University of Montana

ScholarWorks at University of Montana

Graduate Student Theses, Dissertations, & Professional Papers

Graduate School

1984

Evaluation of Montana's water reservation policy

Robin Steinkraus Potter The University of Montana

Follow this and additional works at: https://scholarworks.umt.edu/etd Let us know how access to this document benefits you.

Recommended Citation

Potter, Robin Steinkraus, "Evaluation of Montana's water reservation policy" (1984). *Graduate Student Theses, Dissertations, & Professional Papers*. 8524. https://scholarworks.umt.edu/etd/8524

This Thesis is brought to you for free and open access by the Graduate School at ScholarWorks at University of Montana. It has been accepted for inclusion in Graduate Student Theses, Dissertations, & Professional Papers by an authorized administrator of ScholarWorks at University of Montana. For more information, please contact scholarworks@mso.umt.edu.

COPYRIGHT ACT OF 1976

THIS IS AN UNPUBLISHED MANUSCRIPT IN WHICH COPYRIGHT SUB-SISTS. ANY FURTHER REPRINTING OF ITS CONTENTS MUST BE APPROVED BY THE AUTHOR.

> Mansfield Library University of Montana Date: **1924**

> > .

AN EVALUATION OF MONTANA'S WATER RESERVATION POLICY

by

Robin Steinkraus Potter

B.A., Bemidji State University, 1977

Presented in partial fulfillment of the requirements for the degree of

Master of Science

UNIVERSITY OF MONTANA

1984

Approved by:

Chairman, Board of Examine Dean, Graduate 12-7-84

Date

UMI Number: EP39325

All rights reserved

INFORMATION TO ALL USERS The quality of this reproduction is dependent upon the quality of the copy submitted.

In the unlikely event that the author did not send a complete manuscript and there are missing pages, these will be noted. Also, if material had to be removed, a note will indicate the deletion.



UMI EP39325

Published by ProQuest LLC (2013). Copyright in the Dissertation held by the Author.

Microform Edition © ProQuest LLC. All rights reserved. This work is protected against unauthorized copying under Title 17, United States Code



ProQuest LLC. 789 East Eisenhower Parkway P.O. Box 1346 Ann Arbor, MI 48106 - 1346

TABLE OF CONTENTS

-17-84

Chapter		Page
1.	INTRODUCTION	1
	CHAPTER 1 ENDNOTES	4
2.	DEVELOPMENT OF MONTANA WATER LAW	5
	Current Water Reservation Policy	8
	The Yellowstone Water Reservation	10
	CHAPTER 2 ENDNOTES	18
3.	GOALS OF ESTABLISHING A WATER RESERVATION	20
	Protecting Future Consumptive Water Use from In-state Threats	20
	Protecting Instream Flows from Future Consumptive Water Use	35
	Planning for Future Water Use in the State	43
	Protecting Future Consumptive Water Use from Downstream, Out-of-state Development	48
	CHAPTER 3 ENDNOTES	64
4.	ANALYSIS OF FOUR OPTIONS FOR A RESERVATION POLICY	71
	The No Reservation Option	71
	The Instream Reservation Only Option	73
	The Consumptive Reservation Only Option	75
	The Yellowstone Stampede Option	76
	Achieving the Goals of the Reservation Process	77

Avoiding the Problems Involved in the Yellowstone Reservation	80
Possible Modifications of the Instream Only Reservation Option	83
CHAPTER 4 ENDNOTES	88
5. CONCLUSION	89
LITERATURE CITED	93

iii

Chapter 1

INTRODUCTION

In 1973 the Montana legislature passed the Water Use Act which initiated the centralized administration of water rights. Among its many provisions is a section which creates a unique mechanism for the reservation of water for instream and future uses. The reservation process has been implemented only once--in the Yellowstone River basin. This paper focuses on what role the water reservation should take in the allocation of the remaining unappropriated water in Montana. The paper analyzes existing water reservation policy and recommends improvements.

Attempts to establish water reservations in other parts of the state within the next few years are likely to occur. The Department of Natural Resources and Conservation (DNRC) anticipates receiving reservation applications and at one time proposed a timetable for proceeding with reservations in several basins. Interest in establishing a reservation in the Missouri River basin was expressed during the 1983 legislative session in the form of Senate Bill 51 introduced by Senator McCallum. The DNRC testified against this bill, claiming that there was not enough information available to ensure that a reservation was the best course of action to take in the Missouri basin to achieve the goal of protecting Montana's water from downstream, out-of-state claims.¹ The bill was defeated.

One of the DNRC's current goals is to begin some type of proceeding, possibly patterned after a water reservation, in the Missouri basin to protect water from downstream states' demands. These actions indicate that the primary use of the reservation statute will be in the Missouri River basin and, therefore, this paper emphasizes the reservation's applicability in the Missouri basin.

According to noted water law expert Frank J. Trelease,

Water law should provide for maximum benefits from the use of the resource, and this end should be reached by means of granting private rights in water, secure enough to encourage development and flexible enough for economic forces to change them to better uses, and subject to public regulation only when private economic action does not protect the public interests.²

Security in a water right is important to protect a user's investment in equipment and labor necessary to put the water to use. Uncertainty regarding the security of a water right could prevent the development of desirable water uses. Flexibility, however, is as important as security: an inflexible water right will prevent the maximization of benefits derived from the resource as needs and demands change. Since it is impossible to predict future needs with absolute certainty, a water allocation system should allow for an opportunity to change water use patterns to meet those future needs.

Water law has evolved in an attempt to maximize the benefits derived from the resource by establishing private property rights to the use of water, based on the assumption that private property rights will encourage water users to make good decisions in their use of water in their own self-interest, and that these decisions will serve the interests of the public as a whole.³ These assumptions have

worked well in the past in achieving the goal of development of the resource. In recent years, however, it has become apparent that not all private action results in the public's best interests. This is why the water reservation process was created.

CHAPTER 1 ENDNOTES

¹Montana, Department of Natural Resources and Conservation, testimony presented to the Agriculture Committee, 48th Legislature, January 12, 1983, regarding Senate Bill 51, an act providing for the processing of water reservations in the Missouri River basin by 1 July 1987.

²Frank J. Trelease, "Policies for Water Law: Property Rights, Economic Forces, and Public Regulation," *Natural Resources Journal*, Vol. 5, No. 1 (May 1965), 2.

³*Ibid.*, pp. 8-9.

Chapter 2

DEVELOPMENT OF MONTANA WATER LAW

The idea of reserving water for instream and future use is a major change from the doctrine of prior appropriation which has historically governed water allocation in Montana. The prior appropriation doctrine began when miners in the western United States applied the same principles to water use that they did to mining: that the first person to divert and use the water has a prior right to which later users must accede.¹ In a departure from the eastern riparian doctrine, ownership of riparian land was not required. A water right is a usufructuary right; the appropriator does not own the water but has a right to use it.

Priority and beneficial use are the essential principles of the prior appropriation doctrine. Priority is the basis for distributing water and each appropriator establishes his priority when he begins diverting and using the water. When there is not enough water available to meet the needs of all users, the user with the lowest priority (the last to appropriate) must curtail his use. This process continues as water availability decreases to ensure that those users with the earliest priority continue to have sufficient water to meet their needs.

Although the entire burden of water shortages falls on later appropriators, this system assures each appropriator at the time he makes the decision to begin using water that future appropriators

cannot deprive him of the water he needs. Junior appropriators also are protected from harm by senior appropriators because senior appropriators cannot change or move their water use if it will be detrimental to the rights of junior appropriators. Beneficial use refers to the purpose for which the water is used and the amount of water used. The amount of water an appropriator can take from a stream is limited to the amount he can put to beneficial use. When he cannot put the water to beneficial use, he must leave it in the stream for use by junior appropriators.

The prior appropriation doctrine also requires that water be diverted from the stream channel. Historically, the diversion requirement provided evidence to others of the intent to appropriate. Since, traditionally, instream uses were not considered beneficial uses of water, diverting water was necessary to put it to beneficial use.

The history of the prior appropriation doctrine in Montana was fairly uneventful until the 1972 Constitution was adopted and the Water Use Act was approved one year later. The 1972 Constitution recognizes existing water rights, declares that all waters within the state are the property of the state subject to private appropriation, and instructs the legislature to provide an administrative system for the regulation and recordation of water rights.² The new constitution helped motivate the legislature to pass the 1973 Water Use Act.

The Water Use Act created a permit system for acquiring water rights. Since 1 July 1973 a permit has been required to begin using water from any surface water source or to begin using 100 gallons per minute or more from any groundwater source. The priority of an appropriation is the date the permit application is received by the

DNRC.³ Upon receipt of a permit application, the DNRC publishes a notice of the application in the area's newspaper and notifies individual water users of the proposed project.⁴ An objection period follows during which other water users may object to the application. The department must issue the permit if the following criteria are satisfied:

- (]) 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) Throughout the period during which the applicant seeks to appropriate, the amount requested is available.
- (2) The water rights of a prior appropriator will not be adversely affected;
- (3) The proposed means of diversion, construction, and operation of the appropriation works 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 and 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;
- (7) Except as provided in subsection (6), the applicant proves by substantial credible evidence the criteria listed in subsections (1) through (5).⁵

Additional criteria were added by the 1983 legislature that pertain to applications for permits of 10,000 acre-feet or more per year or 15 or more cubic feet per second (cfs). The amendment adding these criteria also contains a provision that the amendment will terminate 1 July 1985.⁶

A hearing on the application can be held if valid objections are received.⁷ The department may issue a permit subject to conditions or limitations it considers necessary to protect the water rights of prior appropriators.⁸ Permits issued are provisional and are subject to the final determination of existing rights under the adjudication process established in Title 85, Chapter 2, Part 2. When the project has been completed and the water put to the proposed beneficial use, the permittee must notify the department by filing a Notice of Completion. The department then inspects the appropriation and issues a Certificate of Water Right if it determines that the completed project is in substantial accordance with the permit.⁹

Current Water Reservation Policy

Also included in the 1973 Water Use act is a provision allowing the reservation of water for instream or future uses by state and federal agencies or any of their political subdivisions.¹⁰ The reservation statute entails two fundamental differences from the prior appropriation doctrine: it allows water to be reserved for future uses and it does not require a diversion, allowing reservation for instream uses. An applicant for a reservation must establish to the Board of Natural Resources and Conservation's satisfaction the purpose of the reservation, the need for the reservation, the amount of water necessary for the reservation, and that the reservation is in the public interest. If an applicant fails to do this, the board may deny the reservation application.

The Board of Natural Resources and Conservation must treat a reservation application in the same manner as a permit application: notice must be given to prior appropriators, affected parties may object, and a hearing may be held. An environmental impact statement may be required. The priority of a reservation is the date the board issues the order establishing the reservation, and the reservation fits into the priority scheme like any other water right. The reservation

must yield to prior or senior appropriators, and junior appropriators must yield to the reservation when there is not enough water available for all users.

The board must review the reservation at least once every 10 years to ascertain whether or not the objectives of the reservation are being met, and it may extend, revoke, or modify the reservation if they are not being met. The board may reallocate water reserved for instream use if it finds that all or part of the reservation is not needed for those purposes and that the need for the reallocation outweighs the need for the original reservation.

The decision-making body in the reservation process, the Board of Natural Resources and Conservation, consists of seven members appointed by the governor, one of whom must be an attorney.¹¹ After the water reservation statute was approved, the department and board developed and issued rules for the statute's implementation. The stated purpose and policy of the rules is 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 degradation of the natural aquatic ecosystems, [and the purpose of a reservation is to be] responsive to the need for maintaining streamflows for the protection of existing water rights, aquatic life, and water quality and for establishing options for future consumptive and nonconsumptive uses of Montana's water resources.¹²

The rules provide that applications for reservations must be filed with the DNRC and that the DNRC can provide assistance in completing the application to those applicants who desire it. The application must contain information regarding the four items required by statute: the purpose of the reservation, the need for the reservation, the amount of water necessary for the purpose of the reservation, and that the reservation is in the public interest. The rules require that an applicant, in documenting the need for the reservation, provide information explaining why obtaining a water right by permit will not meet the applicant's needs. The rules also provide criteria for determining the amounts of water needed for various purposes, require the applicant to explain the public benefits of the reservation including environmental and economic benefits and adverse effects, and require detailed plans for any storage or diversion facilities necessary to put the reserved water to use.¹³

The department recently has proposed changes in the reservation rules, primarily for clarification. One proposed change that could substantially change the reservation process is to require the department to hold meetings with the applicants to resolve potential conflicts when several applications for reservations in the same drainage basin are received.¹⁴ This function was performed by the board during the Yellowstone reservation process.

The Yellowstone Water Reservation

The first reservation applications requested water in the Yellowstone River basin where potential conflicts between water demands for energy, agriculture, municipal, and instream uses had become apparent. In December 1976 the DNRC issued a two-volume draft environmental impact statement that included information about the existing environment in the Yellowstone basin and analyzed possible impacts if applications were granted without modification, impacts of

several combinations of reservations for various uses, and impacts of the possible reservations on pending permit applications.¹⁵ A final environmental impact statement was issued in January 1977,¹⁶ followed by a draft addendum environmental impact statement in June 1977 reviewing six additional reservation applications and amendments to four original applications.¹⁷ Hearings that lasted for nearly two months began in August 1977 in Billings. It became clear that the 1 January 1978 deadline for decision by the board could not be met, and the Montana Supreme Court allowed an extension. The board issued its final order on 15 December 1978.¹⁸

Reservations were granted for municipal use, irrigation, instream flows, and multipurpose storage. Board member Wilson Clark revealed the board's philosophy toward its duties in the Yellowstone reservation process, emphasizing five considerations on which its decision was based:

(]) Board members felt that their ultimate responsibility was to the people of Montana in general and to those residing in the Yellowstone basin in particular; (2) Board members were fully aware of the complexity of the case and did not take an ultralegalistic stance; (3) Board members were inclined to grant, in each case, the largest reservation that could be justified by the application, the record, the evidence, and the available water supply; (4) Board members recognized that every encouragement should be given to the development of off-stream storage, with pumping from the Yellowstone River during high water periods; and (5) Board members believed that they had an obligation to encourage conservation measures.¹⁹

A review of some of the problems encountered in the Yellowstone reservation may indicate ways to improve the process. One problem with the Yellowstone reservation was the magnitude of the undertaking. The manner in which reservations were created in the Yellowstone basin required the board to review a tremendous amount of complex data and reach conclusions often with inadequate information and uncertainty as to the legal consequences.

The physical area under consideration was enormous, comprising the entire Yellowstone basin including all tributaries. Reservations were requested for several purposes, resulting in the huge task of weighing the values of the various uses throughout the entire basin. One board member described the process as "overwhelming."²⁰

The huge amount of information available to the board included the reservation applications themselves, a two-volume, 697-page draft environmental impact statement and a 67-page addendum, a 194-page final environmental impact statement, 30 volumes of hearing transcripts, and hundreds of pages of proposed findings prepared by the applicants. Most of this information was not organized in such a fashion to make it readily useable by the board.²¹ Besides the volume of information, much of it was extremely complex: hydrologic data and computer modeling of flows, Montana water law and legal issues, water quality data, and biological instream requirements.

