowed [ARM 16-2.14(10)-S14480(5)(b)(ii); (5)(c)(ii)].

Other specific water quality criteria require that:

> (ad) The maximum allowable increase above naturally occurring turbidity is 5 Jackson Candle Units except as is permitted in the general water quality criteria [ARM 16-2.14(10)-S14480(5)(d)(ii); (5)(g)(ii)].

A number of the other specific water quality criteria require that:

> (ad) The maximum allowable increase above naturally occurring turbidity is 10 Jackson Candle Units, except as is permitted in the general water quality criteria [ARM 16-2.14(10)-S14480(5)(e)(ii); (5)(f)(ii); (5)(h)(ii)].

Turbidity, sediment, and settleable solids are collectively described in ARM 16-2.14(10)-S14480(5)(d)(ii)(ad). This criterion states that:

> Naturally occurring turbidity, naturally occurring water temperatures, and naturally occurring concentrations of sediments, settleable solids or residues are not to be increased in quantity to amounts which adversely affect the use indicated.

Thus, once rules are adopted which more thoroughly define "naturally occurring," any increase in turbidity over and above that permitted within the water quality criteria will constitute a water quality violation.

As noted, exceptions are contained in the specific water quality criteria for allowable increases in turbidity. The criteria state that increases in turbidity above that naturally occurring, or above 5 or 10 Jackson Candle Units are permitted if allowed by the general water quality criteria. The exception relating to allowable additional increases in turbidity concerns short-term activities. ARM 16-2.14(10)-S14480(6)(g) provides that:

> No wastes are to be discharged and no activities conducted which, either alone or in combination with other wastes or activities, will cause turbidities to exceed those allowed by specific water quality criteria; provided, short-term activities necessary to accommodate essential dredging, channel or bank alterations, stream diversions or other construction where turbidities in excess of the criteria are unavoidable, may be authorized by the department under conditions as it may prescribe. [Emphasis provided.]

Therefore, if the DHES determines that a particular short-term activity results in an increase in turbidity which will exceed that allowed by the various specific water quality criteria, such additional increase may be authorized. By using this particular general water quality criterion, only short-term activities resulting in a temporary additional increase in turbidity will be authorized. The extent to which a particular activity is short-term and involves essential "dredging, channel or bank alterations, stream diversions, or other construction" will determine the extent to which the designated increases in turbidity may be exceeded.

Whereas the specific and general water quality criteria explicitly set forth allowable concentrations of sediment, settleable solids, and allowable increases in turbidity, the criterion pertaining to dissolved solids is set forth in the U.S. Public Health Service Drinking Water Standards and incorporated by reference into the water quality standards rule. One of the specific

water quality criterion provides that:

> (ag) No increases of toxic or other deleterious substances, pesticides and organic and inorganic materials, including heavy metals, above naturally occurring concentrations, are allowed [ARM 16-2.14(10)-S14480(5)(b)(ii)].

ARM 16-2.14(10)-S14480(5)(c)(ii) states that:

> (ag) Concentrations of toxic or other deleterious substances, pesticides and organic and inorganic materials including heavy metals, after treatment for domestic use, are not to exceed the recommended limits established in the 1962 U.S. Public Health Service Drinking Water Standards or subsequent editions; an increase of more than 10 percent of the concentration present in the receiving water is not allowed; maximum allowable concentrations are to be less than acute or chronic problem levels as revealed by bioassay or other methods.

Three of the specific water quality criteria require that:

> (ag) Concentrations of toxic or other deleterious substances, pesticides and organic and inorganic materials including heavy metals, after treatment for domestic use, are not to exceed the recommended limits contained in the 1962 U.S. Public Health Service Drinking Water Standards or subsequent editions; also, maximum allowable concentrations are to be less than acute or chronic problem levels as revealed by bioassay or other methods [ARM 16-2.14(10)-S14480(5)(d)(ii); (5)(3)(ii); (5)(f)(ii)].

The U.S. Public Health Service Drinking Water Standards establish a limit of 500 mg/l for total dissolved solids. An analysis of the water quality standards rule adopting the U.S. Public Health Service Drinking Water Standards compels use of the 500 mg/l "after-treatment" standard as an instream standard.

ARM 16-2.14(10)-S14480(5)(g)(ii) and (5)(h)(ii) state that:

> (ag) Concentrations of toxic or other deleterious substances, pesticides and organic and inorganic materials, including heavy metals, are not to exceed levels known or demonstrated to be of public health significance; also maximum allowable concentrations are to be less than acute or chronic problem levels as revealed by bioassay or other methods.

And finally, ARM 16-2.14(10)-S14480(d)(ii)(ag) provides that:

> Concentrations of toxic or other deleterious substances, pesticides and organic and inorganic materials including heavy metals, are to be less than those demonstrated to be deleterious to livestock or plants or their subsequent consumption by humans or to adversely affect other indicated uses.

These criteria indicate the concentrations of various substances and materials permitted within the various classifications of state waters. Since the water quality standards apply to state waters, groundwater excluded, these concentration limitations apply only to surface waters. They are not applicable to groundwater aquifers.

In summary, the water quality standards appear adequate to effectively control the introduction of suspended and dissolved solids into surface waters. Should the designated and allowed concentrations exceed those allowed by the specific water quality criteria, pollution could be established and the DHES would be authorized to exercise its enforcement prerogatives as enumerated in the MWPCA.

It must be recognized that the BNRC exercises indirect regulatory control over the quality of groundwater. The BNRC is authorized by the Montana Water Use Act to adopt rules to:

> . . . regulate the construction, use, and sealing of wells to prevent the waste, contamination, or pollution of ground water [Sec. 89-869(2), R.C.M. 1947].

This section expressly confers upon the BNRC the authority to regulate the "construction, use, and sealing of wells." The degree to which the rules adopted adequately address the "construction, use, and sealing of wells" is the degree to which the rules control pollution of groundwater. The BNRC has not adopted such rules at this time.

Furthermore, the groundwater laws, under the jurisdiction of the DNRC, also addresses the pollution of groundwater. This law provides that:

> . . . both flowing and nonflowing wells shall be so constructed and maintained as to prevent the waste, contamination or pollution of ground waters through leaky casings, pipes, fittings, valves, or pumps either above or below the land surface . . . [Sec. 89-2926, R.C.M. 1947].

