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WATER MARKETING IN WYOMING

Mark Squillace*

I. Introduction

Like most states west of the 100th meridian, Wyoming has from its earliest history followed the prior appropriation doctrine to allocate water rights. Wyoming was the first state to adopt a wholly administrative scheme for allocating water rights—a scheme that proved so successful it was emulated by other states.¹ Unlike many of its sister states, however, Wyoming has traditionally adhered to a conservative policy regarding water transfers. Fear that water rights applicants might engage in speculative acquisitions led to a 1909 statute that appeared to ban transfers entirely. Over time, Wyoming's water transfers law evolved to accommodate some changes in use, place of use and point of diversion. But a conservative philosophy continues to permeate water transfer decisions. This article attempts to explain the reasons for that philosophy and to offer suggestions for change. It begins with a brief review of Wyoming water law with an emphasis on those aspects of the law relating to water transfers.² It then considers the particular provi-

Nevertheless, over nine thousand irrigators are taking water from over six hundred streams with a certainty as to their rights and an absence of friction in the protection of these rights, which is in such striking contrast with the situation in surrounding States as to make the methods by which this result was accomplished of unusual interest.

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I wish to thank my graduate assistant, William Wilcox, who was instrumental in the preparation of this article.

^{1.} See F. Trelease & G. Gould, Cases and Materials on Water Law 172 (4th ed. 1986) ("Most states have adopted one of several variations on the Wyoming theme, designed to combine in some degree the efficiency of the administrative action with the sanctity of a court decree."). Elwood Mead, Wyoming's first State Engineer paid tribute to Wyoming's early success in the administration of water rights:

Recently two men were talking about the importance of irrigation in the different arid States. One said that Colorado and California were the leading States, and that in these States about every question had been litigated and settled, so that irrigators knew what they were doing. The other asked why he did not include Wyoming, and was told that irrigation had not made much progress in Wyoming, that an investigation had shown that only two water-right cases had ever been decided by the State supreme court. In the mind of the speaker, litigation went with irrigation, as fever with malaria, and a State with only two lawsuits was not worth notice.

E. MEAD, IRRIGATION INSTITUTIONS 247 (1903). See also Lasky, From Prior Appropriation to Economic Distribution of Water by the State—via Irrigation Administration, 1 ROCKY MTN. L. Rev. 161, 202 (1929).

^{2.} For a more comprehensive review of Wyoming water law see Squillace, A Critical Look at Wyoming Water Law, 24 LAND & WATER L. REV. 307 (1989). The introductory materials included here were adapted from that article.

sions relating to water transfers, and reviews their interpretation by the agencies and the courts. The article concludes with suggestions for changing Wyoming's water transfer laws to encourage more efficient use, while at the same time protecting environmental values and other water users. Many of these suggestions apply equally well to other prior appropriation states.

II. HISTORICAL REVIEW OF WYOMING WATER LAW

In 1869, Wyoming's first territorial legislature enacted laws regulating the initiation of water rights, the construction of ditches, and the incorporation of ditch companies. Although this legislation seemed to apply the prior appropriation doctrine, it did not expressly use that term.³ The Irrigation Act of 1886 erased any doubt that may have existed from this early legislation by expressly recognizing that prior appropriators of water held the better right.⁴ The Irrigation Act declared that unappropriated water belongs to the public,⁵ and provided for establishment of water districts, water commissioners and the regulation, registration and adjudication of irrigation rights.⁶

Wyoming gained statehood in 1890 and the new state's constitution recognized the central role that water would hold for the state's development. Article 8, § 1, declares that "[t]he water of all natural streams, springs, lakes or other collections of still water, within the boundaries of the state... [is] the property of the state." Under Article 8, § 3 "[p]riority of appropriation for beneficial uses... give[s] the better right", and no appropriation may be denied, "except when such denial is demanded by the public interests."