Despite the quantity of information at its disposal, the board found that items essential to its analysis and decision often were unavailable. The lack of answers to key legal questions were particularly frustrating. Three important legal considerations remained unresolved, making the board's decision even more difficult:

(1) the lack of any determination of the entitlements of other states under the Yellowstone River Compact, (2) the lack of any determination of the extent of Federal and Indian reserved rights, and (3) the lack of any determination of the extent of unadjudicated private rights.²² The board's task also was complicated by the nature of the resource. Since water uses are interrelated, a decision made for one use in one section of a stream could affect every other use throughout the basin. Gathering the necessary information to apply for a reservation, compiling the environmental impact statements, holding the hearings, and evaluating the information and reaching a decision required big commitments of time and funds by all those involved in the process.

Another problem that became apparent during the Yellowstone reservation process was that the agricultural applicants represented by conservation districts failed to demonstrate their needs for reservations as required by the reservation statute. The conservation district applications were inadequate and failed to provide information indicating why they were unable to obtain water for their needs through the permit process. The reservation statute's requirements that only government entities are allowed to apply for reservations and that applicants must demonstrate their needs for the reservations clearly indicate that the legislature intended private water users to obtain water through the permit process.

Private agricultural water users, through the conservation districts, were the only private water users allowed to apply for reservations, resulting in agriculture being treated as a public good like water quality. This, however, is not surprising, due to the importance of agriculture to Montana's economy. If the purpose of a reservation is to provide water for uses which cannot be provided by the permit process, conservation districts need to supply more

convincing evidence that their water needs cannot be satisfied through the permit process. The hearings examiner in the Yellowstone reservation process encouraged the board to deny the agricultural applications, or reduce them substantially from the amount of water requested, because they did not establish a need for or ability to use the water.²³ Although the board recognized the inadequacy of the conservation district applications, it refused to eliminate agricultural interests from the proceedings.

The priority system implemented in the Yellowstone reservation created another problem because it replaced the permit system of water allocation which is based on the prior appropriation doctrine of first in time, first in right, with a preference system. All municipal users were given one priority while irrigators were given another. The priority of instream uses was based on their locations in the basin. The board signed its final order creating the reservations in a sequence which established the priority of each use: (1) municipal reservations, (2) instream reservations above the confluence of the Bighorn River, (3) all irrigation reservations, (4) instream reservations below the confluence of the Bighorn River, and (5) all multipurpose storage reservations.²⁴ Under preference systems one group, for example municipal users, may take all the water it needs during a dry year before the next preferred use gets any. This results in uncertainty for all uses that are not in the most preferred group because, as the reservation is perfected, more and more users begin taking their reserved water and those users with less preferred uses do not know how much water has been designated for the more preferred uses.

Preference systems also lead to economic inefficiency because every municipal use is not more valuable than every irrigation use. When municipal user is taking all the water it can use, the value of its marginal product (the value of the last unit used) equals zero, while the value of the marginal product for irrigation (which is not getting any water) would be much higher.²⁵ Preference systems tend to reduce flexibility of water allocation because the favorable position of some uses is continued into the future based on current economic conditions.²⁶

Preference systems (and reservations) encourage development of only preferred uses while discouraging development of other uses. As economic conditions change, the preferred uses also may change, but changing the ranking of the uses would cause considerable confusion and possibly raise the issue of *taking* property without compensation. On the other hand, consumptive reservations also may create a disincentive to development as, in the case of irrigators, their priority is not based on when they put the water to use. The priority of a reserved right remains the same whether or not an irrigator begins using the water now or several years from now, thereby eliminating any incentive to develop the water use soon in order to acquire an early priority date. Since a set quantity of water is reserved for future use, other potential water users may be dissuaded from attempting to obtain a permit junior to the reservation because their rights may not be secure and they may have to discontinue their uses of water when the reserved water finally is put to use.

Since a number of users within a type of use have the same priority, and since development of these consumptive uses may occur over a number of years, another layer of bureaucracy must be imposed to keep order. The conservation districts, in administering the irrigation reservations, are duplicating some of the services already provided by the DNRC's Water Rights Bureau in its administration of the permit system. The reservation statute requires yearly reports assessing the progress toward implementation of the reservation, which adds to the administrative burden of the conservation districts. Conservation districts must keep records of the amounts of reserved water put to use and encourage the development of projects using the reserved water within the time expectations of the board. In the case of the Yellowstone reservation, agricultural water users have been required to file change applications with the DNRC in order to use reserved water on lands not originally designated in the reservation.

Water rights obtained through the permit process can be transferred to other uses and/or other lands through the sever-sell process. Prior approval for selling a water right must be obtained from the DNRC so that the DNRC can ensure that water rights of others will not be adversely affected.²⁷ Apparently this procedure for changing the use and location of a water right is not available to water rights obtained through the reservation process. Reallocation of reserved water can take place only when a determination by the board has been made that the "need for the reallocation . . . outweigh(s) the need shown by the original reservant."²⁸ Granting reservations to

consumptive water uses thus decreases the flexibility of the water allocation system in meeting future water needs.

It should be possible to learn from the problems encountered in the Yellowstone reservation process so that the future water reservations can avoid them yet achieve the results envisioned when the reservation statute was enacted. The goals of establishing a reservation may best be achieved by the type of reservation implemented in the Yellowstone basin, or by some modification of the reservation as implemented in the Yellowstone, or by an entirely different and separate process. First, though, what *are* the goals of establishing a reservation?

CHAPTER 2 ENDNOTES

¹Albert W. Stone, Montana Water Law for the 1980s (Missoula, MT: University of Montana, 1981), p. 25.

²Montana Constitution, Article IX, Section 3.

³Montana Code Annotated, 85-2-302.

⁴*Ibid.*, 85-2-307.

⁵*Ibid.*, 85-2-311.

⁶Ibid.

⁷Ibid., 83-2-309.

⁸Ibid., 85-2-312.

⁹*Ibid.*, 85-2-315.

¹⁰*Ibid.*, 85-2-316.

¹¹Montana Code Annotated, 2-15-124.

¹²Montana Administrative Code, 36-16-101.

¹³*Ibid*, 36-16-104 and 36-16-105.

¹⁵*Ibid*, 36-16-101 through 36-16-116, proposed revision, October 16, 1981.

¹⁵Montana, Department of Natural Resources and Conservation, Yellowstone River Basin Draft Environment Impact Statement for Water Reservation Applications, 2 vols., 1976.

¹⁶Montana, Department of Natural Resources and Conservation, Yellowstone River Basin Final Environmental Impact Statement for Water Reservation Applications, 1977c.

¹⁷Montana, Department of Natural Resources and Conservation, Yellowstone River Basin Draft Addendum Environmental Impact Statement for Water Reservation Applications, 1977b.

¹⁸Montana, Department of Natural Resources and Conservation, Order of the Board of Natural Resources and Conservation Establishing Water Reservations, 1979. ¹⁹J. L. Thomas and Duane Klarich, "Montana's Experience in Reserving Yellowstone River Water for Instream Beneficial Uses," Water Resources Bulletin, Vol. 17, No. 2 (April 1981), 258.

²⁰Quoted in James L. Huffman, The Allocation of Water to Instream Flows: Montana Water Resources Management, Vol. IV (Washington, D.C.: Office of Water Research and Technology, 1980), p. IV-110.

²¹Ted J. Doney, Frank Culver, Carole Massman, and Wayne Wetzel, "Yellowstone Water Reservations: Decision-making by a Citizen Board," in Utilizing Information in Environmental Quality Planning (Minneapolis: American Water Resources Association, 1979), p. 106.

²²Huffman, op cit., p. IV-111.

²³*Ibid.*, p. IV-124.

²⁴Montana, Department of Natural Resources and Conservation, Order of the Board . . . , op cit.

²⁵Water rates for municipal users (especially where meters are used) will prevent the value of the marginal product for municipal use from ever actually reaching zero.

²⁶S. V. Ciriacy-Wantrup, "Concepts Used as Economic Criteria for a System of Water Rights," *Land Economics*, Vol. 32, No. 4 (November 1956), 305.

²⁷Montana Code Annotated, 85-2-402.

²⁸Ibid., 85-2-316.

Chapter 3

GOALS OF ESTABLISHING A WATER RESERVATION

There are several possible goals of establishing a water reservation, some of which can be contradictory. The objective of this section is to identify these goals and evaluate the ability of the reservation process to realize them. The major goals of establishing a reservation are to (1) protect future consumptive water use from in-state threats, (2) protect instream flows from future consumptive water use, (3) plan for future water use in the state, and (4) protect future consumptive water use from downstream out-of-state development. Not all of these goals are stated explicitly in the statute authorizing water reservations, but they can be derived from testimony presented to the Board of Natural Resources and Conservation during the Yellowstone reservation process, and from published and unpublished material prepared by the DNRC.

Protecting Future Consumptive Water Use

from In-state Threats

The first of these goals, to protect future consumptive water use from in-state threats, indicates that there are potential water uses in the state that may jeopardize the future use of water for other, more preferred uses. According to the 1973 Montana Water Use Act, beneficial use is defined as

a use of water for the benefit of the appropriator, other persons, or the public, including but not limited to agriculture (including stock water), domestic, fish and wildlife, industrial, irrigation, mining, municipal, power, and recreational uses.¹

Very few water uses would not be considered beneficial using this definition; and since in the statute there is no preference for any type of water use over another, the possibility of rapid water development for one type of use may be viewed as a threat to the future development of another type of use.

Prior to and since the passage of the 1973 Water Use Act, the doctrine of prior appropriation has controlled the allocation of water in Montana. Those who develop water and put it to a beneficial use the earliest in time have the most secure water right. As basins become more fully appropriated, a fear may arise that water will not be available in the future for those water uses most valued in the state. The most valued uses are not necessarily those which produce the greatest profit; but, rather, those which help maintain the economy of the state and the desired life-style of its citizens.

It became apparent during the Yellowstone reservation process that a widespread view is held by Montanans that it is important to protect the state's environmental values and predominantly agricultural life-style. Related to this view is the belief that some uses of the state's water are more desirable than others although the statutes make no provisions for this to be considered in water allocation by permit. The Montana Futures Study, a statewide public survey, found that the state's residents place a high priority on preserving agricultural land and land that supports wildlife. Agriculture, domestic, and fish and wildlife were rated as the highest valued uses of the state's water.² Thus a major goal of the reservation process is to prevent less desirable water uses from taking large amounts of water from any particular basin to the detriment of the future development of more desirable uses.

A consumptive water user applying for a reservation must establish to the board's satisfaction a need for the reservation and must, therefore, explain the reasons he believes unappropriated water will no longer be available at the time he wishes to proceed with development. The board must determine that obtaining a water right by permit will be ineffective against the perceived threat. Thus the only real threat to future consumptive water development within the state is intervening permits granted for other, less desirable uses.

In-state water uses which may be perceived as threats to future development of the more desired uses include water used for industrial purposes and hydroelectric power, the sale of water out-of-state, and Indian and federal reserved rights. The Yellowstone reservation was a reaction to the fear that the remaining unappropriated water in the Yellowstone basin would be allocated for industrial use. In the 1970s the projected demand for Montana's coal increased dramatically. This can be attributed to the nation's greater awareness of its dependence on possibly insecure supplies of foreign oil, new air pollution regulations that encouraged the use of low sulfur coal, and increased coal consumption. The North Central Power Study, issued by the Bureau of Reclamation in 1971, proposed massive coal development in the Northern Great Plains including 20 coal-fired power plants in Montana's Yellowstone basin, and endorsed embarking on large-scale plans for coal

gasification plants. The proposed plants would have required huge amounts of water from the Yellowstone River.³

Shortly after the enactment of the 1973 Water Use Act, several energy companies applied for permits to use large amounts of water from the Yellowstone River and its tributaries which, if approved, could have severely depleted the Yellowstone River. The legislature reacted by imposing a moratorium on permit applications which suspended action on the existing industrial applications and gave government agencies a chance to prepare applications for reservations. The moratorium emphasized the need for water reservations to protect water for agricultural and municipal needs and minimum flows.⁴ A total of 38 applications for reservation districts, and municipalities.⁵

A lengthy process including reserach studies, the preparation of an environmental impact statement, and a seven-week hearing conducted by the Board of Natural Resources and Conservation followed, with the board finally making its decision on 15 December 1978.⁶ Almost all the applicants were granted reservations although some were reduced substantially from the amount of water requested. It is significant to note that by the time the board made its decision reserving Yellowstone River water for the various purposes, the threat of industry taking all the water and leaving insufficient amounts for other uses had largely disappeared.

The industries whose applications for permits had been suspended voiced little opposition to the moratorium or to their exclusion from

representation in the reservation process.⁷ Industry's lack of opposition reflects the abundance of water in the Yellowstone basin and the remaining large potential for off-stream storage. By the time the board issued its reservation order, "even the most optimistic predictions of industrial development foresaw the need for a very small portion of the available water."⁸ In retrospect it appears that the industrial permit applications were highly speculative and indicative of the erroneous prediction of a massive boom in energy development.

There is a greater potential for industrial water use in the Yellowstone basin than any other region of the state due to its vast coal reserves. Since the threat of industrial water use precluding future consumptive use for other purposes has not materialized here, there is little reason to fear this threat in other parts of the state. In the Missouri River basin numerous reservoirs impound huge amounts of water available for use by industry. The Fort Peck Reservoir alone has a storage capacity of over 19 million acre-feet,⁹ with 300,000 acre-feet available for purchase by industrial users. Since industrial use generally requires a dependable supply of water, industry is more likely to look to the reservoirs for its water needs than chance having its water use cut off during low flow years because of the priority ranking of the permit system.

Permits for hydropower development also may restrict future consumptive water use for other purposes. The effects of this problem currently are being sorted out in the Clark Fork basin. Washington Water Power Company has a water right for its dam at Noxon Rapids for 50,000 cfs which is greater than the average

flow of the river, and has been determined to be the most limiting water right in the Clark Fork basin.¹⁰ Water flows in excess of 50,000 cfs occur an average of 32 days per year generally between 10 May and 25 June; however, in some years flows never exceed 50,000 cfs.¹¹

Applications for permits for consumptive uses in the Clark Fork basin have continued to be granted although the basin appears to be fully appropriated during most of the year. This basically is because the Washington Water Power Company has chosen not to exercise its right to object to permit applications. This may have led permit applicants to believe more unappropriated water is available than actually exists, and there is a possibility that they may have to discontinue their water use at some time in the future. Therefore, as can be seen in the Clark Fork basin, hydropower projects can obtain a water right that can prevent future consumptive water use in a basin.

The effect of this condition would allow future use of the water for irrigation through the month of July. Without the condition the amended Thompson Falls project could result in restricting future irrigation in July. The DNRC contends that the effect of the condition

on hydropower production would be minimal.¹³ If the DNRC's intervention is successful, it would provide another avenue to protect future consumptive water use in the state from downstream hydropower development.

The problem of a hydropower project locking up all the water in a basin and preventing future consumptive uses also exists in the Missouri River basin. The Montana Power Company operates nine hydropower and/or storage reservoirs in the upper Missouri River basin. The U.S. Bureau of Reclamation operates the Canyon Ferry dam for flood control and recreation as well as hydropower.¹⁴ A water availability study published by the DNRC concludes that water is available for appropriation above the Canyon Ferry Reservoir only when water is spilling at the Canyon Ferry dam, or in 60 percent of the years, and is essentially never available after 9 August of any year.¹⁵

The DNRC's decision regarding a permit application for water from a tributary of the Missouri River above the Canyon Ferry Reservoir reaches a different conclusion. Objections were filed by the Bureau of Reclamation and the Montana Power Company to an Application for Beneficial Water Use Permit for a small amount of water to be diverted from the Jefferson River to be used for irrigation. The objections maintained that there was insufficient unappropriated water available in the basin for the proposed use, and that any new irrigation development would adversely affect the rights of the Bureau of Reclamation and the Montana Power Company as prior appropriators.¹⁶

The DNRC issued a Proposal for Decision in this matter on 15 June 1982. Exceptions to the proposal were filed by the Bureau of Reclamation and the Montana Power Company. The DNRC issued its final order on 24 April 1984.¹⁷ A major question examined during the proceedings was whether or not the Bureau of Reclamation was using all the water it stored; that is, whether or not the bureau could claim a right to continued flows when its needs could be met by its stored water.