This section prohibits the pollution of groundwaters caused by faulty well construction. Although this statute does not directly control the pollution of groundwaters or set forth groundwater quality standards, it does positively contribute to the regulation of groundwaters through statutory standards applicable to the construction, use, and maintenance of wells.

SUMMARY

Water quality standards have been adopted by the BHES pursuant to the MWPCA. These standards apply to state waters. State waters as defined by the water quality standards rule includes surface waters but excludes groundwater. Thus, the water quality standards do not regulate the introduction of dissolved or suspended solids into groundwater aquifers. In this respect, the water quality standards are inadequate. It should be noted, however, that groundwater quality standards are being developed.

The water quality standards rule expressly and adequately regulates the quality of surface waters. By regulating turbidity, the water quality standards rule effectively regulates suspended solids. The standard for total dissolved solids is set forth in the U.S. Public Health Service Drinking Water Standards, and adopted by reference into the water quality standards rule. Total suspended and dissolved solids, therefore, are sufficiently regulated.

Although groundwater quality standards have not been adopted by the BHES, the MWPCA establishes a statutory basis by which the quality of groundwater can be regulated. State waters under the MWPCA includes groundwater. Therefore, since pollution has been defined by the MWPCA as a discharge, seepage, drainage, infiltration, or flow into state waters, a discharge, seepage, drainage, infiltration, or flow of pollutants into groundwater may be held unlawful.

The BNRC exercises indirect control over pollution of groundwater inasmuch as it is authorized by statute to adopt rules regulating the construction, use, and sealing of wells to prevent the pollution of groundwater. The DNRC, by virtue of another statute, also indirectly contributes to groundwater quality maintenance through regulation over well construction and maintenance.

RECOMMENDATION

Although a statutory standard exists by which to regulate the quality of groundwater, a comprehensive regulatory scheme would guarantee more effective quality control over groundwater. At present, the water quality standards fail to address groundwater degradation and quality control. Although the introduction of dissolved solids into surface waters is regulated by the water quality standards, the introduction of dissolved solids into groundwater aquifers is neither considered nor controlled by the standards. Therefore, the presence of dissolved solids in groundwater aquifers is entirely ignored by the water quality standards.

Groundwater quality standards must be promulgated if the quality of groundwater is to be adequately protected. The formulation of such a regulatory scheme is defensible under the MWPCA since it is the policy of the State of Montana to conserve water by protecting, maintaining, and improving its quality for various beneficial uses, and to provide a comprehensive program for the prevention, abatement, and control of water pollution [Sec. 69-4801(1), R.C.M. 1947]. Furthermore, Section 69-4804 explicitly provides that:

> This chapter applies to drainage or seepage from all sources including that from artificial, privately owned ponds or lagoons if such drainage or seepage may reach other state waters in a condition which may pollute the other state waters.

Since Section 69-4808.2(1), R.C.M. 1947, expressly directs the BHES to adopt water quality standards, a statutory justification for the adoption of groundwater quality standards can be established.

When groundwater quality standards are established and the definition of "state waters" under ARM 16-2.14(10)-S14480(3) is changed to include groundwater, an additional basis on which to allege pollution of groundwater will be established.

When groundwater quality standards are adopted by the BHES, pursuant to its duty to "adopt rules for the administration of this chapter" [Sec. 69-4808.2 (1)(g), R.C.M. 1947], the water quality regulations will then be sufficient to control the introduction of dissolved solids and other pollutants into groundwater aquifers. Until the adoption of groundwater quality standards, the water quality regulations, as they now stand, are only sufficient to control the introduction of suspended and dissolved solids into surface waters.

Rules should also be adopted to determine what constitues "all reasonable land, soil, and water conservation practices." When rules are adopted, the standard of "naturally occurring" will become more definitive and easier to apply. The formal adoption of such rules would eliminate potential objections made by alleged polluters that this standard, standing alone, is arbitrary and vague. "Naturally occurring," as it is now defined and used in the specific water quality criteria can impede the effective administration and enforcement of the MWPCA and the rules adopted to implement the act.

RECLAMATION AND MINING REGULATIONS ANALYSIS

One of the declared policies of the State of Montana under the Montana Strip and Underground Mine Reclamation Act (Sec. 50-1034, et seq, R.C.M. 1947, hereinafter referred to as the Reclamation Act) is to "demand effective reclamation of all lands disturbed by the taking of natural resources" [Sec. 50-1034(2), R.C.M. 1947]. Reclamation is defined by the Reclamation Act as:

> backfilling, subsidence stabilization, water control, grading, highwall reduction, topsoiling, planting, revegetation, and other work to restore an area of land affected by strip mining or underground mining under a plan approved by the department [Sec. 50-1036(14), R.C.M. 1947].

Pursuant to this definition, reclamation of strip or underground mining lands must provide for water quality control. The regulations adopted to implement the Reclamation Act address to varying degrees the introduction of suspended and dissolved solids into surface waters and groundwater aquifers.

"Department" as referred to in the Reclamation Act means the Department of State Lands (DSL), which has the authority to supervise, administer, and enforce the Reclamation Act [Sec. 50-1038(1), R.C.M. 1947]. The Board, as referred to in the Reclamation Act, means the Board of Land Commissioners (BLC), which has been given the authority to adopt rules implementing the Reclamation Act [Sec. 50-1037(3), R.C.M. 1947].

ARM 26-2.10(10)-S10330 specifically concerns water quality. This rule and its subsections comprise the major segment of the Reclamation Act regulations which deal with water pollution. The rule requires that all operators comply with:

> . . . the following requirements and with all applicable water quality standards established under Montana law and the rules adopted pursuant thereto [ARM 26-2.10(10)-S10330(1)].

"Operator" as defined by the Reclamation Act is:

> a person engaged in strip mining or underground mining who removes or intends to remove more than ten thousand (10,000) cubic yards of mineral or overburden [Sec. 50-1036(7), R.C.M. 1947].

As required by ARM 26-2.10(10)-S10330, an operator must defer to the water quality standards adopted to implement the MWPCA. The reclamation rule compels an operator to comply with the MWPCA and the rules adopted pursuant thereto in order for him to comply with the Reclamation Act and rules. In light of this particular reclamation rule, the previous water quality rule analysis dealing with the introduction of dissolved and suspended solids into surface waters and groundwater aquifers is incorporated into the present discussion.

The water quality section of the reclamation rule adopts a policy of nondegradation of waters [ARM 26-2.10(10)-S10330(1)(a)]. Activities which degrade existing high water quality will be held unlawful unless the BLC determines that degradation is economically and socially justifiable. For further discussion, refer to the nondegradation analysis contained in Issue No. 1.