Shortly after Wyoming's admission to the Union in 1890, the first Wyoming legislature enacted comprehensive water rights legislation which, to this day, serves as the cornerstone of Wyoming water law.⁸ The principle architect of these measures was Elwood Mead.⁹ Mead became the territorial

shortly thereafter Secretary of the Interior Harold Ickes announced that the reservoir behind Boul-

^{3. 1869} Wyo. Sess. Laws, ch. 8, tit. 1, §§ 28, 29; ch. 22, §§ 15-18. The laws provided in relevant part that "the water of any stream [shall not] be directed from its original channel to the detriment of any miners, mill-men, or others along the line of said stream who may have a priority of right, and there shall be at all times left sufficient water in said stream for the use of miners and agriculturists who may have a prior right to such water along said stream." *Id.* at ch. 8, tit. 1 § 29.

^{4. 1886} Wyo. Sess. Laws, ch. 61, §§ 4, 9, 10, 13, 15-24.

Id. at § 14.
 Id. at §§ 1-30.

^{7.} WYO. CONST. art. 8, §§ 1, 3. Neither the constitution, the statutes, nor Wyoming case law, however, define the term "public interest."

8. 1890 Wyo. Sess. Laws, ch. 8.

^{9.} Elwood Mead came to Wyoming from Fort Collins, Colorado, where he served as both assistant state engineer and professor of irrigation engineering at Colorado State Agricultural College (Mead was reputedly the first person in the United States to hold the title of professor of irrigation engineering). One year after Mead assumed his duties as territorial engineer, the newly appointed governor of the Wyoming Territory, Frances Warren, called for a constitutional convention to draft a state constitution. Working behind the scenes with members of the convention, Mead drafted the progressive water provisions which to this day form the cornerstone of Wyoming water law. When Wyoming gained statehood in 1890, Mead set to work devising a comprehensive water code that was approved by the first Wyoming legislature. With Mead's oversight, Wyoming's new laws brought order to the chaos that had previously characterized the state's water allocation system. Mead remained in Wyoming as its state engineer until 1899 when he left for Washington, D.C. to work for the Department of Agriculture. After interim stops in Australia and California, Mead returned to Washington in 1924 as the Commissioner of Reclamation. Mead died in 1936, and

engineer when that office was created in 1888 and became the first State Engineer upon statehood.¹⁰ His success in Wyoming catapulted Mead into national prominence, and in 1924 he was appointed Commissioner of the Bureau of Reclamation.

III. Administration of Water Rights

A. Board of Control

The Wyoming Constitution establishes a Board of Control, which together with the State Engineer, administers water rights in the state.¹¹ The Board is composed of the State Engineer, who serves as its president, 12 and the superintendents of each of the four water divisions established for the four major drainage basins in the state. 13 All actions of the Board of Control wherein adverse parties appear are subject to the contested case process of the State Administrative Procedure Act. 14 Such actions include, for example, decisions approving or denying initial water rights applications¹⁵ or approving or denying any of the various water transfers that are subject to Board of Control approval. 16 Judicial review of the Board's decisions is available in the appropriate district court, and ultimately in the state supreme court.17

B. State Engineer

The Wyoming Constitution calls for a State Engineer, who is qualified by "theoretical knowledge" and "practical experience," to be appointed by the governor and confirmed by the state senate for a six-year term. 18 The

der Dam would be named Lake Mead in honor of a man whose remarkable vision had helped shape the development of the West. For further information about Mead, see, J. Kluger, Elwood Mead: Irrigation Engineer and Social Planner (1970 & reprint 1984) (unpublished dissertation available at the Universities of Arizona and Wyoming).

- Id. at Appendix vii.
 Wyo. Const. art. 8, §§ 2, 5; Wyo. Stat. § 41-4-201 (1977).
 Wyo. Const. art. 8, § 5.
 The water divisions are described by statute:

Water Division No. 1 — "all lands . . . drained by the North Platte River, and [its] tributaries ... the South Platte River, Snake River (a tributary of the Green River) and its tributaries, and Running Water Creek and its tributaries."

Water Division No. 2 — "all lands . . . drained by the tributaries of the Yellowstone and Missouri Rivers north of the water shed of the North Platte River and Running Water Creek, and east of the summit of the Big Horn Mountains."

Water Division No. 3 — "all lands . . . drained by the Big Horn River and its tributaries, and by Clark's Fork and its tributaries."

Water Division No. 4 — "all lands . . . drained by the Green, Bear and Snake Rivers and [their] tributaries," except that portion of the Snake River already placed in Water Division No. 1. Wyo. Stat. § 41-3-501 (1977).