The DNRC determined that storing such large amounts of water merely for protection from future long-term droughts could not preclude current use of the water by upstream irrigators. In its final order the DNRC concluded that "the Bureau and the Montana Power Comapny . . . failed to show by the assertion of their respective rights that there is not unappropriated water available for this Applicant."¹⁸ The Bureau of Reclamation and the Montana Power Company subsequently appealed this decision in court. The DNRC's final order appears to provide a loophole, in at least some situations, to allow future consumptive water use in spite of water rights for hydropower and other uses that seem to fully appropriate a basin. The subordination of future consumptive water uses to existing hydropower rights continues to be a problem in Montana. Establishing a reservation for future consumptive uses will, however, have no effect on existing hydropower rights. Since almost all the major sites for hydropower projects are already in use, water reservation will be of little value to combat this threat to future consumptive uses. Also, there currently is a method to prevent future hydropower developments from precluding future consumptive water use. The 1983 legislature passed House Bill 908 which includes new criteria, in addition to the existing criteria, that must be met for some

permits to be granted. The new criteria apply to permit applications for 10,000 or more acre-feet of water per year, or 15 or more cfs, and require the following to be established in order for a permit to be issued:

The applicant has proven by clear and convincing evidence that the rights of a prior appropriator will not be adversely affected;
The proposed appropriation is a reasonable use. Such a finding shall be based on a consideration of the following:

- (A) The existing demands on the state water supply, as well as projected demands such as reservations of water for future beneficial purposes, including municipal water supplies, irrigation systems, and minimum streamflows for the protection of existing water rights and aquatic life;
- (B) The benefits to the applicant and the state;
- (C) The economic feasibility of the project;
- (D) The effects on the quantity, quality, and potability of water for existing beneficial uses in the source of supply;
- (E) The effects on private property rights by any creation of or contribution to saline seep; and
- (F) The probable significant adverse environmental impacts of the proposed use of water as determined by the Department pursuant to Title 75, Chapter 1, or Title 75, Chapter 20.¹⁹

With these criteria the department may be able to place a condition on permits for hydropower to allow for a designated level of future water development for consumptive uses upstream from the hydropower project.

Selling water for out-of-state use has been hotly debated recently and could potentially become another threat to future consumptive water use within the state. Several bills were proposed during the 1983 legislative session to establish a water marketing program. The bill that finally was approved, House Bill 908, instead established a committee to study water marketing. It is very probable that the 1985 legislature will again consider this issue and that new water marketing bills will be proposed. Coal slurry pipelines would be the most likely candidate to use water sold by Montana under a water marketing program, which means that Montana also would have to repeal its current prohibition against using water in such pipelines.²⁰ Coal slurry pipelines have been dealt a serious blow by their failure to secure the right of eminent domain. In September 1983 the U.S. House of Representatives defeated a bill that would have given coal slurry pipeline companies the authority to buy land despite a landowner's objections.²¹ The failure of this bill makes the construction of coal slurry pipelines very difficult because most pipelines would have to cross rail lines, and the railroads, being competitors for the transportation of coal, have refused to sell the pipeline companies rights-of-way.

The sole pipeline company that has managed to obtain all its rights-of-way without the power of eminent domain, Energy Transportation Systems, Inc. is running into other problems. The pipeline was planned to carry coal to Arkansas to supply Arkansas Power and Light. In July 1983, however, Arkansas Power and Light granted a 20-year contract to Union Pacific and Chicago and Northwestern Railroads.²² Besides lobbying against the eminent domain bill, the railroads have reduced their rates for hauling coal because they faced the potential competition of coal slurry pipelines, thus making the pipelines appear less favorable.²³ So, even if in the future Montana does establish a water marketing program and does repeal the prohibition on using water in coal slurry pipelines, there may not be much demand for the water it wishes to sell.

If the state does find buyers for its water, the threat to future consumptive water use within the state still would be minimal
because the water sold would undoubtedly come from the storage in existing reservoirs. Montana currently has 300,000 acre-feet of water available for sale for industrial purposes from the Fort Peck Reservoir under an agreement with the U.S. Bureau of Reclamation for which it has found no buyers.²⁴ In any case, the future water needs within the state would be a high priority in any water marketing program and should be considered in any potential water sale, thereby making a water reservation unnecessary as a tool to protect future consumptive uses from the sale of water out of state.

Indian and federal reserved rights present another threat to the future consumptive water use in the state. Reserved rights first were established in the U.S. Supreme Court case, *Winters v. U.S.* (207 U.S. 564, 577, 1908).²⁵ The court ruled that since the Indians were intended to farm on the Indian reservation, sufficient water was reserved for them to achieve this purpose. Subsequent U.S. Supreme Court cases have expanded the Winters Doctrine to other federally owned land and have continued to maintain that when land is reserved for a federal purpose, "the Government, by implication, reserves appurtenant water then unappropriated to the extent needed to accomplish the purpose of the reservation."²⁶

Indian reservations and federally owned land comprise large amounts of acreage within Montana's borders. Thus the currently unquantified Indian and federal water rights could conceivably prevent a considerable amount of future water development for consumptive uses. Since, however, it is fairly well established that the priority of the reserved right is the date the land was reserved,²⁷ the process of

reserving water for future consumptive use would be ineffective against this threat. The date the land was reserved for Indian reservations or federal purposes invariably would be much earlier than the date establishing a reservation of water by order of the Board of Natural Resources and Conservation. A Water Rights Compact Commission was created by the state legislature in Senate Bill 76 to negotiate with the Indian tribes and the federal government in an attempt to resolve the problem by quantifying their reserved rights as a part of the general adjudication of the water rights in the state.²⁸

Even though none of the potential in-state threats appear imminent, there are other methods to counter the threats to future consumptive water use besides establishing a water reservation. One of these methods is the public interest criterion. Public interest criteria could allow the DNRC to review a wider range of issues than the effect on prior appropriators and water availability when determining whether or not a permit should be issued, including land use, economic considerations, environmental quality, and the loss of alternative uses of the water. If granting a permit was found to have substantial negative impacts in these areas, the permit could be denied or conditioned to mitigate these impacts. Especially important for protecting future consumptive uses such as agriculture and domestic use would be public interest criteria that would allow consideration of the "effect of the loss of alternative uses of water that might be made within a reasonable time if not precluded or hindered by the proposed use."29

Most western states have included some type of public interest criteria in their water use laws. The criteria often are so general, however, that they have been difficult to interpret and, therefore, have been used rarely.³⁰ There currently are two areas of Montana's water laws that contain public interest criteria. A public interest criterion appears in the statute authorizing water reservations which states only that an applicant for a reservation must establish that "the reservation is in the public interest."³¹

The previously mentioned House Bill 908 passed by the 1983 legislature contains new public interest criteria that must be met for applications greater than 10,000 acre-feet per year or 15 cfs.³² The criteria listed in this statute do not, however, include a provision for consideration of the effect of an application on the loss of possible alternative uses of the water. This problem possibly could be considered under these criteria because they contain a provision allowing the consideration of the benefits to an applicant and the state. The criteria described in this statute cannot be used to consider the potential effects of all permit applications because they apply only to applications for large amounts of water. Also, the statute included a termination date of 1 July 1985. The legislature would need to delete the termination date and expand the criteria as well as apply them to all permit applications if the public interest criteria are to be an effective tool to protect future consumptive water uses from in-state threats. An additional advantage of public interest criteria is that by using them to impose conditions on a permit, it may be possible to approve a project and

still protect other future consumptive water uses as well as economic and environmental values.

Another method to counter in-state threats to future consumptive water use is through the use of Montana's Major Facility Siting Act.³³ This act provides guidelines for the siting of industrial facilities by the Board of Natural Resources and Conservation. Water quantity and quality are among the concerns that the board may address when it reviews construction permit applications. When the Montana Power Company applied for a facility siting permit for the expansion of its Colstrip power plant, the board required it to provide storage for the water it needed so it could fill a reservoir during high spring run-off, thereby preventing any damage to existing and future water users. This act could be used in a similar fashion in the future to prevent industrial water needs from threatening future consumptive uses for agricultural and domestic use.

Another method to counter in-state threats would be useful in the event that any unforeseen threats arise. A temporary statutory moratorium on new appropriations can be used to provide an opportunity to ascertain the extent of existing rights in a basin and to evaluate alternative future uses. This method could prevent a stream or basin from becoming fully appropriated before the full effect on future needs can be discovered. This was the method used by the Montana legislature in 1974 when it passed the Yellowstone Moratorium in response to the threat posed to future consumptive water uses by industrial permit applications.

Threats to future consumptive water use at their worst could only prevent users from obtaining new water use permits. The sever-sell process through which a new user can purchase an existing water right would still provide an avenue for obtaining water.³⁴

By using the reservation process to counter the industrial threat in the Yellowstone basin, the state replaced its traditional method of allocating water, the prior appropriation doctrine, with a system in which most of the remaining unappropriated water in the basin was allocated for future use. It may not be necessary to overhaul Montana's water allocation system so drastically in order to accomplish Since the form that an in-state threat to future consumptive this goal. water uses must take is that of an Application for Beneficial Water Use Permit, the logical response to this threat is to deny or condition the permit to prevent harm to those future water uses most important to the state. The public interest criteria is the tool by which those permits that constitute a threat can be denied or conditioned. The goal of protecting the future consumptive use of water most desired in the state can be accomplished by developing public interest criteria that can be applied to all permit applications, while using as backups the Major Facility Siting Act and a moratorium on new appropriations. These methods seem more appropriate than establishing a reservation for countering the threat of less desirable uses taking all the available water. Instead of undertaking the huge task of allocating most or all the available water in a basinwide reservation, they focus on the immediate threat (and counter it by allowing the permit to be denied or granted with conditions to protect future development) by requiring

a source of water or water storage to be developed that will not restrict future consumptive uses, or by preventing the application from being processed until the problem has been further investigated.

Protecting Instream Flows from Future

Consumptive Water Use

The second important goal of establishing a water reservation is to protect instream flows from future consumptive water use. Low flows result from a combination of events that change the normal amount of water in a basin. Changes in the amount of precipitation can cause large fluctuations in streamflow and natural catastrophies such as floods, earthquakes, forest fires, etc., and can change the characteristics of a drainage basin, thereby changing flows. Human actions can alter flow patterns and water quality as well as the quantity of water in a basin. The diversion of water from a stream has the most significant impact in causing low flows, sometimes to the point that streams are entirely dewatered.³⁵

Instream flows provide a public benefit by maintaining amenity values such as water quality, wildlife habitat, ecosystem maintenance, recreation, and aesthetics. These uses are compatible with more traditionally accepted instream values such as navigation and hydropower generation. These public benefits can be diminished or destroyed by incremental water development for private, consumptive uses. A problem that arises in attempts to protect instream flows is the difficulty of determining the optimal amount of water to leave in the stream, that is, the marginal value at which the public benefit outweighs the private gain. The economic evaluation of allocating water for instream flows involves comparing the value of water for instream uses with the value of water diverted for consumptive uses. In determining the value of instream flows the sum of all instream benefits can be considered while water withdrawn from the stream usually fulfills only one consumptive purpose.³⁶ Marginal value is the value of the last unit consumed, and it decreases as the amount of water used increases. Thus the principle on which economic allocation of resources is based is that resources should be allocated so that all users derive equal value from the marginal unit used.³⁷

In economic terms the value of water for various uses easily can be determined when market prices are charged for its use. Market prices reflect the user's willingness to pay for the use of the resource. When market prices are not available, willingness to pay must be estimated. An irrigator's willingness to pay is based on the net increase in income he receives from the land made productive by irrigation.³⁸ Willingness to pay for the preservation of instream flows includes the value obtained from the river by the recreational user (for fishing, boating, etc.), plus the three benefits of preservation outlined by Sutherland in his report, *Recreation and Preservation Valuation Estimates for Flathead River and Lake System*:³⁹

Option value is defined as the willingness to pay to avoid irreversible loss of the opportunity for future access to natural environments for recreation use. Bequest value is defined as willingness to pay for the satisfaction derived from endowing future generations with a natural environment. Existence value is the willingness to pay for the knowledge that a natural environment is preserved even though no recreation use is contemplated. It is difficult to estimate recreation and amenity values of maintaining instream flows. Economic theory suggests, however, that instream uses have a positive marginal value, and observation shows that water-based recreation is an important part of Montanan's lives. As natural environments are lost to development, the opportunity for outdoor recreation declines. Coupled with the increase in demand for these recreation opportunities, the value of recreation resources is increasing steadily. This is occurring while the value of most agricultural products is decreasing steadily.⁴⁰ Public demands for the amenity values associated with instream flows are leading to changes in the laws regulating water allocation so that these values can be protected.

These economic arguments for the value of protecting instream flows clearly are anthropocentric. Nonhuman forms of existence may have intrinsic value as well. In this case, protecting instream flows would benefit not only the human user but every other organism dependent on the river as well as the health of the riparian ecosystem as a whole.

Protecting instream flows has become a concern in the West only in the past few decades. During the late 1800s and early 1900s, when the prior appropriation doctrine was being developed, exploitation of natural resources for economic gain was the rule. At that time water in the West was being diverted from streams and put to use mainly for mining and irrigation, and the assumption that water left in a stream was being wasted found its way into law.

Two requirements of the prior appropriation doctrine conflict with the idea of leaving water in a stream channel. A valid appropriation could be achieved only if (1) the water was diverted from the stream channel and (2) it was put to a beneficial use. Traditionally, beneficial use was defined in economic terms and did not include instream uses such as recreation and fish and wildlife habitat. The diversion requirement gave notice of the project to others,⁴¹ thus the diversion requirement and the beneficial use requirment have historically prevented appropriations for instream purposes. In recent years, however, a new demand by the public has arisen for water for fish and wildlife, recreation, aesthetics, etc. Public pressure for the consideration of the effect on environmental values of water allocation has resulted in a reexamination of the underlying assumptions of western water law that favor private consumptive water use.

The decision to preserve instream flows requires thorough consideration of the importance of leaving water instream and the effect it will have on other uses of the water. Also, many of the values protected by preserving instream flows are difficult to quantify in economic terms. The careful study and balancing of interests required in making this type of decision cannot be guaranteed if the decision is left up to private parties; therefore, only public rights for instream flows are effective in protecting public benefits.