The issue of treatment facilities as relating to sediment control is also directly addressed in the water quality segment of the reclamation rule. The rule provides that:

> Treatment facilities in sufficient size and number consisting of but not limited to collection basins, water retarding structures and siltation dams shall be constructed with prior approval of the Department. All such facilities shall be constructed at or above the points of discharge into receiving streams for the purpose of treating acid or toxic water and for the settling of sediment prior to discharge into the receiving stream [ARM 26-2.10(10)-S10330(1)(b)(i)].

Pursuant to this rule, waters containing sediment and settleable solids cannot be discharged into the receiving stream until the settleable solids have settled. When the collected water meets the applicable water quality standards, then the collected water can be discharged. Through the implementation of this rule, the concentration of sediment in the receiving stream should not be significantly altered by this controlled discharge. This rule should guarantee that the waters polluted by the mining operation will not enter surface waters outside the mining operation's confines. This particular rule provides one of the most effective means for controlling the introduction of suspended solids into surface streams that can be found in any of the water quality or reclamation regulations.

Turbidity is also addressed in the reclamation rules. ARM 26-2.10(10)-S10330(1)(b)(viii) provides that:

> The maximum total allowable increase to naturally occurring stream turbidity is ten (10) Jackson Candle Units except that four (4) hours following a major precipitation event, the discharge shall not contain suspended sediments in excess of five hundred (500) Jackson Candle Units above normal and not over one hundred (100) Jackson Candle Units above normal twenty-four (24) hours thereafter. . . . If the above standards in (vii) and (viii) are in conflict with Federal and/or other Montana state agencies, the more stringent regulations will apply.

Again, deference is given to the rules implementing the MWPCA, but in this case, only on the condition that those rules regarding allowable increases in turbidity are more stringent than the reclamation rules regarding such increases.

For example, the Yellowstone River drainage from the Yellowstone Park boundary to the Laurel water supply intake is classified as B-D_1 under the water quality standards rule [ARM 16-2.14(10)-S14480(4)]. The specific water quality criteria in the B-D_1 classification states that:

> The maximum allowable increase above naturally occurring turbidity is 5 Jackson Candle Units except as is permitted in the general water quality criteria [ARM 16-2.14(10)-S14480(5)(d)(ii)(ad)].

Since the reclamation regulation provides for a maximum total allowable increase of 10 Jackson Candle Units above the levels naturally occurring, the more stringent 5 Jackson Candle Units increase required by the water quality regulations would be applicable to this B-D_1 stretch of the Yellowstone River. The converse would also be true. If the allowable increase in turbidity in the reclamation regulation is more stringent than that permitted by the water quality regulations, then the more stringent reclamation regulation increase would be enforced.

The Strip and Underground Mine Act [Sec. 50-1601, et seq., R.C.M. 1947], hereinafter referred to as SUMSA, states that it is the policy of the State of Montana to:

> . . . provide adequate remedies for the protection of the environmental life support system from degradation and provide adequate remedies to prevent unreasonable depletion and degradation of natural resources [Sec. 50-1602(1), R.C.M. 1947].

Pursuant to its authority, as set forth in Section 50-1604, R.C.M. 1947, the BLC has adopted regulations to accomplish and implement the purposes of SUMSA. The regulations implementing SUMSA are embodied in ARM 26-2.10(18)-S10380. The segment of this regulation which specifically addresses water quality is set forth in ARM 26-2.10(18)-S10400(f)(3). Inasmuch as this particular water quality rule almost identically reflects the wording of ARM 26-2.10(10)-S10330, which implements the Reclamation Act, a separate analysis of this rule is not necessary. Therefore, the previous discussion pertaining to the introduction of suspended and dissolved solids into surface water and groundwater aquifers under ARM 26-2.10(10)-S10330 of the Reclamation Act, is pertinent and applicable to this comparable SUMSA regulation.

SUMMARY

As required by the Reclamation Act, reclamation of strip and underground mining lands must provide for water quality control. SUMSA provides that it is Montana policy to protect the environment and prevent unreasonable depletion and degradation of the state's natural resources. The regulations which have been adopted to implement these acts concern and regulate the introduction of suspended and dissolved solids into surface waters and groundwater aquifers.

Specifically, reclamation and SUMSA regulations require persons engaged in strip or underground mining who remove more than 10,000 cubic yards of mineral or overburden to comply with the water quality standards established under the MWPCA. Therefore, for an operator to remain in compliance with the Reclamation Act and SUMSA, he must comply with the rules adopted to implement the MWPCA. Thus, by deference, the water quality standards rule is indirectly incorporated into both acts.

The reclamation and SUMSA rules also adopt a policy of nondegradation of state waters. Should an activity occur which causes existing high water quality to be degraded, the DSL is authorized to take enforcement action against the responsible operator. Activities which degrade high water quality may be authorized only if the BLC determines that such degradation is economically or socially necessary.

The water quality segment of both rules also requires the construction of and regulates sediment treatment facilities. They specify that waters containing sediment and settleable solids cannot be discharged into a receiving body of water until the particles have settled. The successful implementation of this controlled discharge guarantees that sediment concentrations in receiving streams will not be altered. This particular rule provides one of the most effective means by which to control the introduction of suspended and dissolved solids into surface streams.

Turbidity is also addressed in both rules. Deference is given to the water quality standards adopted by the MWPCA. If the water quality standards regulate increases in turbidity more stringently than the reclamation and SUMSA rules, the water quality standards will be enforced. The converse is also true.

Both the Reclamation Act and SUMSA defer to the water quality standards adopted pursuant to the MWPCA; their adequacy is measured by the adequacy of the water quality standards. Therefore, both these acts adequately address the introduction of dissolved and suspended solids into surface waters. These regulations do not, however, adequately address the introduction of dissolved solids into groundwater aquifers.

RECOMMENDATION

The regulations implementing the Reclamation Act and SUMSA defer to the water quality standards of the MWPCA as the minimum water quality levels to be achieved by operators. For this reason the need to adopt groundwater quality standards under the MWPCA becomes exceedingly important. Therefore, it is emphatically recommended that the BHES proceed to adopt groundwater quality standards.

Issue No. 9

Does The Natural Streambed and Land Preservation Act of 1975 affect water quality control efforts?