- 14. Regulations and Instructions, Part IV, Board of Control, Ch. VI, § 1 (1982). See also Wyo. STAT. § 41-4-517 (Cum. Supp. 1988). 15. Wyo. STAT. §§ 41-4-502, 503 (1977 & Cum. Supp. 1988).

 - 16. Wyo. STAT. at §§ 41-3-104, 114 (a)(r)(i) (Cum. Supp. 1989).
 - 17. Id. at § 16-3-114; Wyo. R. App. P. 1.04.
- 18. WYO. CONST. art. 8, § 5. The Wyoming statutes further require that the state engineer be a professional engineer and have at least two years engineering practice and experience in the state. WYO. STAT. § 9-1-901 (1977)(amended 1987). Curiously, when the 1987 state legislature changed the requirements for the state engineer, eliminating the requirement that the state engineer be a land surveyor and reducing the experience necessary from five years, it did not reduce the qualifications

State Engineer is the chief water official in the state. The State Engineer's responsibilities derive both from state statutes and the state constitution. Among other things, the State Engineer is responsible for measuring streams, collecting information for construction of water projects, advising the state on water needs, and suggesting amendments to the state's water laws. The State Engineer must maintain complete records of his work, and he may appear on behalf of the state of Wyoming in any proceeding or hearing relating to water. The state of the state of Wyoming in any proceeding or hearing relating to water.

As will be noted in greater detail below, a few water rights decisions are made initially by the State Engineer rather than the Board of Control. Such decisions include actions on petitions to exchange water²¹ or to change the point of diversion of an unadjudicated water right, 22 and actions on petitions to amend or correct existing permits.²³ Somewhat surprisingly, the statutes make no provision for administrative appeals on decisions to exchange water. Thus, initial review appears to be available only in the state district court.²⁴ Administrative proceedings now exist, however, for appeals from decisions on changes in points of diversion of unadjudicated water rights, and for permit amendments. In both cases —— an appeal may be taken to the Board of Control.²⁵ For permit amendments, the Board is expressly required to conduct a contested case hearing26 in accordance with requirements of the Wyoming Administrative Procedure Act.²⁷ though such a process should probably be followed in either case.²⁸ Judicial review of the agency's decision following the contested case process is available in the appropriate district court.²⁹ and from there to the Wyoming Supreme Court.³⁰

C. Water Divisions

As noted above, Wyoming is divided into four water divisions corre-

for the deputy and first assistant state engineers. Both of these individuals must have more experience than the state engineer; the deputy is required to have five years experience and the first assistant is required to have three years experience. *Id.* at § 9-1-903 (1977).

- 19. Wyo. STAT. § 9-1-902 (1977).
- 20. Id. at § 9-1-902(a)(vii), (b).
- 21. Id. at § 41-3-106(c)(Cum. Supp. 1989).
- 22. Id. at § 41-3-114 (a)(ii).
- 23. Id. at § 41-4-514(a).
- 24. See WYO. R. APP. P. 12. The State Engineer might, in his discretion, offer interested parties the right to a contested case hearing and thus perhaps avoid such parties claims to a right to trial de novo. See id. at Rules 12.03, 12.08.
 - 25. WYO. STAT. §§ 41-3-114(g), 41-4-514(c)(Cum. Supp. 1989).
 - 26. Id. at § 41-4-514(c).
 - 27. Id. at § 16-3-107.
- 28. The Wyoming Administrative Procedure Act defines a "contested case" as "a proceeding . . . in which legal rights, duties or privileges of a party are required by law to be determined by an agency after an opportunity to a hearing." *Id.* at § 16-3-101(b)(ii). Since proceedings to change a point of diversion involve property rights, and since due process of law probably requires a hearing before any action can be taken to affect those rights, the contested case provisions would seem to apply. *Cf.* Wong Yang Sung v. McGrath, 339 U.S. 33, 50, 51 (1950), modified on other grounds, 339 U.S. 908 (1950).
- 29. WYO. R. APP. P. 12.03. Review of such actions should generally be based on the record made before the agency. *Id.* at 12.07. *But see id.* at 12.08. The agency's action must be upheld unless it is "unsupported by substantial evidence." WYO. STAT. § 16-3-114(c)(ii)(E) (1977).
 - 30. Wyo. R. App. P. 1.04, 12.11.