The first public rights for instream flows in Montana were appropriated as a result of a statute passed by the 1969 legislative session. The legislature authorized the Montana Fish and Game Commission to appropriate water in parts of 12 streams to maintain

flows needed to protect important fisheries.⁴² This statute was repealed later by the Water Use Act of 1973, but it is assumed that the rights created before its repeal still are in effect because the 1973 Water Use Act and the 1972 Constitution declare the validity of all existing rights.⁴³

The 1973 Water Use Act recognizes instream rights and provides the opportunity to protect instream uses by establishing a water reservation. For the first time in Montana's history, fish and wildlife and other instream uses specifically were declared to be beneficial uses of water, and a means to circumvent the diversion requirement was approved.⁴⁴ The statute allowing water reservations specifically states that

the state or any political subdivision or agency thereof or the United States or any agency thereof may apply to the board 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.⁴⁵

The legislature later amended the statute to require that

the board shall limit any reservations after May 9, 1979, for maintenance of minimum flow, level, or quality of water that it awards at any point on a stream or river to a maximum of 50% of the average annual flow of record on gauged streams. Ungauged streams can be allocated at the discretion of the board.⁴⁶

The first and as yet only water reservation to be established affected the Yellowstone River basin. Two agencies, the Department of Health and Environmental Sciences (DHES) and the Fish and Game Commission, submitted applications requesting the reservation of instream flows. The DHES requested 6.6 million acre-feet per year at Sidney near the North Dakota border and the mouth of the Yellowstone River,⁴⁷ and smaller amounts in two other reaches of the river. The DHES based its requests on the U.S. Public Health Service water quality standards for drinking water, focusing particularly on the standard for total dissolved solids (TDS).⁴⁸ The Fish and Game Commission made more than 100 specific reservation requests on the Yellowstone and its tributaries including 8.2 million acre-feet per year at Sidney.⁴⁹ The Fish and Game Commission requested instream flows sufficient to protect a number of wildlife values including riffle areas, retaining efficient paddlefish migrations, maintaining normal stream channels, and protecting the security of goose nesting sites.⁵⁰

Since the Fish and Game Commission's instream flow requests were for larger amounts than the DHES' requests, the Board of Natural Resources and Conservation focused its attention mainly on the Fish and Game Commission's requests, assuming that whatever flows they eventually granted would protect the water quality goals of the DHES as well.⁵¹ The board granted an instream flow reservation of 5.5 million acre-feet per year at Sidney, a larger amount than many of the reservation participants had anticipated, and more than half of the 8.3 million acre-feet average annual flow.⁵² By granting large instream flows plus establishing a priority system, giving first priority to municipalities, second to instream flows above the Bighorn River, third to irrigation, fourth to instream flows below the Bighorn River, and fifth to multipurpose storage, the board proclaimed the importance of maintaining water quality, aquatic habitat, and recreation opportunities in the upper basin and the relative importance of irrigation in the lower basin.⁵³ Through the establishment of a water reservation, instream flows have been protected in the Yellowstone basin.

At present, instream flows in most streams and rivers in the rest of the state remain unprotected. Water reservations provide the only currently available mechanism to prevent dewatering of Montana's streams and rivers. Establishing instream flow reservations also may be effective in protecting instream flows in some of those streams that already are fully appropriated. On many streams the most senior water rights are located in the downstream portion of the stream and significant amounts of water are left in the upstream portion to satisfy these rights. These instream flows could, however, be lost if any water right owners were to move their points of diversion upstream or were to sell their water rights to upstream landowners. In order to make a change in the water right or to sell it, the water right owner must obtain the approval of the DNRC. Other water right owners may object to the change or sale if they believe it will be detrimental to their water rights.⁵⁴ If a water reservation for instream flows has been established, the agency holding the reservation could object on the grounds that the change or sale would damage its instream reservation.

Other tools exist that can be used to protect instream flows; but, unlike the reservation, these were not designed for this purpose and are not as effective in achieving this goal. In 1968 the U.S. Congress enacted the Wild and Scenic Rivers Act which, in effect, reserves historical instream flows on designated rivers.⁵⁵ It appears clear that the federal government has the power to claim reserved water rights for Wild and Scenic Rivers. The act cannot, however, be relied on as an effective tool to protect instream flows throughout the state because most streams and rivers never will be designated Wild and Scenic and the legislation establishing them may contain conditions which allow future consumptive diversions in some cases.⁵⁶

The Montana Environmental Policy Act requires an environmental review of all state actions that may have a significant impact on the environment. It seems that under this act an environmental review would be necessary when a water right permit application is received by the DNRC that could harm instream flow values. Also under this act, establishing a water reservation could be required to be evaluated as an alternative to the project under consideration.⁵⁷ Since it currently is unclear whether or not the results determined in an environmental impact statement require substantive action by the agency, it is unlikely that the Montana Environmental Policy Act will be used in this manner to protect instream flows.

Conservation also could be used in conjunction with a water reservation to protect instream flows. Since irrigation uses 95 percent of all the water put to use in Montana, using more efficient irrigation techniques to conserve water could significantly affect the amount of water available for instream uses.⁵⁸

Senate Bill 370, passed during the 1983 legislative session, includes a provision that allows the DNRC to close a basin to further water right permit applications, or to modify or condition permits issued in highly appropriated basins upon petition by at least 25 percent or 10 water users.⁵⁹ This statute could be used to prevent further stream dewatering in highly appropriated basins by conditioning permits to protect the instream flows or by rejecting permit applications. This statute has yet to be implemented although a few

petitions have been received by the DNRC. It is unknown at this time whether or not this statute ever will be used to protect instream flows.

Although these other methods may be available to incidentally protect flows in some areas, the reservation statute provides the only currently available method that can effectively protect instream flows in all of Montana's streams and rivers.

Planning for Future Water Use in the State

A third possible goal of establishing a water reservation is to plan future water use in the state. Due to the state's adoption of the prior appropriation doctrine which relies on a priority system of first in time, first in right, few methods are available to the state to direct water development. The reservation process has been viewed by some state water planners as a way to implement a state water plan.

Any water use has the potential to affect any other use within a basin; for example, upstream diversions will affect downstream uses and water quantity decisions can affect water quality. This can lead to several problems that may be alleviated by some type of planning. Planning may be useful to avoid water shortages, to avoid piecemeal development of projects that could have harmful impacts on a fishery, water quality, future irrigation needs, etc., or to help protect the state's future water needs from downstream out-of-state demands.

Water planning in Montana has been sporadic. A comprehensive state water plan was mandated by the legislature in the Water Resources Act of 1967. The intent of initiating a plan was to coordinate the various water uses in the state to ensure the best use of the state's resource. The DNRC was instructed to examine future water needs

throughout the state along with federal, state, and local water development projects and goals in developing the plan. The State Water Plan envisioned at the time was to be a four-step process requiring an inventory of the state's water resources including their management and use, projections of future water use based on the resource inventory, development of alternative water projects and plans for the future, and, finally, implementation of the plan.⁶⁰

State planning efforts were aided by federal matching grants authorized by the Water Resources Planning Act.⁶¹ A series of reports compiled in a cooperative effort by various governmental groups, called Level B Studies, were published which describe the resources of a river basin, identify present and future water needs, outline alternative plans and planning goals, and recommend a plan to be implemented in the basin. To date, implementation has begun only in the Flathead River basin. No attempt is being made by the DNRC to begin implementation of the plans in the other basins and there presently is no final document that can be called the State Water Plan.

Comprehensive river basin planning and plan implementation no longer appear to be active goals of the DNRC. Current planning efforts are being geared to solving individual water use conflicts and problems rather than working toward a complete plan allocating all the state's water to predetermined water development projects. The attitude within the department seems to be that the state should not get involved in a master water allocation scheme but should leave water allocation to be determined by market forces.⁶²

This type of planning, called *adaptive* planning, has become the predominant type of water planning in use throughout the United States due to an understanding that (1) inadequate information concerning physical, biological, and social systems exists and, therefore, "resource use decisions will be based on imperfect knowledge," (2) lack of information and inability to predict the future precisely frustrate comprehensive plans, thus only incremental changes are possible, and (3) the responsibility for implementing water management plans is fragmented, making implementation extremely difficult.⁶³

The Water Management Bureau of the DNRC currently uses the Level B Studies as baseline information when investigating water use problems; however, some of these studies were poorly done and the information they contain is becoming outdated, so it is very unlikely that they ever will be implemented. Current ongoing planning efforts in the state include the following:

1. Continuing to inventory the state's water resources and developing a water use data base that soon will be published.

2. Developing a strategy for dealing with hydropower development in coordination with other state and federal agencies.

3. Promoting the wise development of water resources in state-owned projects and through loans and grants available from the state Water Development Bureau.

4. Quantifying the existing water rights in the state through the adjudication program established by Title 85, Chapter 2, Part 2, Montana Code Annotated.

5. Developing a strategy to quantify and protect future water needs in the Missouri River basin.

6. Reviewing water policy development, including the monitoring of proposed bills and responding to the activities of the federal government.

7. Increasing public involvement in water policy decision-making including holding public hearings when appropriate and developing a newsletter and film.

8. Monitoring floodplain development.

9. Developing water availability studies in areas characterized by water shortages.

10. Developing a groundwater policy.

11. Participating in regional planning studies with groups such as the Missouri Basin States Association.⁶⁴

The Water Management Bureau of the DNRC is preparing a report to the legislature outlining the state's planning activities in response to an audit that questioned why a state water plan, as mandated by the Water Resources Act of 1967, has never been adopted.

There are two views of how a water reservation can fit into the planning process. One is that a water reservation $i_{\mathcal{B}}$ a water plan. This would mean that the process of establishing a reservation (the applications prepared by the various government entities, the environment impact statement, the hearings and deliberations by the board) is a planning process.

There may be similar elements in the reservation process and a planning process, but there are drawbacks in declaring a water

reservation a water plan. Reservation applications are made by individual agencies attempting to protect the most water they can for their particular goals. Their applications provide information about the importance of their water needs and justifications for the amounts of water requested. No effort is made to coordinate the various interests represented. Some affected individuals and groups are not guaranteed representation in the reservation process. Although the Yellowstone reservation hearings were open to the public, public input did not appear to be a major factor in the reservation decision.⁶⁵

Because participation in the reservation process is limited to government agencies and their political subdivisions, industry and some individual water users (irrigators not part of an irrigation district, domestic water users not part of a municipality, etc.), were excluded from the process. Some groups that were eligible to participate did not. At the outset of the Yellowstone reservation process there was no forum provided for the interested groups to help identify the goals of the process. The reservation decision is made by a citizen board which is, perhaps, not the proper body to initiate a water plan. For all these reasons the reservation process does not ensure that the primary goal of water planning will be met: the optimal use of the state's water resource.

The second view of how a water reservation fits into the planning process is that a reservation can be used as a tool to implement a water plan. In this case an already completed water plan delineating the future water needs of a basin could be incorporated into a reservation. The board could use the plan as a guideline for

making its reservation decision. The reservation process could be a valuable tool to implement a state water plan since it allows the need for all the various water uses to be evaluated and designates the amounts of water to be reserved for these uses.

This cannot be achieved under the permit system which operates on a first-come, first-served basis. In order to use the reservation process to implement a state water plan, a plan must exist to be implemented. Since the state no longer is working toward developing a comprehensive state water plan, there is no plan to implement and establishing a water reservation cannot accomplish the goal of planning Montana's water use.

A comprehensive plan delineating specific projects and programs with an implementation schedule no longer appears feasible in view of changing social values, changes in technology, and the fragmented jurisdiction over water use among state and federal, public and private authorities. Instead, the *adaptive* approach focusing on solving immediate problems and allowing the planning process to remain flexible in response to changing conditions will be more effective in achieving water management goals. Using a reservation as a planning tool should, therefore, not be considered an important aspect of water reservation policy.

Protecting Future Consumptive Water Use From Downstream, Out-of-state Development

A possible goal of establishing a reservation, that has become more apparent in recent years, is to protect future consumptive water use in Montana from downstream, out-of-state development. There

recently has been discussion of the possibility of using reservations as part of Montana's strategy to preserve options for future water development in the face of downstream claims. The phrase "use it or lose it" has been used to describe this issue and the fear that if downstream states put the water to use before Montana does, Montana will be forced to limit its future water development so that prior downstream rights will be protected.

The conflict between Montana and downstream states in the Missouri River basin centers around the problem that increased future diversions in Montana and other upper basin states may lead to a reduction in navigation service and hydropower production in the lower basin states.⁶⁶ A major factor in this conflict is the 1944 Flood Control Act, also known as the Pick-Sloan Plan. This act combined the Pick plan, the Army Corps of Engineers' plan for the construction of six large reservoirs on the Missouri River for flood control and navigation improvement, with the Bureau of Reclamation's Sloan plan for increased water development for irrigation.

The crucial aspect of this plan for the Missouri River basin conflict lies in the O'Mahoney-Milliken Amendment. This amendment provides that streamflows for navigation will not conflict with any beneficial consumptive use in states west of the 98th Meridian.⁶⁷ The amendment protects farmers in the West from navigational servitude and ensures "the historic and traditional rights of the people of the West to use the waters rising in the West in a manner that has been recognized by law and by court decision for almost 100 years."⁶⁸

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Whether or not the amendment also gives the upper basin states permission to continue developing consumptive uses of water to the point that navigation is entirely precluded still is subject to interpretation. Noted water law expert, Frank Trelease, in his report on the legal aspects of interstate water allocation, concluded, however, that

The O'Mahoney-Milliken Amendment is more than a policy statement. It is a rule of substantive law. It shares with a Congressional allocation one cardinal feature: as long as it stands, no court will "substitute its own notions of equitable apportionment for the rule chosen by Congress." That rule is clear. Waters arising in the West are reserved for use in the West.⁶⁹

All of the Pick-Sloan reservoirs were completed by the mid-1960s, providing downstream states with flood control, a barge transportation industry, and hydroelectric power, while inundating large tracts of land in Montana, North Dakota, and South Dakota.⁷⁰ In return for giving up land to the reservoirs, the upper basin states were to receive federally funded development of irrigation and other consumptive uses. Few of the federal projects have been completed. Montana's share of the federal development was to include the irrigation of over one million acres of land. Only 76,200 acres have been put under irrigation as a result of the Pick-Sloan Plan.⁷¹

A recent catalyst in the conflict between the upper and lower basin states has been South Dakota's planned sale of Missouri River water to Energy Transportation Systems, Inc. (ETSI) for use in a coal slurry pipeline. The contract between South Dakota and ETSI includes several benefits for South Dakota. It prevents ETSI from obtaining water for its project by pumping from wells in the Madison aquifer in Wyoming, thereby threatening the groundwater supplies of farmers, ranchers, and rural communities in arid western South Dakota.⁷² For

allowing ETSI to use up to 50,000 acre-feet per year of Missouri River water impounded in the Oahe Reservoir, South Dakota will receive \$10 million before the pipeline begins operation and \$9 million per year, adjusted for inflation, during the 50-year life of the project.⁷³ Finally, the contract allows South Dakota to divert water from ETSI's pipeline for rural and municipal use in western South Dakota.⁷⁴

Two lawsuits have been filed in an attempt to halt South Dakota's water sale to ETSI. The Attorney Generals of Nebraska, Iowa, and Missouri have filed one suit, and the Sierra Club, the Nebraska, Iowa, and Rocky Mountain chapters of Farmers Union, and the Kansas City Southern Railway Company have filed the other. The suits against the Army Corps of Engineers, Bureau of Reclamation, and Department of the Interior officials charge that the federal government violated several laws when it approved contracts allowing South Dakota's water sale.⁷⁵ The states' suit contends that allowing the water sale and interbasin transfer without a complete analysis of long-term water availability threatens Nebraska's future water use from the Missouri River and will harm fish and wildlife resources. It further maintans that

1. The permit was approved without legal authority and contrary to the Federal Flood Control Act of 1944.

2. There was inadequate study of the environmental consequences of the withdrawal of the water from the Missouri River Basin.

3. The contract between South Dakota and ETSI says it is providing water for transportation purposes, a purpose not authorized by Congress in the Flood Control Act.

4. Use of Missouri River water for transportation purposes is the lowest priority use, since it is not listed in the Flood Control Act.