ANALYSIS

The Natural Streambed and Land Preservation Act of 1975 [Sec. 26-1510, et seq., R.C.M. 1947, hereinafter referred to as the Streambed Act] states as its goals the protection and preservation of Montana's rivers and streams. The policy declaration of the Streambed Act states that it is the:

> policy of the state of Montana that its natural rivers and streams and the lands and property immediately adjacent to them within the state are to be protected and preserved to be available in their natural, or existing state, and to prohibit unauthorized projects and in so doing to keep soil erosion and sedimentation to a minimum, except as may be necessary and appropriate after due consideration of all factors involved . . . [Sec. 26-1511, R.C.M. 1947].

As illustrated by the policy statement, proposed projects must be authorized before they are commenced so that soil erosion and sedimentation will be minimized. Furthermore, "No work on a project under this act may take place without the written consent of the supervisors" [Sec. 26-1514(9), R.C.M. 1947]. The procedure to acquire the requisite authorization is set forth in Sections 26-1513 and 26-1514, R.C.M. 1947.

The projects within the scope of the Streambed Act are those which cause a:

> physical alteration or modification of a stream in the state of Montana which results in a change in the state of the stream in contravention of section 26-1511 [Sec. 26-1512(5), R.C.M. 1947].

The particular projects which have been established as causing undesirable stream alterations and modifications are enumerated in ARM 36-2.2(2)-S250.

The BNRC is the administrative body which has been delegated the duty to adopt statewide rules implementing the Streambed Act. The pertinent statutory provision provides that:

> By July 1, 1975, the board of natural resources and conservation after consultation with the association of conservation districts shall adopt rules setting minimum standards and guidelines for the purposes of this act [Sec. 1520(1), R.C.M. 1947].

Pursuant to this statutory directive, the BNRC has adopted state minimum standards and guidelines implementing the Streambed Act. These standards and guidelines are set forth in ARM 36-2.2(2)-S210 through S260.

The Streambed Act also directs the supervisors of each conservation district, or grazing district, or even the county where a conservation district or grazing district has no jurisdiction, to adopt minimum standards and guidelines which meet or exceed those adopted by the BNRC. Section 26-1520(2), R.C.M. 1947, provides that:

> By January 1, 1976, the supervisors of each district shall adopt by resolution after a public hearing rules setting standards and guidelines for projects, and exclusions, within their districts which shall meet or exceed the minimum standards set by the board under subsection (1) of this section.

Thus, rules adopted by the supervisors of each conservation district must minimally require compliance with the standards and guidelines adopted by the BNRC as set forth in ARM 36-2.2(2)-S210 through S260.

The statewide minimum standards and guidelines adopted by the BNRC [ARM 36-2.2(2)-S210 through 260] address various water quality problems which the DHES's water quality standards rule also specifically addresses [ARM 16-2.14(10)-S14480]. Before the supervisors of a conservation district approve a proposed project, they must initially determine that reasonable efforts will be made by the applicant to:

> (c) Insure that the project will pass anticipated water flows without creating harmful erosion problems upstream or downstream;
> (d) Minimize effects on fish and aquatic habitat;
> (e) Minimize turbidity or other water pollution problems by the materials used or removal of ground cover; . . . [ARM 36-2.2(2)-S240].

The standards cited require minimization of certain water quality problems. However, they do not mandate compliance with the water quality standards which have been adopted by the BHES.

The minimum standard enunciated in the Streambed Act rule requires that turbidity resulting from projects be minimized. The water quality standards specifically designate the increases in turbidity that will be permitted within the various stream classifications. These increases must not be exceeded if a person is to remain in compliance with the MWPCA. Therefore, it is possible that an applicant under the Streambed Act who has taken affirmative steps to minimize turbidity will cause a disallowed increase in turbidity to occur. The DHES could then take enforcement action against an applicant for water quality violations.

Under the Streambed Act rule no project may be approved unless reasonable efforts will be made by the applicant to minimize the potential effects on fish and aquatic habitat resulting from the project. This regulation, similar to the one regarding turbidity, requires reasonable efforts at

minimization. The standard does not strive to guarantee compliance with the water quality standards in effect. Therefore, while positive steps are taken by an applicant to minimize adverse effects on fish and aquatic habitat, a water quality standard may be violated with the resulting effect that fish and aquatic habitat within a reach of stream are no longer protected. Again, an applicant could be subject to enforcement actions authorized by the MWPCA for water quality violations.

The Streambed Act and the rules adopted pursuant thereto are oriented towards pre-pollution control. As stated in the policy declaration, projects must be authorized before commenced. The goal of this mandatory project authorization is the minimization of certain water quality problems. The major benefit of the Streambed Act is the operation of this minimization guarantee. The Streambed Act and the rules adopted to implement the Act do not seek to achieve water quality standard compliance. Therefore, a "successful minimization" of turbidity and of adverse effects on fish and aquatic life may still constitute pollution under the MWPCA.

Special consideration must be afforded ARM 16-2.14(10)-S14480(6)(g). Under this particular water quality standards rule subsection, certain unlawful increases in turbidity may be authorized by DHES. The activity or project involved must be short-term, and increases in turbidity over the levels permitted must be unavoidable. The pertinent rule states:

> No wastes are to be discharged and no activities conducted which, either alone or in combination with other wastes or activities, will cause turbidities to exceed those allowed by specific water quality criteria; provided, short-term activities necessary to accommodate essential dredging, channel or bank alterations, stream diversions or other construction where turbidities in excess of the criteria are unavoidable, may be authorized by the department under conditions as it may prescribe.

Pursuant to this rule, it is possible that given certain procedures, a project which has been approved by the supervisors of a conservation district could also be authorized by the DHES even though the project causes otherwise unlawful increases in turbidity.

Currently, the Streambed Act and the rules adopted pursuant thereto positively serve water quality control efforts because they seek to minimize certain water quality problems. Without the Streambed Act and statewide minimum standards and guidelines, water quality problems resulting from various projects would be of greater magnitude.

SUMMARY

A goal of the Streambed Act is the protection and preservation of Montana's rivers and streams. To accomplish this goal, proposed projects must be authorized by the supervisors of the local conservation district before they are begun, so that erosion and sedimentation will be minimized. Projects which physically alter or modify streams in Montana come within the purview of the Streambed Act.

The BNRC has been designated the rule-making body possessing the statutory obligation to adopt statewide rules and standards implementing the Streambed Act. The supervisors of each conservation district have been required by the Streambed Act to adopt standards and guidelines for their districts which minimally meet those adopted by the BNRC.