sponding roughly with the major drainage basins in the state.³¹ Each division is headed by a superintendent appointed by the governor who serves at the governor's pleasure.³² The governor may appoint a superintendent from among those qualified by "training and experience."³³ Such qualifications are determined by examination in the areas of irrigation laws and the administration, the measurement of flowing water, evaporation, seepage, drainage and the hydrographic features of the water division.³⁴ The superintendent regulates all water usage within his division.³⁵

D. Water Districts

For administrative convenience, the Board of Control may further divide water divisions into water districts.³⁶ The governor may appoint a commissioner for each district or he may appoint a commissioner to more than one district on the superintendent's recommendation.³⁷ The State Engineer must create separate groundwater districts within each division from the boundaries of underlying aquifers.³⁸ The State Engineer may divide these districts into subdistricts "when parts of an aquifer require or may require separate regulations from the rest."³⁹

E. Water Distribution Organizations

As with most other western states, Wyoming hosts a variety of public and private water distribution organizations. The most common organizations are mutual ditch companies, 40 irrigation districts, 41 and, to a much lesser extent, water conservancy districts. 42 Other water organizations authorized by law include flood control districts, irrigation and drainage districts, public irrigation and power districts, watershed improvement districts, and drainage districts. 43

F. Public Rights to Water

Wyoming water rights are subject to the right of the public to float on the surface of water bodies for recreational purposes. The seminal case in Wyoming is Day v. Armstrong.⁴⁴ In Day, the Wyoming Supreme Court held

^{31.} See supra, note 13, WYO. CONST. art. 8, § 4; WYO. STAT. § 41-3-501 (1977).

^{32.} Wyo. STAT. § 41-3-502 (Cum. Supp. 1989).

^{33.} *Id*.

^{34.} Id. The State Engineer administers the examination and makes recommendations to the Governor. The Governor then appoints superintendents from the State Engineer's list of recommendations.

^{35.} Id. at § 41-3-503 (1977).

^{36.} Id. at § 41-3-601.

^{37.} Id. at § 41-3-602 (Cum. Supp. 1989).

^{38.} Id. at § 41-3-910 (1977).

³⁹ Id

^{40.} Id. at §§ 41-5-101 to -105 (1977 & Cum. Supp. 1988).

^{41.} Id. at §§ 41-7-101 to -1006.

^{42.} Id. at §§ 41-3-701 to -779.

^{43.} Statutory references for these organizations are as follows: flood control districts (id. at §§ 41-3-801 to -803) irrigation and drainage districts (id. at §§ 41-6-101 to -507), public irrigation and power districts (id. at §§ 41-7-801 to -865), watershed improvement districts (id. at §§ 41-8-101 to -126) and drainage districts (id. at §§ 41-9-101 to -606).

^{44. 362} P.2d 137 (Wyo. 1961).

that the state constitution's provision for state ownership of all water in the state guaranteed the public's right to float on that water. This right included any incidental contact with the land necessary to move a craft around shoals or obstructions.⁴⁵ Unlike courts in other jurisdictions, the Wyoming court did not rely directly on the navigability of the water to support the public's right. Rather, the public's right is an incident of the state's ownership of the water and it is the utility of the water for flotation which alone limits the public's right.46

G. Instream Flows

In 1986, Wyoming passed legislation allowing the state to acquire rights to instream flows to establish or maintain fisheries.⁴⁷ Under this law, only the State of Wyoming may acquire and hold an instream flow right. Such rights are held by the Game and Fish Commission for the State.⁴⁸

DISTINCTIONS AMONG TYPES OF WATER RIGHTS

This discussion divides Wyoming water rights into four categories: (1) surface rights, (2) groundwater, (3) storage water, and (4) miscellaneous sources. The surface rights discussion includes both water from a water course and diffused surface water. The groundwater discussion encompasses

45. Id. at 145, 146. The court made clear, however, that wading or walking on a private stream bed for purposes other than floating a craft would be deemed an actionable trespass. Id. at 146.

47. Instream Flow Act of 1986, ch. 76, § 1 (codified at Wyo. STAT. §§ 41-3-1001 to -1014

(Cum. Supp. 1989)).