5. The water-sale contract would have to be approved by Congress because of the radical modifications it would make on current uses of Missouri River water. The suit says the sale would diminish hydroelectric power generation, increase the cost of electricity, and shorten the navigation season.

6. The Administrative Procedures Act was violated.⁷⁶

The suit by the private organizations contends the water sale would establish a precedent for future interbasin transfers of Missouri River water.⁷⁷

In response to the suits, South Dakota Governor William Janklow said that downstream states are using more Missouri River water than South Dakota, and they have saved millions of dollars in flood damage because of the dams built in South Dakota. He claimed that the water sale was the best way for South Dakota to get the money for water development promised in the Flood Control Act of 1944.⁷⁸ He further maintained that the 50,000 acre-feet involved is a tiny portion of the total amount of water in the river, equivalent to "one-tenth of the amount that evaporates" from the Oahe Reservoir in a year.⁷⁹

Janklow countered the argument that the water sale and interbasin transfer will set a precedent by pointing out that there already are several interbasin transfers in the basin, including one in Missouri involving 16,704 acre-feet of water. "The best defense they [Missouri] have come up with is 'it's not a lot of water,' We agree," Janklow said.⁸⁰ Thus a conflict between the upper and lower basin states has resulted due to the lower basin states' fear that development of consumptive water uses in the upper basin states will harm their existing instream water uses and prevent their future development of consumptive uses.

South Dakota and Nebraska officials have engaged in what has been called a war of words over the water sale.⁸¹ Harsh criticism has been exchanged by both sides leading to pressure from various sources, including Governor Janklow, the Missouri Basin States Association,

Department of the Interior official Garrey Caruthers, and Army Corps of Engineers official Mark Sisinyak, for a legal allocation of the water in the basin in order to resolve the conflicts.⁸² In response, Democratic Representative Robert A. Young of Missouri has introduced a bill in the House that would establish a Missouri River Interstate Commission to negotiate a compact for the basin,⁸³ and Iowa Democratic Representative Berkely Bedell introduced a bill that would prohibit any state from selling or transferring interstate water out of that state without the consent of all other states in the basin.⁸⁴ Due to this conflict between the upper and lower basin states, Montana may be forced to participate in the legal allocation of the water in the Missouri River basin. How likely it is that the U.S. Congress would require compact negotiations and the constitutionality of such a compulsion are unknown.

A question that remains to be answered is how real the physical threat of a water shortage is in the Missouri River basin. If depletions in the upper basin increase, at some point there no longer will be sufficient flows in the river to support navigation. According to a study conducted by the Montana DNRC, as upper basin depletions increase to about 1.6-1.7 million acre-feet per year over the 1975 level of 6.5 million acre-feet per year, navigation would be curtailed for at least one year and the navigation season would be shortened during a drought period similar to the nine-year drought of 1934-1942.⁸⁵

Since there would not be enough carry-over storage in the upper basin reservoirs to maintain navigation during a nine-year drought, an increase in depletions of 1.6-1.7 million acre-feet per year can be considered the threshold level of development beyond which there is a risk that navigation cannot be sustained. Without a drought, the study predicts that extensive navigation seasons can be provided past the year 2020. There is only a 2-3 percent chance of a drought as severe as the 1934-1942 drought. If, therefore, upper basin depletions exceed the threshold level, there is a 2-3 percent chance that navigation will be curtailed for at least one year by the year 2020.⁸⁶

Current flows in the Missouri River exceed those required by navigation and other instream uses. Furthermore, a great deal of water development for consumptive uses can occur in the upper basin before there is a risk of curtailing navigation in the lower basin. The fears of the lower basin states appear to be unfounded, or at best premature. One possible solution to this problem, rather than an allocation of all the water in the basin among the various states, is a drought management plan. Since navigation will be curtailed only if depletions proceed past the threshold level *and* a severe drought occurs, the upper and lower basin states could minimize their potential losses by preparing for the possibility of a severe drought.

There are several options for a drought management plan upon which the Missouri basin states might be able to agree. For example, some type of agreement might be reached that would provide that in the case that depletions pass the threshold level and a severe drought occurs, the upper basin states would forego the use of water for irrigation for one season in return for a monetary payment from the lower basin states which thus were able to continue enjoying the benefits of navigation. The upper and lower basin states would be

able to benefit from their respective water uses during years of normal water flows, and they would share the disadvantages accompanying a drought.

The actions of Representatives Young and Bedell indicate that Montana may be compelled to become a party to the allocation of all the water in the Missouri basin even if such pervasive action is not needed. Because of the fears of some state officials in the lower basin, a political solution to a hydrologic and economic problem that does not yet exist may be forced on the entire basin.

Besides exacerbating the conflict between upper and lower basin states, South Dakota's water sale to ETSI has caused Montana to reevaluate its policy on coal slurry and interstate water sales. Montana statutes currently ban the use of water for coal slurry pipelines by declaring it not a beneficial use of water, one of the criteria that must be met to obtain a water right.⁸⁷ Exporting water out of Montana is prohibited without legislative approval.⁸⁸

In view of the U.S. Supreme Court decisions in Sporhase v. Nebraska (102 S. Ct. 3456, 1982) and Altus v. Carr (255 F. Supp. 828, W.D. Tex., 1966; Aff'd per curiam, 385 U.S. 35, 1966), it seems likely that these statutes are unconstitutional as a burden on interstate commerce.⁸⁹ During the 1983 legislative session an attempt was made to eliminate the state's ban on using water in coal slurry pipelines and to establish a water marketing program. House Bill 893 failed despite strong support from Governor Ted Schwinden. In its place, House Bill 908 was passed which initiated a two-year study of the coal slurry ban and the water marketing issue.⁹⁰

Supporters of water marketing in Montana hoped to follow South Dakota's lead and finance future water development projects with water sale proceeds. A windfall to the state from water sales for coal slurry pipelines is improbable, however. A bill that would grant coal slurry pipelines the power of eminent domain was defeated recently in the U.S. Congress. At least one pipeline company, the Powder River Piepline Company, indicated it would not proceed with plans for a coal slurry pipeline if the bill did not pass.⁹¹

Resolution of the conflict between the upper and lower basin states by allocating the Missouri River among the states in the basin could be accomplished in one of three ways: by an interstate lawsuit decided by the U.S. Supreme Court, through Congressional apportionment, or by negotiation of an interstate compact (or drought management plan) among the states. The first of these would occur if a suit for the equitable apportionment of the Missouri River is brought before the U.S. Supreme Court by one state against another state. Previous equitable apportionment cases decided by the court were based on priority of use (Wyoming v. Colorado, 259, U.S. 419, 1922), an equitable apportionment of the benefits resulting from the flow of a river (Kansas v. Colorado, 206 U.S. 46, 1907), and the protection of an established economy (*Nebraska v. Wyoming*, 325 U.S. 589, 1945). Unlike previous equitable apportionment cases decided by the court, a suit to allocate the water of the Missouri River would be between upper basin consumptive uses and lower basin instream uses.

It is difficult to draw conclusions from the previous equitable apportionment cases that can be applied to the conflict in the Missouri

basin. There are, however, precedents and principles that would guide the U.S. Supreme Court's decision in a suit to allocate the Missouri River. If the lower basin states brought a suit requesting an equitable apportionment of the river, they would have to show a "substantial injury to present interests or a threatened invasion of serious magnitude to existing rights."⁹² Since this probably will not occur before at least 2020, such a suit to prevent future harm most likely would be dismissed as premature.

A suit brought by the lower basin states also might be dismissed if the U.S. Supreme Court agreed with precedents that imply that a state cannot claim a legal right to navigational benefits supplied by the United States. The U.S. Congress alone can decide whether or not to continue these benefits and, in the O'Mahoney-Milliken Amendment, it declared navigation to be subordinate to upper basin consumptive uses.⁹³

The United States, due to its interest in Corps of Engineers and Bureau of Reclamation projects on the Missouri River, would have to be a party in any lawsuit to allocate the river. The United States cannot, however, be made a party in any suit without its consent. If it wished to stop the suit, it could do so by refusing to become a party.⁹⁴

Congressional apportionment is the second way in which interstate water allocation can be achieved. This method was announced by the U.S. Supreme Court in Arizona v. California (373 U.S. 564, 1963), which is the only time it was used. In this case the Colorado River Compact allocated water between the upper and lower basin states but did not specify the amount of water each state would receive. Since the states could not agree, the U.S. Congress passed the Boulder Canyon Project Act which apportioned the water for the states.⁹⁵ The act was tailored to the particular situation in the Colorado River basin.

Since congressional apportionment was a unique method used in a unique set of circumstances, it is unlikely to be used in the Missouri basin. There is, however, some question regarding whether or not the O'Mahoney-Milliken Amendment can be considered an allocation by the U.S. Congress of the Missouri River. It does appear to at least allocate the water of the Missouri River between the uses of the upper and lower basins, if not among the basin states.⁹⁶ The U.S. Congress also could become involved in the conflict by ordering the basin states to begin compact negotiations, as Representative Young has proposed.

Interstate compact is the third method of allocation. Negotiations between the basin states could result in a compact with the terms including anything that can be agreed upon by all parties. Once the states have agreed on a compact, they must obtain the consent of the U.S. Congress and the compact becomes law. The compact would be superior to state law.

Compacts, unlike equitable apportionment suits, can allocate the unappropriated water remaining in the basin based on future needs.⁹⁷ One goal of a compact is to avoid future lawsuits. States may fare better by compromising on the issues than they would in a court decree. The states have more control over an allocation in compact negotiation than they would have in an equitable apportionment suit or congressional apportionment. If a compact allocating the water

between the upper and lower basins could be agreed upon, a second compact could be negotiated to allocate the water alloted to the upper basin among the upper basin states (as in the Colorado River basin).⁹⁸

Because congressional apportionment has been used so rarely and an equitable apportionment suit would be difficult for a lower basin state to win until it can show substantial injury, the method most likely to be used to resolve the conflict between the upper and lower basin states on the Missouri River is an interstate compact. How useful would a water reservation be for Montana in compact negotiations?

Each state taking part in compact negotiations would make a claim for the amount of water it needs based on present and future uses. Montana would find support for its claims in the O'Mahoney-Milliken Amendment which protects upper basin consumptive uses from lower basin use for navigation. Montana also can argue that it has not received the full amount of federal water development projects guaranteed by the Pick-Sloan Plan of the 1944 Flood Control Act in support of its claims for future needs. Also in Montana's favor is that approximately 50 percent of the flow of the Missouri River at Sioux City, Iowa originates in Montana.⁹⁹

Existing uses are Montana's strongest claim. The state must have a record of the amount of water it needs for existing uses. It is important for compact negotiations that the current adjudication of pre-July 1, 1973 water rights in Montana result in decrees that accurately depict the purposes and amounts of water used in the Missouri River basin. These decrees must be able to withstand a challenge from

the federal government and the other states in the basin in order to fully protect existing uses in compact negotiations.

Entering the negotiation process with accurate decrees plus the permit system that has been in effect since 1 July 1973 will give Montana a strong claim to the water it needs to satisfy existing rights. The more water that has been put to use prior to the beginning of negotiations, the more water the state will be able to claim for existing uses. Lower basin states may not be able to present such a strong claim for existing uses. In the states of Missouri and Iowa, water can be taken from the Missouri River without a permit and without reporting the water use to the state. Missouri officials have admitted that their lack of information about water use within the state puts them in a vulnerable position when condemning South Dakota's sale to ETSI.¹⁰⁰

Claims to future water needs are more difficult to support, and this is where the water reservation process may play a part. The statute authorizing the reservation of water in Montana¹⁰¹ allows water to be set aside for future consumptive needs as well as instream needs. A priority date is assigned and future permit applications may be denied if it is determined that they will interfere with the reservation. Within the state the reservation clearly is second in security only to an established, perfected water right. In interstate compact negotiations the reservation may not provide any more support for Montana's claim for future water needs than an inventory of potential uses.

The key to the value of the reservation is due diligence. If a reservation indicates valid water needs and diligent progress is being made toward implementing the use of the water for the purposes for which it was reserved, a reservation may be a stronger tool for negotiation than a potential project identified as part of an inventory. If, however, the reservation is used simply to stake a claim to more water, it will be no more valuable than an inventory and may even damage Montana's credibility in the negotiation process. If Montana does wish to use the reservation process in its negotiation strategy, it is imperative that the reservation already in effect in the Yellowstone basin be perfected on a reasonable timetable.

The security of a perfected reservation compared to that of a perfected permit has been questioned.¹⁰² One argument is that because a reservation can be reviewed and modified by the Board of Natural Resources and Conservation, it is open to legal attack. Although an unperfected consumptive reservation is obviously not as secure as a perfected permit, the status of a perfected reservation is not likely to become a major issue for several reasons.

In an intrastate conflict, a reservation and permit are equally secure. To meet the criteria for issuance of a permit, an applicant must show that

the water rights of a prior appropriator will not be affected [and that] 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.¹⁰³

The question of a reservation's security would arise, therefore, only in an interstate conflict.

Since negotiation is the method most likely to be used in resolving an interstate conflict, defending the status of a reservation would be the task of Montana's negotiators. It is unlikely that previous case law would weigh heavily in the negotiators' determination. Because a water shortage in the Missouri River basin is not predicted to occur for several decades, any compact negotiations that may take place within this time would focus on future rather than current water uses. Reserved water in use at the time negotiations take place would not be in jeopardy. Furthermore, there is nothing in the statutes that would prevent issuance of a permit with conditions allowing future review and modification, so the differences in legal status between a reservation and permit may not be as large as they might appear.

The most effective bargaining tool in compact negotiations is "to have a realistic appraisal of the state's future needs and plans for developing that needed water."¹⁰⁴ A water reservation may not be necessary to accomplish that goal. It may be accomplished by identifying Montana's water resources and potential uses in the Missouri basin, including obtaining the comments of interested agencies, water users, and the public, and assisting, through the Water Development Bureau and other resources, in the implementation of the projects identified. This would demonstrate the state's future water needs and its commitment to meeting those needs while avoiding the expensive and time consuming process (preparing an environmental impact statement, holding hearings, and the issuance of an order by the Board of Natural Resources and Conservation) that would be required to establish a reservation. This process would not give future water needs the legal

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

status within the state that a reservation would, but it probably would prove to be just as effective as a reservation in interstate compact negotiations.

In conclusion, there is no obvious answer to the question of whether or not establishing a reservation in the Missouri River basin would benefit Montana in possible future interstate compact negotiations. There is no clear evidence indicating that a reservation would prove to be much more valuable as a tool in negotiations than would an inventory of potential projects. Allocating all the water in the basin through the reservation process simply to strengthen Montana's negotiating position in an interstate conflict that has a 2 percent chance of occurring 40 years from now appears to be an overreaction to the problem.

CHAPTER 3 ENDNOTES

¹Montana Code Annotated, 85-2-102.

²Statistical Center, Montana State University, Montana Futures: A Survey of Citizen Choices (Helena, MT: Office of the Governor, Budget and Program Planning, 1977), p. 56.

³Approximately 855,000 acre-feet per year for the coal-fired power plants plus 2,600,000 acre-feet per year for the coal gasification plants and petrochemical complexes; Bureau of Reclamation, North Central Power Study, Vols. 1 and 2, Billings, MT, October 1971, pp. 44-45.

⁴Ted J. Doney, Frank Culver, Carole Massman, and Wayne Wetzel, "Yellowstone Water Reservations: Decision-making by a Citizen Board," in Utilizing Information in Environmental Quality Planning (Minneapolis, MN: American Water Resources Association, 1979), p. 104.