The statewide minimum standards adopted by the BNRC concern various water quality issues. For example, turbidity, fish and aquatic habitat, and erosion are specifically regulated in the statewide minimum standards.

The standards require minimization of certain water quality problems. They do not, however, require compliance with the water quality standards adopted by the BHES. The ultimate accomplishment of the Streambed Act, therefore, is the minimization of potential water quality problems. This is a benefit which must not be overlooked. It should be emphasized, however, that successful minimization of various water quality problems may still constitute pollution under the MWPCA.

RECOMMENDATION

The incongruity of having a particular project approved by the board of supervisors of a conservation district and concurrently subject to remedial action by the DHES is apparent. It is recommended that the following action be taken to alleviate this potential conflict.

A variance system should be formally established by the DHES. This variance system would enable an individual whose project has been approved under the Streambed Act to secure a guarantee from the DHES that should the project cause water quality violations, the project under certain conditions would not be held in violation of the MWPCA. A reasonable interpretation of ARM 16-2.14(10)-S14480(6)(g) authorizes the DHES to establish such a variance system.

This recommendation obviously proposes the establishment of a coordinated referral system between the district supervisors and the Department of Fish and Game, both members of the "team" under the Streambed Act [Sec. 26-1512(8), R.C.M. 1947], and the DHES. Therefore, the DHES should actively pursue the establishment of a coordinated referral system contemplated by this recommendation.

The implementation of this recommendation will assure an individual engaged in an approved project under the Streambed Act that the commencement or continuation of his project will not subject him to remedial action by the DHES under the MWPCA.

Issue No. 10

Can water quality problems associated with impoundment or other developments which alter the hydrograph be controlled under the existing water quality rules?

ANALYSIS

The MWPCA and the rules promulgated pursuant thereto do not address the issue of hydrographs or the issue of alterations in a hydrograph. According to the Glossary a hydrograph is "a graph showing, for a given point on a stream or conduit, the discharge, stage, velocity, available power, or other property of water with respect to time." An alteration in a hydrograph does not constitute water quality degradation under the MWPCA. If the normal hydrograph in a particular river is altered, the alteration itself does not constitute a violation of the MWPCA or the rules. Activities associated with water quality degradation, including activities which may alter the hydrograph, are considered in the rules.

Impoundments which may alter a hydrograph are generally addressed in ARM 16-2.14(10)-S14480(6)(i) which states:

> For operations of existing water impoundments that cause conditions harmful to prescribed beneficial uses of state waters, it is to be demonstrated to the satisfaction of the department that continued operations will be done in the best practicable manner to minimize harmful effects and will not violate state laws or department rules. New water impoundments shall be designed to provide temperature variations in discharging water that maintain or enhance the existing propagating fishery and associated aquatic life. As a guide, the following temperature variations are recommended: Continuously less than 40°F during the months of January and February, and continuously greater than 44°F during the months of June through September.

This rule compels existing water impoundment operations to comply with state laws and DHES rules. Besides compliance with state laws and DHES rules, an additional requirement is imposed upon new water impoundment operations. Newer impoundment operations are also required to seasonally regulate the temperature of the water discharged. A review of this rule, however, clearly indicates that the issue of impoundment or other similar development, as relating to hydrographs or alterations thereof, is not considered.

As the rule mandates, both new and existing impoundment operations must comply with state laws and department rules. Therefore, a person desiring to appropriate water or commence construction of an impoundment

must secure a permit from the DNRC authorizing such request [Sec. 89-880(2), R.C.M. 1947]. The DNRC will issue a permit to the applicant if:

> ...(1) there are unappropriated waters in the source of supply:
> (a) at times when the water can be put to the use proposed by the applicant;
> (b) in the amount the applicant seeks to appropriate; and
> (c) throughout the period during which the applicant seeks to appropriate, the amount requested is available;
> (2) the rights of a prior appropriator will not be adversely affected;
> (3) the proposed means of diversion or construction are adequate;
> (4) the proposed use of water is a beneficial use;
> (5) the proposed use will not interfere unreasonably with other planned uses or developments for which a permit has been issued or for which water has been reserved;
> (6) an applicant for an appropriation of 10,000 acre-feet a year or more or 15 cubic feet per second or more proves by clear and convincing evidence that the rights of a prior appropriator will not be adversely affected [Sec. 89-885, R.C.M. 1947].

An examination of this law indicates that the issuance or denial of a permit to appropriate is probably not based on the potential pollution that may be caused by the operation of the impoundment.

In light of ARM 16-2.14(10)-S14480(6)(i), impoundment operations must comply with the MWPCA and the rules adopted pursuant thereto. An examination of the MWPCA shows how it affects water quality degradation associated with various activities, including those which may not alter the hydrograph.

The policies of the State of Montana under the MWPCA are to conserve water by protecting, maintaining, and improving its quality for various beneficial uses, and to provide programs which prevent, abate, and control water pollution [Sec. 69-4801(1), R.C.M. 1947].

The defining characteristics of pollution thus becomes exceedingly important if one is to determine whether an alteration in a hydrograph is indicative of water quality degradation. Pollution is defined by the MWPCA as:

> contamination, or other alteration of the physical, chemical, or biological properties of any state waters, which exceeds that permitted by Montana water quality standards, including, but not limited to, standards relating to change in temperature, taste, color, turbidity, or odor; . . . [Sec. 69-4802(5), R.C.M. 1947].

The substance of this definition concerns situations which indicate water pollution. The definition does not attempt to enumerate activities which may potentially produce degradation. Rather, the definition stresses the effects of an activity rather than the activity itself. Pursuant to this definition, an impoundment does not cause pollution by altering a hydrograph but only by causing an alteration of the physical, chemical, or biological properties of state waters beyond that permitted by the Montana water quality standards.

Section 69-4806(1), R.C.M. 1947, makes it unlawful to:

> . . . cause pollution as defined in section 69-4802(5), R.C.M. 1947, of any state waters . . .

Therefore, pollution caused by an impoundment's operation is unlawful under the MWPCA. When pollution does occur, the violator is subsequently subject to the enforcement remedies set forth in the MWPCA.

The primary issue thus becomes whether the impoundment or any other development which might have altered the hydrograph has violated a Montana water quality standard. The policy declaration of the water quality standards rule states that:

> The following standards are adopted to establish maximum allowable changes in water quality and establish limits for pollutants which affect prescribed beneficial uses of state waters . . . [ARM 16-2.14(10)-S14480(1)].

A water quality standard is composed of various elements. Each body of water is given a water use classification, a water use description, and specific and general water quality criteria [ARM 16-2.14(10)-S14480(2)]. More precisely, the specific and general water quality criteria are designed to protect the water use descriptions designated under each classification [ARM 16-2.14(10)-S14480(5)].

The specific water quality criteria enumerated in the rule and established to protect the various water uses described include: turbidity, temperature, sulfates, concentration of sediment, settleable solids, total dissolved solids, residues, and true color [ARM 16-2.14(10)-S14480(5)]. If an activity causes any of the above criteria to exceed the level permitted by the applicable water quality standard in effect for a particular reach of a river, pollution can be established. For example, if an impoundment causes a river's concentration of total dissolved solids to exceed the concentration permitted by the water quality standard applicable to that particular reach of river, its designated uses are no longer protected, and pollution has occurred.

Regardless of the factors creating the alteration of the physical, chemical, or biological properties characterizing a body of water, alterations exceeding the allowed levels constitute pollution. It is immaterial that the cause of the alteration or contamination is an impoundment. The violation of a water quality standard and the effect of the activity establishes the pollution, not the existence of the activity itself.

Pollution can be established only if an impoundment or some other development causes a violation of a water quality standard.

SUMMARY

The MWPCA and the rules promulgated to implement the act do not address the issue of hydrographs or alterations in hydrographs. Although an alteration in a hydrograph may denote water quality degradation, an alteration in a hydrograph standing alone does not in itself constitute water quality degradation.

Impoundments which may alter a hydrograph are covered in the water quality standards rule. A review of the pertinent rule, however, indicates that impoundments or other developments as they specifically relate to hydrographs or their alterations are not considered. Impoundment operations must comply with the MWPCA and the rules adopted to implement the act. The rules indicate how water quality degradation associated with various activities, including those which alter hydrographs, is addressed.

The definition of pollution as given in the MWPCA stresses various conditions which may indicate pollution rather than pollution-causing activities. In light of this definition, an impoundment does not cause pollution if it merely alters a hydrograph, but only if it causes a water quality standard to be exceeded.

Thus, in light of the MWPCA and the rules which have been promulgated thereto, it is immaterial that a hydrograph has been altered by an impoundment or any other development. If the impoundment has caused a water quality standard to be violated, pollution can be established.

RECOMMENDATION

The MWPCA makes it unlawful to cause pollution as defined in the act [Sec. 69-4806(1), R.C.M. 1947]. When pollution does occur, the DHES is authorized by the MWPCA to:

> Take such actions as are authorized or required under section 69-4820.1 to ensure that the terms and conditions of issued permits are complied with and to insure that violations of this chapter are appropriately prosecuted [Sec. 69-4809.1(1)(g), R.C.M. 1947].

Section 69-4809.1(1)(g), R.C.M. 1947, indicates that the DHES may initiate enforcement actions against a violator of the MWPCA. If the operation of an impoundment has caused a water quality standard to be exceeded, the DHES can pursue enforcement remedies. Usually, enforcement follows water quality degradation.

Emergency procedures, however, are established in Section 69-4824, R.C.M. 1947, whereby the DHES "shall order the person to stop, avoid, or moderate the act so that the substantial injury will not occur." The DHES is authorized under this section to issue an emergency order when it

". . . finds that a person is committing or is about to commit an act in violation of this chapter . . ." Thus, Section 69-4824, R.C.M. 1947, empowers the DHES to deter a pollution-causing activity before it occurs, but the act must be capable of causing ". . . substantial pollution the harmful effects of which will not be remedied immediately after the commission or cessation of the act . . ."

It is not advisable, however, for the DHES to issue an emergency order--for example, requiring a person to stop the construction of an impoundment. Such an action could result in political repercussions, such as the substantial modification or repeal of the MWPCA.

Since this outcome would be undesirable, the implementation of the recommendation set forth in Issue No. 1 is reemphasized. A certification process should be established whereby withdrawal applications considered by the DNRC could also be evaluated by the DHES in terms of potential water quality degradation. The other alternative as discussed in Issue No. 1 is to consolidate jurisdiction of water quality and water withdrawal under one department.

As recommended in Issue No. 1, it is urged that the BNRC grant the DHES's reservation request for the Yellowstone River. Such action by the BNRC would effectively serve to prevent pollution before it occurs, whether the pollution is caused by an impoundment or other development.

Issue No. 11

What are the enforcement remedies provided by the MWPCA, and are they effective?

ANALYSIS

Success of a "regulatory" act is measured by the effectiveness of its enforcement provisions. The MWPCA sets forth various enforcement procedures which may be pursued by the DHES. A review of the MWPCA indicates that the DHES may proceed either administratively or judicially. The MWPCA specifies the various remedies that should be initiated in certain situations. Where discretion is permitted, however, the type and seriousness of a violation will determine the enforcement action to be taken.

An administrative remedy includes all responses made by and available to a regulatory agency which seek compliance with its requirements. A judicial remedy is one which endeavors to resolve cases and controversies in court. The following discussion will pertain to the various enforcement remedies, both administrative and judicial, available to the DHES.

Pursuant to Section 69-4809.1(1)(f), R.C.M. 1947, the DHES has been directed to:

> Issue orders to any person to clean up any material which he or his employee, agent, or subcontractor has accidentally or purposely dumped, spilled, or otherwise deposited in or near state waters and which may pollute them; . . .

This section clearly confers upon the DHES the authority to issue orders to persons whose actions have polluted or may pollute state waters.

Section 69-4820.1, R.C.M. 1947, enumerates the type of order and the precise conditions under which an order may be issued. Pursuant to Section 69-4820.1(1), R.C.M. 1947, the DHES may take appropriate enforcement action to:

(a) prevent, abate, and control the pollution of state waters;
(b) prevent, abate, and control any violation of a condition or limitation imposed by a permit issued under 69-4809.1(1)(a),
(c) prevent, abate, and control any violation of rules relating to pretreatment standards [Sec. 69-4820.1(1), R.C.M. 1947].

Thus, when the DHES determines that pollution of state waters, violations of limitations set forth in MPDES permits, or violations of pretreatment standards have occurred or are likely to occur, it is authorized to begin

enforcement action. Since this section sanctions appropriate enforcement action, either administrative or judicial remedies may be pursued. The nature of the violation in question will determine the enforcement action to be undertaken.