⁵Montana, Department of Natural Resources and Conservation, Yellowstone River Basin Final Environmental Impact Statement for Water Reservation Applications, 1977c.

⁶Montana, Department of Natural Resources and Conservation, Order of the Board of Natural Resources and Conservation Establishing Water Reservations, 1979.

⁷James L. Huffman, The Allocation of Water to Instream Flows: Montana Water Resources Management, Vol. IV (Washington, D.C.: Office of Water Research and Technology, 1980), pp. IV-128 and IV-177.

⁸*Ibid.*, p. IV-177.

⁹Missouri River Basin Commission, Upper Missouri River Basin Level B Study Report and Environmental Impact Statement, Omaha, NB: 1981, p. 19.

¹⁰The dam at Cabinet Gorge, located in Idaho, has no priority over present or future appropriations in Montana according to Montana Code Annotated, 85-1-122; see Diana Fitz, Water Availability in the Clark Fork of the Columbia River Basin (Helena, MT: Water Sciences Bureau, Department of Natural Resources and Conservation, 1981), p. 5.

¹¹*Ibid.*, p. 11.

64

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

¹²Montana, Department of Natural Resources and Conservation, "Comments, Supplementary Report, and Recommendations by Intervenor, the Montana Department of Natural Resources and Conservation," presented to the Federal Energy Regulatory Commission regarding Montana Power Company, Project No. 1869-000, p. 18. (Unpublished.)

¹³Ibid.

¹⁴Diana Fitz, Analysis of Water Availability on the Missouri River Above Canyon Ferry Reservoir (Helena, MT: Water Sciences Bureau, Department of Natural Resources and Conservation, 1981a), p. 1.

¹⁵*Ibid.*, p. 19.

¹⁶Montana, Department of Natural Resources and Conservation, "Final Order in the Matter of the Application for Beneficial Water Use Permit No. 12016-s41G by Don J. Brown," April 24, 1984, p. 2.

¹⁷Ibid. ¹⁸Ibid., p. 12. ¹⁹Montana Code Annotated, 85-2-311. ²⁰Ibid., 85-2-104.

²¹Coal Pipeline Act of 1983, H.R. 1010, January 27, 1983.

²²"Coal Slurry Vote Unlikely to Slow Inter-North's Line," Omaha World-Herald, September 29, 1983, p. 1.

²³"River Rolls Along; No Water for Cloal Slurry," Council Bluffs, Iowa, *The Nonpareil*, September 9, 1983, p. 4-A.

²⁴U.S., Department of the Interior, Bureau of Reclamation, Contract No. 14-06-600-204A, 1976.

²⁵Winters v. U.S., 207 U.S. 564, 577, 1908.

²⁶Cappaert v. U.S., 426 U.S. 128, 1976.

²⁷Albert W. Stone, *Montana Water Law for the 1980s* (Missoula, MT: University of Montana, 1981), p. 121.

²⁸Montana Code Annotated, 85-2-701 through 85-2-704.

²⁹Montana, Department of Natural Resources and Conservation, *Issues in Water Management* (Helena, MT: Water Resources Division, Department of Natural Resources and Conservation, 1981), p. 26.
³⁰George Gould, "Reserving Instream Flows Under the Appropriation Doctrine: Problems and Possibilities," Berton L. Lamb, ed., *Protecting Instream Flows Under Western Water Laws, Selected Papers* (Fort Collins, CO: Fish and Wildlife Service, U.S., Department of the Interior, 1977), p. 10.

³¹Montana Code Annotated, 85-2-316.

³²Listed on page 28.

³³Montana Code Annotated, Title 75, Chapter 20.

³⁴Montana Code Annotated, 85-2-402.

³⁵John F. Orsborn, Brian W. Mar, James W. Crosby III, and James Crutchfield, A Summary of Quantity, Quality, and Economic Methodology for Establishing Minimum Flows, Vol. I (Pullman, WA: State of Washington Water Reserach Center, 1973), p. 6.

³⁶Montana, Department of Natural Resources and Conservation, The Economics of Altered Streamflow in the Yellowstone River Basin, Montana, Yellowstone Impact Study, Technical Report No. 11 (Helena, MT: Department of Natural Resources and Conservation, 1977), pp. 15-16.

³⁷Jack Hirshleifer, James C. DeHaven, and Jerome W. Milliman, Water Supply Economics, Technology and Policy (Chicago, IL: University of Chicago Press, 1960), p. 38.

³⁸Montana, Department of Natural Resources and Conservation, Water Resources Assessment Project (Helena, MT: Department of Natural Resources and Conservation, 1981), p. 2.

³⁹Ronald J. Sutherland, Recreation and Preservation Valuation Estimates for Flathead River and Lake System (Helena, MT: Department of Fish, Wildlife and Parks, 1982), p. 56.

⁴⁰Thomas M. Power, "The Economic Valuation of the Montana Department of Fish and Game Instream Water Reservation on the Yellowstone River," testimony prepared for the Montana Board of Natural Resources and Conservation, July 20, 1977, p. 4.

⁴¹Dallin W. Jensen, "Administrative Strategies for Satisfying Instream Flow Needs," John F. Orsborn and Charlena H. Allman, eds., *Proceedings of the Symposium and Specialty Conference on Instream Flow Needs*, Vol. I (Bethsda, MD: American Fisheries Society, 1976), p. 300.

⁴²Revised Codes of Montana Annotated (1947), Cumulative Supplement (1977) 80-801.

⁴³Montana Code Annotated, 85-2-101 and Montana Constitution, Article IX, Section 3. ⁴⁴Montana Code Annotated, 85-2-316.

⁴⁵Ibid.

⁴⁶Ibid.

⁴⁷Montana, Department of Health and Environmental Sciences, "Application for Reservation of Water in the Yellowstone River Basin," Helena, MT, 1976.

⁴⁸Ibid.

⁴⁹Montana, Fish and Game Commission, "Application for Reservation of Water in the Yellowstone River Basin," Helena, MT, 1976, p. 253.

⁵⁰J. L. Thomas and Duane Klarich, "Montana's Experience in Reserving Yellowstone River Water for Instream Beneficial Use," Water Resources Bulletin, Vol. 17, No. 2 (April 1981), 259.

⁵¹Huffman, op. cit., p. IV-82.

⁵²Montana, Department of Natural Resources and Conservation, Order of the Board . . . , op.cit.

⁵³Thomas and Klarich, op. cit., p. 259.

⁵⁴Montana Code Annotated, 85-2-402 and 85-2-403.

⁵⁵National Wild and Scenic Rivers Act, PL 90-542, 1968.

⁵⁶Amendment to the Wild and Scenic Rivers Act, PL 94-486, Section 203 (3), 1976.

⁵⁷Dan Tarlock, "Recent Developments in the Recognition of Instream Uses in Western Water Law, *Utah Law Review*, Vol. 1975, p. 893.

⁵⁸Montana, Department of Natural Resources and Conservation, Water Resources . . ., "op. cit., p. 2.

⁵⁹Montana Code Annotated, 85-2-319.

⁶⁰Water Resources Act of 1967, Montana Code Annotated, 89-101-1.

⁶¹Water Resources Planning Act of 1965, PL 89-90, 1965.

⁶²Sue Higgins, interview, Water Management Bureau, June 1, 1984.

⁶³Leonard Shabman, "Emerging Concepts for the Conduct of State Water Resources Planning," Water Resources Bulletin, Vol. 20, No. 2 (April 1984), 203.

⁶⁴Higgins, loc. cit.

⁶⁵Huffman, op. cit., p. 126.

⁶⁶The division between the upper and lower basins on the Missouri River is considered to be Sioux City, Iowa because it is downstream from the six main dams on the river and is the beginning point for navigation; Wright Water Engineers, Inc. and Frank J. Trelease, A Water Protection Strategy for Montana (Helena, MT: Montana Department of Natural Resources and Conservation, 1982), p. III-27.

⁶⁷States involved are Colorado, Montana, Wyoming, South Dakota, North Dakota, Kansas, and Nebraska; *Flood Control Act of 1944*, PL 534, U.S. Senate Documents 191 and 247.

⁶⁸Congressional Record, 78th Congress, 2nd Session, p. 4215.

⁶⁹Wright Water Engineers, Inc. and Trelease, op. cit., p. V-77.

⁷⁰Warren R. Neufield, "South Dakota's Perspective on the Missouri River Basin Conflict," speech presented at the Missouri Basin Planning Conference, University of Missouri, Kansas City, MO, May 24, 1983.

⁷¹Leo Berry, "A Water Protection Strategy for Montana in the Missouri River Basin," speech presented at the Environmental Quality Council Surplus Water Marketing Meeting, Helena, MT, January 11, 1983.

⁷²Charles L. Neff, "Interstate Transfers of Water: South Dakota's Decision to Market Water for Coal Slurry Operations," *Tulsa Law Journal*, 18 (Spring 1983), 515.

⁷³"ETSI Says Progress Steady As Slurry Pipeline Takes Shape," Hot Springs, South Dakota, *Star*, June 29, 1982, p. 1.

⁷⁴"Janklow: S. Dakotans Will Come Out Winners," The Lincoln Star, August 13, 1982, p. 24.

⁷⁵"Two Officials Say Legal Document to Decide Missouri Water Dispute," Omaha World-Herald, August 19, 1982.

⁷⁶Fred Thomas and Steven Stingley, "Two Suits Seek to Cork Pipeline Water Deal," *Omaha World-Herald*, August 18, 1982, p. 1.

⁷⁷*Ibid.*, p. 3.

⁷⁸Steven Stingley, "Janklow Says Water Sale is Return on 1984 Promise," Omaha World-Herald, August 14, 1982a, p. 1.

⁷⁹"Janklow: S. Dakotans . . , "loc. cit.

⁸⁰Ibid.

⁶¹Steven Stingley, "Water Sale Stirs 'War of Words' by Governors," Omaha World-Herald, August 15, 1982b, p. 1.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

⁸²Nancy Hicks, "Governors Rapped for River Disputes," The Lincoln Star, August 12, 1982, p. 1.

> ⁸³H.R. 2516, 1983. ⁸⁴H.R. 1749, 1983.

⁸⁵Wright Water Engineers, Inc. and Trelease, op. cit., p. III-48.

⁸⁶*Ibid.*, p. III-50.

⁸⁷Montana Code Annotated, 85-2-104.

⁸⁸*Ibid.*, 85-1-121.

⁸⁹Environmental Quality Council Surplus Water Marketing Meeting, minutes, January 11, 1983.

⁹⁰Don Snow, "Montana Kills Slurry Water Use," *High Country* News, April 1, 1983, p. 3.

⁹¹Dick Willis, "Powder River Pipeline Set to Start Buying Rights-of-way," Rapid City Journal, September 7, 1983, p. 1.

⁹²Wright Water Engineers, Inc. and Trelease, op. cit., p. V-94.

93 Ibid.

⁹⁴*Ibid.*, p. V-95.

⁹⁵David Ladd, Protecting Montana's Water: Support for a State Water Plan (Helena, MT: Department of Natural Resources and Conservation, n.d.), pp. 21-23.

⁹⁶Wright Water Engineers, Inc. and Trelease, op. cit., p. V-60.

⁹⁷Ladd, op. cit., p. 10; see also Hinderlider v. La Plata River and Cherry Creek Ditch Company, 304, U.S. 92, 1938.

⁹⁸Wright Water Engineers, Inc. and Trelease, op. cit., p. III-12.

⁹⁹*Ibid.*, p. VII-18.

¹⁰⁰James Allen Flanery, "Missourians Keep Pumping Water," Omaha World-Herald, May 29, 1983, p. 1.

¹⁰¹Montana Code Annotated, 85-2-316.

¹⁰²O'Keefe, Mark D., Protecting Montana's Water for Future Use: Water Reservation History, Status and Alternatives. Unpublished MS thesis, University of Montana, 1984, pp. 61-64. ¹⁰³Montana Code Annotated, 85-2-311. ¹⁰⁴Ladd, *op. cit.*, p. 56.

Chapter 4

Analysis of Four Options for a Reservation Policy

There are four basic options for a water reservation policy. These include a system allowing no reservations, a system in which only instream uses can be granted a reservation, a system in which only consumptive uses can be granted a reservation, and a system in which any type of use can be granted a reservation.

The No Reservation Option

The first option, under which no reservations would be granted for any use, would require anyone who wished to appropriate water for any purpose to go through the permit process described in Title 85, Chapter 2, Part 3, Montana Code Annotated, in order to obtain a water right. This statute requires a diversion, impoundment, or withdrawal of water to perfect the water right, thus permits cannot be granted for instream purposes. Under the permit system the priority of the water right is based on the prior appropriation doctrine's concept of first in time, first in right. The user who first began to use water from a particular source has the first or senior water right and can take all the water he needs to satisfy his water right before any subsequent or junior right can take any when there is not enough water available for both uses.

The priority of a permit is the date the Application for Beneficial Water Use Permit is received by the DNRC. This means that

an appropriator whose priority date is relatively late on a highly appropriated stream may not have a very secure supply of water. For those uses which require a secure supply at all times, such as some industrial uses or those which require a secure supply at specific critical periods (irrigation, for example), this situation may not be acceptable. If the option of reserving water for future use (thereby protecting an earlier priority date and a more secure supply of water than may be possible at a later date under the permit system) is not available, the only remaining alternative for a water user in need of a secure supply is to purchase water rights through the sever-sell process. Municipalities also have the alternative of condemning water rights for which they must pay a fair price.¹

The time and expense required of a water user who appropriates water by permit are minimal. The filing fee that must accompany an Application for Beneficial Water Use Permit ranges from \$50-\$250 for consumptive water uses and \$50-\$200 for nonconsumptive water uses based on the volume of water requested.² If no objections to the application are received by the DNRC, a permit can be issued within four months. If objections are received, it may take longer to obtain a permit-especially if a hearing is required.

The department is constrained by statutory time limits for issuing or denying a permit:

The department shall grant, deny, or condition an application for a permit in whole or in part within 120 days after the last date of publication of the notice of application if no objections have been received and within 180 days if a hearing is held or objections have been received. However, in either case the time may be extended upon agreement of the applicant, or, in those cases where an environmental impact statement must be prepared or in other extraordinary cases, not more than 60 days upon order of the department.³

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

The application form requires information concerning the location of the point of diversion from the source and the place of use of the water, the amount of water to be used (flow rate and volume), the purpose of use, and period of use. A map showing the location of the project must accompany the application. This information should not be difficult for the applicant to obtain since an application can be submitted to the DNRC only a few months to approximately one year before the applicant proposes to begin work on the project. By that time the plans should be well developed. When a permit is issued, it specifies a date by which the project must be complete and the water put to use. If the appropriator fails to put the water to use within the allotted time, the DNRC may revoke the permit and the priority date will be forfeited.

The water user who chooses the alternative approach of purchasing water through the sever-sell process must first find a willing seller and negotiate a price. The sale then must be approved by the DNRC to ensure that moving the water right and changing the purpose for which it is used will not adversely affect the water rights of others:

Without obtaining prior approval from the department, an appropriator may not sever all or any part of an appropriation right from the land to which it is appurtenant, sell the appropriation right for other purposes or to other lands, or make the appropriation right appurtenant to other lands.⁴

The Instream Reservation Only Option

The second option, under which reservations would be granted for instream uses only, would require potential consumptive users to go

through the permit process (or the sever-sell process) to obtain a water right. Government entities could acquire a water right for instream uses by applying for a reservation. The priority of the reservation would be the time it is adopted by the Board of Natural Resources and Conservation, thus the reservation would have to yield to senior water rights and junior water rights would have to yield to it during water-short years.