The various elements in a compliance order are set forth in Section 69-4820.1(2), R.C.M. 1947. This section provides that:

> In furtherance of subsection (1), a person violating a condition, limitation, standard, or other requirement established pursuant to this chapter may be served with a compliance order issued by the department. The order must specify the condition, limitation, standard, or other requirement violated and must set a time for compliance . . .

This section also directs the DHES to evaluate the seriousness of the violation and the good faith efforts made by the violator to comply with the DHES's requirements when it establishes a compliance schedule.

The DHES is authorized under Section 69-4820.1(3), R.C.M. 1947, to:

> commence a civil action seeking appropriate relief, including a permanent or temporary injunction, for a violation which would be subject to a compliance order under subsection (2).

Pursuant to this section, the DHES is permitted to seek an injunction if a particular violation would be subject to a compliance order under Subsection 2 of Section 69-4820.1, R.C.M. 1947. Thus, the DHES may commence civil action seeking injunctive relief if the violator has or is likely to pollute state waters, violate a condition contained within the MPDES permit, or violate a pretreatment standard. The petition seeking injunctive relief must be filed in the district court of the county where the defendant is located, resides, or is doing business.

Although the DHES is authorized to proceed either administratively or judicially under Section 69-4820.1, R.C.M. 1947, it may choose only one of these particular enforcement remedies. If the DHES determines to seek an injunction it will be denied the right to simultaneously proceed administratively. Conversely, if the DHES decides to proceed administratively, it will be denied the right to simultaneously proceed judicially. Once administrative remedies are exhausted, however, judicial action may be taken.

The DHES is also authorized under Section 69-4820.1(4), R.C.M. 1947, to seek civil penalties. Penalty provisions are set forth in Section 69-4823, R.C.M. 1947. This section provides that:

> A person who violates this chapter or rule, permit, effluent standard, or order issued under the provisions of this act shall be subject to a civil penalty not to exceed ten thousand dollars ($10,000). Each day of violation constitutes a separate violation.

Thus, if a person violates the MWPCA, a rule promulgated to implement the act, a condition or limitation contained within an MPDES permit, or a compliance order issued pursuant to the act, he will be subject to a daily civil penalty not to exceed ten thousand dollars ($10,000).

A violator will also be subject to a twenty-five thousand dollar ($25,000) daily civil penalty in addition to imprisonment for not more than one year, or both, if he willfully or negligently violates Section 69-4806, R.C.M. 1947, or any pretreatment standard established pursuant to the MWPCA [Section 69-4823(2), R.C.M. 1947]. Subsequent convictions under this subsection will subject a violator to a daily fine of not more than fifty thousand dollars ($50,000) or imprisonment for not more than two years, or both. It is reasonable to assume that the economic burdens resulting from the imposition of a civil penalty along with imprisonment will compel many potential violators to comply with the MWPCA.

It should be noted that the MWPCA specifically provides that the DHES's securing of a civil penalty "does not bar enforcement of this chapter or of rules or orders issued under it by injunction or other appropriate remedy" [Section 69-4823 (3), R.C.M. 1947]. Thus, a judicial action by the DHES seeking a civil penalty does not preclude it from petitioning for injunctive relief.

The MWPCA specifically provides that a purpose of the act is to:

> provide additional and cumulative remedies to prevent, abate, and control the pollution of state waters. This chapter does not abridge or alter rights of action or remedies in equity or under the common law or statutory law, criminal or civil, nor does this chapter or an act done under it estop the state or a municipality or person as owners of water rights or otherwise in the exercise of their rights in equity or under the common law or statutory law to suppress nuisances or to abate pollution [Section 69-4823(4), R.C.M. 1947].

This section provides that the DHES is not limited by the specific enforcement remedies set forth in the MWPCA. For example, Section 69-4820.1(3), R.C.M. 1947, provides the DHES with specific grounds on which to seek a permanent or temporary injunction. Pursuant to Section 69-4823(4), R.C.M. 1947, however, the grounds for injunction afforded the DHES under Section 69-4820.1(3), R.C.M. 1947, are not the only ones on which the DHES may rely. Thus, the DHES may proceed to secure an injunction under the MWPCA's injunctive grant or pursuant to statutory grounds providing for injunctive relief.

Section 93-4204, R.C.M. 1947, sets forth statutory grounds on which an injunction may be granted. Briefly, provisions of this section provide that an injunction may be granted when it appears by the complaint that the plaintiff is entitled to the relief demanded and that the continuance or commission of an act would produce irreparable injury to the plaintiff.

Additional injunctive powers are also conferred upon the DHES in Section 69-4825, R.C.M. 1947. Thus, if the DHES determines that injunctive

relief is the appropriate remedy, it is authorized to petition for an injunction pursuant to Section 69-4820.1(3), R.C.M. 1947, Section 93-4204, R.C.M. 1947, or Section 69-4825, R.C.M. 1947.

Another administrative remedy that the DHES may pursue upon knowledge of a violation is to serve a notice of violation on an alledged violator. Section 69-4820(1), R.C.M. 1947, provides that:

> The notice shall state the provision alleged to be violated, the facts alleged to constitute the violation, the nature of the corrective action which the department requires, and the time within which the action is to be taken.

The notice of violation authorized to be issued under this section is distinguishable from the compliance order authorized to be issued under Section 69-4820.1(2), R.C.M. 1947. Whereas a notice of violation must set forth the corrective action that the DHES requires a violator to take, a compliance order need not set forth any corrective action.

Another distinction is that the section authorizing notices of violation confers upon the DHES the authority to require an alleged violator to appear before the BHES to answer the charges made against him as set forth in the notice. When the DHES issues a compliance order, however, it cannot require an alleged violator to appear before the BHES for a public hearing. Furthermore, an alleged violator who has received a notice of violation may request the BHES to conduct a hearing if the DHES does not. This right, however, is not conferred upon a violator who has been issued a compliance order.

Under the notice of violation section, the BHES may issue an appropriate order for the prevention, abatement, or control of pollution after a hearing has been held or upon the failure of an alleged violator to request a hearing [Section 69-4820(5), R.C.M. 1947].

The MWPCA provides an administrative procedure which allows the DHES to halt actions which will cause substantial injury to state waters. Section 69-4824, R.C.M. 1947, sets forth the procedure to be followed by the DHES in emergency situations. This section provides that:

> If the department finds that a person is committing or is about to commit an act in violation of this chapter or an order or rule issued under it which, if it occurs or continues, will cause substantial pollution the harmful effects of which will not be remedied immediately after the commission or cessation of the act, the department shall order the person to stop, avoid, or moderate the act so that the substantial injury will not occur. The order shall be effective immediately upon receipt by the person to whom it is directed, unless the department provides otherwise

This section clearly permits the DHES to demand the immediate cessation of any act which will substantially affect the quality of state waters. Therefore, the extent to which an emergency order is effective immediately upon receipt by the person to whom it is directed is the extent to which it resembles a

court-issued injunction. This section is an extremely valuable administrative enforcement tool. Like an injunction, it provides the DHES with a means of preventing a pollution-causing act before it occurs.

Another enforcement remedy conferred upon the DHES is the authority to suspend or revoke an MPDES permit if it believes that the permittee has violated the MWPCA. If the DHES determines that a point-source violation is likely to continue and cause lasting pollution, the DHES may order the suspension or revocation of the MPDES permit to take effect immediately [Section 69-4807.1(2), R.C.M. 1947]. The possible suspension or revocation of a person's MPDES permit offers the best enforcement tool available to the DHES in preventing and controlling the discharge of pollutants into state waters.

Pursuant to its statutory duty to adopt rules [Section 69-4808.2(1)(e), R.C.M. 1947], the BHES has adopted rules which concern the suspension, modification, and revocation of permits. ARM 16-2.14(10)-S14460(7)(a)(iii) states the conditions justifying the modification, suspension, or revocation of an MPDES permit:

> An MPDES permit may be modified, suspended, or revoked in whole or in part during its term under provisions of Section 69-4807.1, R.C.M. 1947, for cause, <u>including but not limited to</u>, any of the following:
>
> (aa) Violation of any conditions of the permit
> (ab) Obtaining an MPDES permit by misrepresentation or failure to disclose fully all relevant facts
> (ac) A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge
> (ad) A failure or refusal by the permittee to comply with the requirements of Section 69-4809.2, R.C.M. 1947 [Emphasis provided]

An examination of this rules indicates that the DHES is given extremely broad authority on which to base the modification, suspension, or revocation of an MPDES permit. A permittee's knowledge of this power acts as an inducement to comply with the MWPCA, the rules promulgated to implement the act, and the conditions and limitations set forth in his MPDES permit.

It is unlawful under Section 69-4806(2), R.C.M. 1947, to discharge pollutants into state waters without an MPDES permit; therefore, an unauthorized discharge will subject an individual to whatever appropriate enforcement action the DHES determines to pursue, including, but not limited to, revocation of his MPDES permit. Moreover, if an individual continues to discharge pollutants after his MPDES permit has been revoked, he may also subject himself to additional enforcement action.

The enforcement alternatives set forth in the MWPCA do not lend themselves as readily to nonpoint sources of pollution as they do to point sources. The very nature of nonpoint-source pollution and the evident problem of tracing a nonpoint source of pollution to an individual makes application

of the enforcement remedies very difficult. Even the successful implementation of best management practices (see Issue 7) will not provide for the elimination of nonpoint-source pollution.

Pollution caused by dewatering is also fairly immune from application of the enforcement remedies authorized by the MWPCA. Since it is usually the cumulative effect of many withdrawals that cause pollution, and not just one individual approprition, enforcement action against an individual appropriator would be non-productive.

SUMMARY

The enforcement remedies enumerated in the MWPCA, in addition to those provided in the common law and by statute, provide the DHES with a full and fairly effective gamut of enforcement remedies for controlling point-source pollution. Therefore, there is no reason why pollution or the threat of pollution from point sources cannot be adequately remedied or prevented. The enforcement remedies available, however, for control of pollution caused by nonpoint sources and dewatering are inadequate.

RECOMMENDATION

It is recommended that jurisdiction over the water appropriation process and water quality maintenance be combined into one department or a referral system established between the DNRC and the DHES so that pollution caused by dewatering will be properly and adequately controlled.

Due to the inadequacy of the enforcement remedies available for controlling pollution caused by nonpoint sources and dewatering, it is once more urged that the BNRC grant the reservation of Yellowstone River waters applied for by the DHES.

Conclusion

In order to avoid repetition, the recommendations enunciated following the various issue-analyses will not be reiterated. However, the author takes the opportunity to re-emphasize the importance of implementing the recommendation proposed in Issue 1. Should this particular recommendation be implemented, water quality in the Yellowstone River will be adequately protected from degradation.

Literature cited

Anderson, F. 1974. Federal Environmental Law. West Publishing Company. St. Paul, Minnesota.

Montana Department of Community Affairs. 1976 (December). Economic conditions in Montana: a report to the Governor. Research and Information Systems Division, Helena. 35 pp.

Montana Department of Health and Environmental Sciences. 1977. Water Quality Bureau. Montana's Statewide 208 Planning To Achieve and Preserve Clean Waters: Final Work Plan Summary. Helena, Montana.

Montana Department of Natural Resources and Conservation. 1975. A study to evaluate potential physical, biological, and water use impacts of water withdrawals and water development on the middle and lower portions of the Yellowstone River drainage in Montana. Annual Report to the Old West Regional Commission. August 1. Helena.

_____. 1976. Yellowstone River Basin: draft environmental impact statement for water reservation applications. Two volumes. water resources division, Helena. 412 pp.

_____. 1977. Yellowstone River Basin final EIS for water reservation applications. Water resources division. 194 pp.

Montana Energy Advisory Council. 1976 (June). Montana energy position: a Montana Energy Advisory Council staff report, by Theodore H. Clack, Jr. Helena. 56 pp.

North Central Power Study Coordinating Committee. 1971 (October). North central power study: report of phase I. Volume I. Bureau of Reclamation, Billings. 80 pp.

Rocky Mountain Association of Geologists. 1972. Geologic atlas of the Rocky Mountain Region: United States of America. Denver. 331 pp.

State Conservation Needs Committee. 1970. Montana soil and water conservation needs inventory. Soil Conservation Service, Bozeman. 172 pp.

Water and Waste Water Central Engineering, Joint Editorial Board representing the Emerican Public Health Association, American Society of Civil Engineers, American Water Works Association, and Water Pollution Control Federation. 1969. Glossary.

Wilbur, C. G. 1971. The biological aspects of water pollution. Charles C. Thomas, Springfield, Illinois.

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