A reservation for an instream use would be perfected immediately upon approval by the board. If substantial amounts of water reserved for instream uses, future consumptive water uses might be prevented from later obtaining a secure supply of water by permit. Since, under this option, a potential consumptive user could not compete with the instream uses for a water reservation, the only alternative would be to purchase water through the sever-sell process.

Government entities wishing to reserve water for instream uses would submit applications for reservations which would require detailed information concerning the purpose of the reservation, the need for the reservation, Extensive research might be necessary in order to provide the information required in the applications. An environmental impact statement most likely would be required, and public hearings would be held by the board. Potential consumptive water users could submit objections to the reservation applications on the basis of their future needs. In order to substantiate their objections the objectors might also find it necessary to spend a considerable amount of time and energy researching and documenting their need for specific amounts of water and the benefits that would be derived from their water use.

Based on the information compiled in the environmental impact statement and during the hearings, the board would make a decision whether or not to approve the reservation requests and in what amounts.

The Consumptive Reservation Only Option

The third option, in which only consumptive uses can be granted a reservation, would give potential consumptive water users the choice of going through the permit process to obtain a water right or, if they felt their ability to obtain a water right by permit in the future might be threatened, they could apply for a reservation. Under this option there would be no opportunity to obtain a water right for instream uses. The priority of the reservation would be the time it is adopted by the Board of Natural Resources and Conservation. The reservation would be subject to senior rights and junior rights would be subject to it.

A potential consumptive water user wishing to apply for a reservation would need to supply the board with information regarding the need for a reservation and why he would be unable to obtain water by permit, the purpose and amounts of water necessary, and that the reservation is in the public interest. Again, an environmental impact statement probably would be required and hearings would be held by the board. Although those individuals and agencies interested in protecting water for instream uses would be allowed to object to the reservation applications, the board might not seriously consider objections since there would be no avenue available for ensuring the protection of instream flows. The board's deliberation would consist of deciding whether or not the consumptive uses described in the reservation applications should take precedence over the consumptive uses that would take the water by obtaining permits if the reservation were not granted.

The Yellowstone Stampede Option

The fourth option, a system in which consumptive and instream uses can be granted a reservation, was implemented in the Yellowstone River basin. It is referred to herein as the Yellowstone Stampede option. Under this option instream uses can be granted a reservation and consumptive uses can obtain water through the permit or reservation process. The priority of a reservation is the time it is adopted by the Board of Natural Resources and Conservation so that, at least as this option was developed in the Yellowstone Reservation, the order in which the various uses are adopted by the board establishes a preference system.

Since each type of use granted a reservation has a different priority, all uses within a type of use have the same priority. An alternative to the preference system would be for the board to adopt a reservation for all uses at once, meaning they all would share the same priority date and, during water shortages, they all would have to share the water. The reservation is subject to senior water rights and junior water rights are subject to it.

The procedure under this option would follow the pattern established during the Yellowstone reservation process: each government entity wishing to obtain a reservation would submit an application, an environmental impact statement would be written, and hearings held. Each applicant, and any other interested party, could object to any other application. This proved to be an extremely time consuming process. The Yellowstone reservation process took over four years to complete from the time the moratorium was enacted. Although the instream reservations are perfected immediately upon approval by the board, the consumptive reservations are subject to a review by the board at least every 10 years to assess their progress in putting the water to the use for which it was reserved. The board can extend, revoke, or modify the reservations.⁵

Achieving the Goals of the Reservation Process

An essential element of an evaluation of these options is to examine how well each of them achieves the goals of the reservation process. The most important goal of establishing a reservation clearly is that of protecting instream flows from future consumptive water use. Allowing the board the opportunity to grant a reservation for instream uses is a valuable tool. This is the only way a minimum instream flow currently can be protected against future depletions. Water quality will be protected by establishing minimum flows because adequate streamflows dilute the concentration of pollutants. Providing for minimum streamflows also preserves fisheries and riparian habitat and provides recreational opportunities. John Krutilla, noted economist and director of the natural environments program at Resources for the Future, Inc., maintains that since natural environments are a resource that cannot be made more available by technological improvements, a fixed amount of this resource is available while demand for it is increasing.⁶

For all these reasons it is important to retain in the reservation policy the opportunity to protect instream flows. Since instream flows cannot be protected under the permit system of allocation, neither the No Reservation option nor the Consumptive Reservation Only option can achieve the goal of protecting instream flows. These two options can, therefore, be eliminated from further consideration.

The goal of protecting future consumptive water use from in-state threats can be achieved better by public interest criteria than by establishing a water reservation. The threat of less desirable water uses diverting and using water to the detriment of the future development of more desirable uses can be countered by denying or conditioning the intervening permits for the less desirable uses. Public interest criteria solve the immediate problem without the upheaval of the existing water allocation system that occurs when all the remaining unappropriated water in a basin is reserved for various uses. Adding public interest criteria to the existing criteria that must be met in allocating water by permit is the most effective way to achieve this goal. The water reservation system would therefore no longer be expected to achieve the goal of protecting future consumptive water use from in-state threats.

The goal of planning future water use in the state appears, at best, to be a possible incidental benefit of establishing a water reservation. The reservation process was not used as a conscious planning effort in the Yellowstone reservation. It would be possible in the future to use a water reservation as a tool for implementing a state water plan. At present, however, comprehensive water basin

planning no longer is being actively pursued in the state and no official state water plan exists; therefore, the reservation process cannot be useful as a tool to implement a plan.

A water reservation could be used as a tool to defend the water needs of Montana in compact negotiations with other states to meet the goal of protecting future consumptive water use from downstream out-of-state development. There is no conclusive evidence that a water reservation would benefit the state in potential negotiations or that allocating all the water in the basin for this purpose would be worth the cost. The Instream Reservation Only option would prevent reservations for consumptive purposes and consequently would be ineffective in achieving this goal. The Yellowstone Stampede option, by allowing consumptive reservations, would permit the use of a reservation in compact negotiations, but it remains unclear whether or not this use of a reservation would be effective in achieving the goal of protecting future consumptive uses from out-of-state threats.

Since the in-state threat to future water use can be handled more successfully by public interest criteria, the primary goal of establishing a water reservation is to protect instream flows. The Instream Reservation Only and Yellowstone Stampede options are capable of achieving this goal. Using a reservation for planning and/or negotiating a compact with downstream states should not be considered major goals of a reservation policy.

Avoiding the Problems Involved in the

Yellowstone Reservation

Another element of evaluating the reservation options must be to analyze the ability of the remaining two options to avoid the problems encountered in the Yellowstone Reservation process. The magnitude of the reservation procedure could be reduced by allowing only applications for instream purposes; fewer applicants would simplify the process.

Potential consumptive water users still could take part in the process by providing the board with information concerning their future water needs and objections to the reservation application. This might require nearly as much work by the potential consumptive water users as would preparing their own applications. The board's burden, however, would be reduced. Even though the board would have to consider the effect of establishing a reservation for instream flows on future consumptive needs, it would not be required to determine the specific amount of water needed for each future use. By allowing only instream reservation applications, the scope of the reservation might be reduced so that an entire river basin would not have to be reviewed at one time. This also would decrease the number of parties involved, reduce the volume of information the board must analyze, and focus concern on particular areas that are experiencing the most problems.

Since agricultural reservation applications would not be considered by the board, conservation districts would not be burdened with the task of proving their needs for reservations. Instead, they could protect their interests by objecting to any instream reservation

application for amounts of water they consider unreasonable and potentially damaging to their ability to obtain water for their future needs by permit. They would protect their interests by limiting instream reservations without experiencing all the problems involved in establishing their own reservations. The additional layer of bureaucracy required to perfect the agricultural reservation, to keep records of the amounts of reserved water put to use, to file change applications with the DNRC to allow reserved water to be used on lands not originally designated in the reservation, and to encourage use of the reserved water within the time expectations of the board no longer would be needed.

Reserving water for instream purposes only would also increase flexibility. This option would avoid allocating large amounts of water for the various consumptive uses, thereby reducing the chance of wrong predictions that could prevent intervening water needs from being met. Leaving a large amount of water unreserved would cause less disruption to the existing water allocation system and would allow future consumptive users to appropriate water at the time they need it. Future users still could be protected from individual projects that are unacceptable to the people of the state through the use of public interest criteria. Flexibility also can be increased by allowing the board to consider the effect of reservations on all potential future water users rather than, as in the Yellowstone process, on only those who submitted reservation applications. The Instream Reservation Only option also would eliminate the disadvantages of a preference system because no ranking of the uses would be necessary.

The Instream Reservation Only option avoids some of the problems encountered in the Yellowstone reservation process and reduces the time and expense of the process. It also may be possible to avoid some of these problems by using the Yellowstone Stampede option, but this option still would cause the massive disruption of the state's existing allocation process.

The remaining question to be answered in comparing the Instream Reservation Only and Yellowstone Stampede options is whether or not the advantage of using the reservation process as a tool in compact negotiations is worth the disadvantages connected with consumptive reservations. The uncertainty of the value of a reservation makes a definitive answer to this question impossible.

Reservations for instream flows may be useful in compact negotiations by showing that the state has made a commitment to leaving a specified amount of water instream that downstream states can rely upon. Any advantage a reservation may have over an inventory of future water needs probably would not be substantial enough to warrant such a drastic overhauling of the state's water allocation system. This assumption seems even more likely to be correct in view of the doubt that a physical water shortage in the Missouri basin will occur for many years.

The Instream Reservation Only option thus appears to be the most effective of the four options in achieving the goals of a reservation while avoiding the problems encountered in the Yellowstone Reservation process. This option may not, however, be politically acceptable. Agricultural interests are very influential in Montana, and may make it impossible for instream reservations to be approved if irrigation is excluded from the reservation process. Even though it would be to an irrigator's advantage to obtain a water right through the permit rather than the reservation process, irrigators may feel their ability to obtain water in the future will be threatened by large-scale reservations for instream flows.

This obstacle to an instream reservation only system points out two problems with the Instream Reservation Only option. First, due to the perception of the agricultural industry that an instream reservation is a threat to future irrigation, the board may wish to allow some future consumptive water uses to precede an instream reservation in priority. This is made difficult by the second problem with the Instream Only option--that an instream reservation is immediately perfected. Before reverting to the Yellowstone Stampede option as a solution to this problem, possible modifications of the Instream Reservation Only option must be considered.

Possible Modifications of the Instream Only

Reservation Option

There are at least four possible modifications of the Instream Reservation Only option that would allow the board to avoid the problem of an immediately perfected instream reservation and permit a future consumptive water use to supercede an instream reservation. One modification would be to allow the board to designate a block of water exempt from reservation. For example, the board may be aware of a particularly beneficial planned irrigation project that would be impeded by an instream reservation it wishes to approve. The board could declare a specified number of acre-feet of water exempt from the instream reservation. Then, at a later date when the irrigation project is ready to be developed, the water exempt from the instream reservation would be available for appropriation through the permit process. Although the irrigation permit would have a later priority date than the instream reservation, conditions guaranteeing the exempt water to future consumptive appropriation could be placed on the water use permit and the board order establishing the instream reservation. When the full amount of water declared exempt from reservation has been appropriated, any future consumptive water developments would be subject to the priority of the instream reservation.

A second modification that would achieve the same result would be to allow the board to postdate the priority date of the instream reservation. If the board established an instream reservation with the provision that it would go into effect two years hence, for example, the irrigation project planners would have two years to apply for a permit and obtain a priority date that precedes the priority date of the instream reservation. Postdating the priority of the instream reservation has an advantage over declaring a specific amount of water exempt from reservation because it would avoid tampering with the priority system. A disadvantage of postdating is that several other appropriators could obtain permits within the two-year period to the possible detriment of the instream reservation.

Both modifications would allow the board to ensure that particular proposed consumptive water uses would not be damaged by the instream reservation it established. If, however, the board did have a particular consumptive project in mind that it wished to provide with

a secure supply of water, neither of these modifications would prevent another appropriator from obtaining a permit before the preferred consumptive use.

A third modification of the Instream Reservation Only option involves expanding the power of the board to reallocate water already reserved. The board currently has the authority to reallocate reserved water from one reservant to another if it determines that "all or part of the reservation is not required for its purpose and that the need for the reallocation has been shown by the applicant to outweigh the need shown by the original reservant."⁷ This reallocation power could be expanded to enable a potential consumptive water user to petition the board to reallocate a portion of the water reserved for instream purposes to the petitioner's proposed use. The petitioner would have to provide evidence to the board showing that the need for the proposed consumptive use outweighs the need for the instream reservation. He also would need to prove to the board's satisfaction that he is unable to obtain water for his consumptive use through the permit process or the sever-sell process.

An advantage of this modification is that it places the burden of showing the importance of the consumptive water use on the user. Because of the strict criteria the petitioner must meet, the procedure would be used rarely and the board would not be continually harrassed with requests for reallocation. It provides, however, an opportunity for the board to allocate water to a consumptive use in those cases where evidence of the need for the use is overwhelming. Another advantage of this modification is that it is not restricted to a time

period as are postdating and exempting water from reservation modifications as well as the Yellowstone Stampede option, but it can be used at any time in the future if water needs should change.

A fourth possible modification of the Instream Reservation Only option is to leave it to the board's discretion whether or not to accept consumptive reservation applications for any particular basin. This would require a two-step reservation process. First, the board (or the department on behalf of the board) would study the water needs of a basin and decide what kinds of applications it would accept. The board then would define a limited application period, hold hearings, evaluate the applications, and issue its decision. In those basins where protecting instream flows is extremely important, the board might decide to accept only applications for instream reservations. In basins with a strong agricultural constituency and a great deal of irrigable acreage, the board might decide to accept consumptive and instream reservation applications.

In an area where towns are dependent upon streams for their water supply, the board might accept only municipal and instream reservation applications. This system would allow the board to tailor the reservation process to the unique needs of each basin. Besides mollifying agricultural interests, this system also would provide the opportunity to establish consumptive reservations in the future to help defend Montana's water needs in negotiations with other states if the downstream out-of-state threat to Montana's water becomes imminent and it appears that a reservation would be useful.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

The third and fourth modifications are preferable to the first two because they leave the final decision on who gets a reservation in the hands of the board. The first two modifications could not prevent any potential water user from obtaining an earlier priority than the reservation the board approves.

Although the Instream Reservation Only option achieves the important goals of the reservation process with the least disruption to Montana's existing water allocation system, it fails to accommodate the political interests of the agricultural community. A compromise between the Instream Reservation Only and the Yellowstone Stampede options can, therefore, best accomplish all the purposes of a reservation. A compromise between the two options limits the scope of the Yellowstone Stampede option by giving the board the authority to determine whether or not it is important to accept consumptive reservation applications in each particular basin, while allowing any potential consumptive user excluded from the reservation process to petition the board for already reserved water if the importance of the consumptive use becomes apparent at a later time. ¹Montana Code Annotated, 70-30-1.

²Fee Schedule for the Appropriation of Water in Montana (effective April 16, 1982).

³Montana Code Annotated, 85-2-310.

⁴Ibid., 85-2-402.

⁵*Ibid.*, 85-2-316.

⁶John V. Krutilla and Anthony C. Fisher, *The Economics of Natural Environments* (Washington, D.C.: Resources for the Future, 1975), pp. 13-14.

⁷Montana Code Annotated, 85-2-31 (10).

Chapter 5

CONCLUSION

Montana can make the best use of its water resource by continuing to grant water rights to consumptive users through its permit system, by protecting those water uses most important to the people of the state through public interest criteria, and by reserving water to protect important instream flow values. The reservation option best suited for this task is the Instream Reservation Only option, therefore water reservation policy should be modified so that applications for consumptive reservations no longer will be accepted by the board except under unusual circumstances where the board has determined there is a severe threat to a consumptive user's ability to obtain water for future needs that cannot be repressed by the public interest criteria, and there is overwhelming evidence of the importance of the consumptive use to the people of the state. This would be likely to occur only in areas where future municipal or irrigation developments prove exceptionally beneficial, or if future evidence shows that downstream states will be successful in forcing Montana into compact negotiations over the Missouri River basin through congressional action, and that a reservation would provide substantial benefits in defending Montana's future water needs.

The recommended policy package that best achieves all the goals of establishing a reservation includes the following:

Modified Instream Reservation Only. This policy would 1. emphasize that the primary goal of establishing a reservation is to protect instream flow values. State agencies and other government agencies responsible for protecting those public values would be encouraged to apply for a reservation when those values may be threatened. The board would decide for each basin under consideration whether or not consumptive reservation applications would be accepted. The board could solicit particular consumptive applications if there is overwhelming evidence of a need for the consumptive reservation. If, in the future, the need for an unforeseen consumptive water use becomes apparent, a government entity may petition the board for already reserved water. The applicant would need to prove to the board's satisfaction its need for the consumptive water use and its inability to obtain water by permit or through the sever-sell process, the importance of the use to the people of the state, and that the need for the consumptive use outweighs the need for the use for which the water already has been reserved.

2. Public Interest Criteria. Public interest criteria included in the criteria for issuance of a Beneficial Water use Permit by the DNRC would be used to deny or condition permits that pose a threat to the future development of water uses most important to the people of the state.

3. Sever-Sell. The sale of water rights would be encouraged by the DNRC in basins that become fully appropriated through the permit or reservation process to allow water to be transferred to new uses as water needs change.

4. Moratorium. In the event that any unforeseen threats to future water use in the state arise that cannot be handled by any of the above policies, a statutory moratorium on new appropriations by permit or reservation could be enacted by the legislature.

In order to implement these recommendations, the public interest criteria currently in the Water Use Act must be expanded and made permanent. The public interest criteria should include consideration of the effect of the loss of alternative water uses that would be caused by the proposed use for which a water use permit application has been submitted. New legislation is needed to expand the current public interest criteria and eliminate the termination date of the statute authorizing these criteria so that they can be used to prevent harm to the future water uses most important to the state.

The DNRC should publicize the existence of the sever-sell procedure and encourage potential water users in highly appropriated or closed basins to negotiate with water right holders for the purchase of water rights. This may require the DNRC to examine any obstacles in the sever-sell process and to develop a system to aid potential water right buyers in their search for a willing seller.

The reservation rules should be changed to place more emphasis on requiring applicants to prove their needs for a reservation. Applicants for consumptive uses must show they will not be able to obtain a water right by permit or sever-sell and that the public interest criteria will not protect their future needs from intervening permits for less desirable water uses. The rules should clearly instruct the board to approve consumptive water reservations only when the need for a consumptive reservation is overwhelming and that need cannot be satisfied by any other method. Statutory changes may be required to authorize the board to consider the types of reservation applications it will accept in each basin and to allow the board to close the reservation proceedings in a basin to consumptive reservation applications or to particular types of consumptive reservation applications. Further changes in the reservation statute are necessary to allow potential water users who have no reserved water to petition the board for already reserved water. This provision must include the strict criteria mentioned previously that must be met by the petitioner in order for the board to consider the request.

This policy package achieves the goals of the reservation process with the least disruption of the existing water allocation system while satisfying the objections of the agriculture industry to the Instream Reservation Only option. It gives the state an opportunity to evaluate the alternative uses of its water and to allocate water in a manner that ensures security and flexibility, and provides the state with a mechanism to make good decisions concerning its water resource.

LITERATURE CITED

- Altus v. Carr. 255 F. Supp. 828 (W. D. Tex. 1966) Aff'd per curiam, 385 U.S. 35 (1966).
- Amendment to the Wild and Scenic Rivers Act. PL 94-486, Section 203 (3), 1976.

Arizona v. California. 373, U.S. 564 (1963).

Berry, Leo. "A Water Protection Strategy for Montana in the Missouri River Basin." Speech presented at the Environmental Quality Council Surplus Water Marketing Meeting, Helena, MT, January 11, 1983.

Boulder Canyon Project Act. 45 Stat. 1057, 43 U.S.C. 617 (1970).

Bureau of Reclamation. North Central Power Study. Vols. 1 and 2. Billings, MT, 1971.

Cappaert v. U.S. 426 U.S. 128 (1976).

Ciriacy-Wantrup, S. V. "Concepts Used as Economic Criteria for a System of Water Rights." *Land Economics*. Vol. 32, No. 4 (November 1956), 295-312.

Coal Pipeline Act of 1983. H. R. 1010, January 27, 1983.

"Coal Slurry Vote Unlikely to Slow Inter-North's Line." Omaha World-Herald, September 29, 1983. P. 1.

Congressional Record. 68th Congress, 2nd Session, p. 4215.

- Doney, Ted J., Frank Culver, Carole Massman, and Wayne Wetzel. "Yellowstone Water Reservations: Decision-making by a Citizen Board," in Utilizing Scientific Information in Environmental Quality Planning. Minneapolis, MN: American Water Resources Association, 1979. Pp. 103-117.
- Environmental Quality Council Surplus Water Marketing Meeting. Minutes. January 11, 1983.
- "ETSI Says Progress Steady as Slurry Pipeline Takes Shape." Hot Springs, South Dakota, *Star*, June 29, 1982. P. 24.
- Fee Schedule for the Appropriation of Water in Montana. Effective April 16, 1982.

- Fitz, Diana. Analysis of Water Availability on the Missouri River Above Canyon Ferry Reservoir. Helena, MT: Water Sciences Bureau, Department of Natural Resources and Conservation, 1981a.
- Fitz, Diana. Water Availability in the Clark Fork of the Columbia River Basin. Helena, MT: Water Sciences Bureau, Department of Natural Resources and Conservation, 1981b.
- Flanery, James Allen. "Missourians Keep Pumping Water." Omaha World-Herald, May 29, 1983. P. 1.
- Flood Control Act of 1944. PL 534, U.S. Senate Documents 191 and 247.
- Gould, George. "Reserving Instream Flows Under the Appropriation Doctrine: Problems and Possibilities," Berton L. Lamb, ed., Protecting Instream Flows Under Western Water Laws, Selected Papers.
 Ft. Collins, CO: Fish and Wildlife Service, U.S. Department of the Interior, 1977. Pp. 3-21.
- H. R. 1749, 1983.
- H. R. 2516, 1983.
- Hicks, Nancy. "Governors Rapped for River Disputes." *The Lincoln Star*, August 12, 1982. P. 1.
- Higgins, Sue. Interview. Water Management Bureau, Helena, MT, June 1, 1984.
- Hinderlider v. La Plata River and Cherry Creek Ditch Company. 304 U.S. 92 (1938).
- Hirshleifer, Jack, James C. DeHaven, and Jerome W. Milliman. Water Supply Economics, Technology and Policy. Chicago, IL: University of Chicago Press, 1960.
- House Bill 893. Montana 48th Legislature, 1983.
- House Bill 908. Montana 48th Legislature, 1983.
- Huffman, James L. The Allocation of Water to Instream Flows: Montana Water Resources Management. Vol. IV. Washington, D.C.: Office of Water Research and Technology, 1980.
- "Janklow: S. Dakotans Will Come Out Winners." The Lincoln Star, August 13, 1982. P. 24.
- Jensen, Dallin W. "Administrative Strategies for Satisfying Instream Flow Needs," John F. Orsborn and Charlena H. Allman, eds., Proceedings of the Symposium and Specialty Conference on Instream Flow Needs. Vol. I. Bethesda, MD: American Fisheries Society, 1976.

Kansas v. Colorado. 206 U.S. 46 (1907).

- Krutilla, John V. and Anthony C. Fisher. *The Economics of Natural Environments*. Washington, D.C.: Resources for the Future, 1975.
- Ladd, David. Protecting Montana's Water: Support for a State Water Plan. Helena, MT: Department of Natural Resources and Conservation, n.d. (Unpublished.)
- Missouri River Basin Commision. Upper Missouri River Basin Level B Study Report and Environmental Impact Statement. Omaha, NB: 1981.
- Montana Administrative Code. Title 36, Chapter 16, Section 101.
- Montana Administrative Code. Title 36, Chapter 16, Sections 101-116, proposed revision, October 16, 1981.
- Montana Code Annotated. Title 2, Chapter 15, Section 124.
- Montana Code Annotated. Title 70, Chapter 30, Section 1.
- Montana Code Annotated. Title 75, Chapter 20.
- Montana Code Annotated. Title 85, Chapter 2, Sections 102, 104, 121, 122, 302, 307, 309-312, 315, 316, 319, 402, 403, 702-704.
- Montana Constitution. Article IX, Section 3.
- Montana, Department of Health and Environmental Sciences. "Application for Reservation of Water in the Yellowstone River Basin." Helena, MT, 1976.
- Montana, Department of Natural Resources and Conservation. Yellowstone River Basin Draft Environmental Impact Statement for Water Reservation Applications. 2 vols. 1976.
- Montana, Department of Natural Resources and Conservation. The Economics of Altered Streamflow in the Yellowstone River Basin, Montana. Yellowstone Impact Study, Technical Report No. 11. Helena, MT: Department of Natural Resources and Conservation, 1977a.
- Montana, Department of Natural Resources and Conservation. Yellowstone River Basin Draft Addendum Environmental Impact Statement for Water Reservation Applications. 1977b.
- Montana, Department of Natural Resources and Conservation. Yellowstone River Basin Final Environmental Impact Statement for Water Reservation Applications. 1977c.

- Montana, Department of Natural Resources and Conservation. Order of the Board of Natural Resources and Conservation Establishing Water Reservations. 1979.
- Montana, Department of Natural Resources and Conservation. *Issues in Water Management*. Helena, MT: Water Resources Division, Department of Natural Resources and Conservation, 1981.
- Montana, Department of Natural Resources and Conservation. Water Resources Assessment Project. Helena, MT: Department of Natural Resources and Conservation, 1981.
- Montana, Department of Natural Resources and Conservation. Testimony to the Agriculture Committee, Montana 48th Legislature, January 12, 1983.
- Montana, Department of Natural Resources and Conservation. "Comments, Supplementary Report, and Recommendations by Intervenor, the Montana Department of Natural Resources and Conservation." Presented to the Federal Energy Regulatory Commission regarding Montana Power Company, Project No. 1869-600, December 12, 1983. (Unpublished.)
- Montana, Department of Natural Resources and Conservation. "Final Order in the Matter of the Application for Beneficial Water Use Permit No. 12016-s41G by Don L. Brown." April 24, 1984.
- Montana, Fish and Game Commission. "Application for Reservation of Water in the Yellowstone River Basin." Helena, MT, 1976.
- National Wild and Scenic Rivers Act. PL 90-542, 1968.
- Nebraska v. Wyoming. 325 U.S. 589 (1945).
- Neff, Charles L. "Interstate Transfers of Water: South Dakota's Decision to Market Water for Coal Slurry Operations." *Tulsa Law Journal*, 18 (Spring 1983), 515-527.
- Neufield, Warren. "South Dakota's Perspective on the Missouri River Basin Conflict." Speech presented at the Missouri Basin Planning Conference, University of Missouri, Kansas City, MO, May 24, 1983.
- O'Keefe, Mark D. Protecting Montana's Water for Future Use: Water Reservation History, Status and Alternatives." Unpublished MS Thesis, University of Montana, 1984.
- Orsborn, John F., Brian W. Mar, James W. Crosby III, and James Crutchfield. A Summary of Quantity, Quality, and Economic Methodology for Establishing Minimum Flows. Vol. 1. Pullman, WA: State of Washington Water Research Center, 1973.

- Power, Thomas M. "The Economic Valuation of the Montana Department of Fish and Game Instream Water Reservation on the Yellowstone River." Testimony prepared for the Montana Board of Natural Resources and Conservation, July 20, 1977.
- Revised Codes of Montana Annotated (1947). Cumulative Supplement (1977) 89-801 and 89-101-1.
- "River Rolls Along; No Water for Coal Slurry." Council Bluffs, Iowa, The Nonpareil, September 9, 1983. P. 4A.
- Senate Bill 51. Montana 48th Legislature, 1983.
- Senate Bill 76. Montana 46th Legislature, 1979.
- Senate Bill 370. Montana 48th Legislature, 1983.
- Shabman, Leonard. "Emerging Concepts for the Conduct of State Water Resources Planning." Water Resources Bulletin. Vol. 20, No. 2 (April 1984), 203-209.
- Snow, Don. "Montana Kills Slurry Water Use." High Country News, April 1, 1983. P. 3.
- Sporhase v. Nebraska. 102 S. Ct. 3456 (1982).
- Statistical Center, Montana State University. Montana Futures: A Survey of Citizen Choices. Helena, MT: Office of the Governor, Budget and Program Planning, 1977.
- Stingley, Steven. "Janklow Says Water Sale is Return on 1944 Promise." Omaha World-Herald, August 14, 1982a. P. 1.
- Stingley, Steven. "Water Sale Stirs 'War of Words' by Governors." Omaha World-Herald, August 15, 1982b. P. 1.
- Stone, Albert W. Montana Water Law for the 1980s. Missoula, MT: University of Montana, 1981.
- Sutherland, Ronald J. Recreation and Preservation Valuation Estimates for Flathead River and Lake System. Helena, MT: Department of Fish, Wildlife and Parks, 1982.
- Tarlock, Dan. "Recent Developments in the Recognition of Instream Uses in Western Water Law." Utah Law Review, Vol. 1975, pp. 871-903.
- Thomas, Fred and Steven Stingley. "Two Suits Seek to Cork Pipeline Water Deal." Omaha World-Herald, August 18, 1982. P. 1.

- Thomas, J. L. and Duane Klarich. "Montana's Experience in Reserving Yellowstone River Water for Instream Beneficial Uses." *Water Resources Bulletin*, Vol. 17, No. 2 (April 1981), 255-261.
- Trelease, Frank J. "Policies for Water Law: Property Rights, Economic Forces, and Public Regulation." Natural Resources Journal, Vol. 5, No. 1 (May 1965), 1-48.
- "Two Officials Say Legal Document to Decide Missouri Water Dispute." Omaha World-Herald, August 19, 1982. P. 1.
- U.S., Department of the Interior, Bureau of Reclamation. Contract No. 14-06-600-2040A, 1976.
- Water Resources Act of 1967. Montana Code Annotated, 89-1001-1.

Water Resources Planning Act of 1965. PL 89-90, 1965.

Water Use Act of 1973. Montana 44th Legislature, 1973,

Willis, Dick. "Powder River Pipeline Set to Start Buying Rights-ofway." Rapid City Journal, September 7, 1983. P. 1.

Winters v. U.S. 207 U.S. 564, 577 (1908).

- Wright Water Engineers, Inc. and Frank J. Trelease. A Water Protection Strategy for Montana. Helena, MT: Department of Natural Resources and Conservation, 1982.
- Wyoming v. Colorado. 259 U.S. 519 (1922).