^{46.} Id. at 143, 145. All states recognize the public's right to use the surface of water of lakes or streams that are navigable under the federal test for ownership of title to the bed of the lake or stream. Under this test, water was deemed navigable if it was usable in its natural and ordinary condition for customary modes of trade and travel when the state was admitted to the Union. See Johnson & Austen, Recreational Rights and Titles to the Beds on Western Lakes and Streams, 7 NAT. RES. J. 1 (1967). Most states have gone further, however, and guaranteed the public's right to use the surface of waters that would not be considered navigable under the federal test. Many of these states have reached this result by adopting a state test for navigability that is considerably broader than the federal test. Thus, any water body that can float a saw log or a pleasure boat may satisfy the test. See, e.g., State v. McIlroy, 268 Ark. 227, 237, 595 S.W.2d 659, 664-65 (1980), cert. denied sub nom, Arkansas v. McIlroy, 449 U.S. 843 (1980); Kelley ex rel. MacMullan v. Hallden, 51 Mich. App. 176, 214 N.W.2d 856, 864 (1974). The analysis used by the Wyoming Supreme Court reaches essentially the same result, but relies on the fact of state ownership of the water, rather than navigability of the water body.

^{48.} WYO. STAT. § 41-3-1002(e). Although the Wyoming Water Development Commission actually files the water right application, such applications are made strictly on the recommendation of the Game and Fish Commission. Id. at § 41-3-1003(c). Further, only Game and Fish may petition for a change of use on an instream flow right. Id. at § 41-3-1007(a). In addition to the instream flow procedure, the State of Wyoming may acquire water rights by transfer or gift. Id. at § 41-3-1007; see also id. at § 23-1-302(a)(iii)(A). Astute conservationists should take particular note of the possibility for obtaining donations at the time of a water transfer. Suppose, for example, that a municipality purchases an irrigation water right and proposes to take the water into another drainage basin. As described in greater detail below, the amount of water available for transfer is limited to the historic consumptive use. Id. at § 41-3-104 (1977). Thus, if 50% of the water was returned to the stream as an instream flow, only 50% of the water right may be transferred to the municipality. Usually, the transaction ends at this point and the original irrigator no longer has a water right. The irrigator could just as easily comply with the Wyoming transfer statute if he decided to sell 50% of his water to the municipality (the consumptive share) and donate the remaining 50% to Game and Fish (the nonconsumptive share). The irrigator and the municipality lose no money in this transaction, no other users should be adversely affected, yet instream flow rights may be gained.

more traditional notions of that resource as well as by-product water,⁴⁹ and geothermal resources. Storage water is addressed separately because Wyoming law treats such rights differently from other water rights. The miscellaneous category includes imported water, foreign water, and water appropriated for use outside the state. While each of these categories are examined separately, much of the ensuing discussion will focus on surface rights because the law has developed more fully for surface rights than for other Wyoming water rights. Similarities between the surface water system and other water categories are noted without extended discussion.

A. Surface Water

1. Nature of an appropriative water right

Under the state Constitution, "the water of all natural streams, springs, lakes, or other collections of still water within the boundaries of the state are ... declared to be the property of the state." 50 Under Wyoming case law, this provision limits the state's power to grant water rights to those collections of water referenced in the Constitution. Thus, for example, diffused surface water which does not form a natural stream is not subject to appropriation under state law.⁵¹ By contrast, the Wyoming Supreme Court sustained an appropriation of water collecting in the ditch of a private land owner after seeping from an irrigation canal.⁵² The court made clear, however, that the appropriator had no right to demand that the seepage water be continuously made available to him. Thus, the irrigation company had the right to "abandon its canal, relocate it, or line it with an impervious substance so that seepage ceases."53 A water right gives the owner a right to use state water for beneficial purposes.⁵⁴ Further, water rights are appurtenant to the land, and cannot be transferred to other lands without the approval of the Board of Control.⁵⁵ Finally, "[p]riority of appropriation . . . shall give

^{49.} By-product water is defined by law to mean "water which has not been put to prior beneficial use, and which is a by-product of some nonwater-related economic activity and has been developed only as a result of such activity. By-product water includes, but is not limited to, water resulting from the operation of oil well separator systems or mining activities such as dewatering of mines." *Id.* at § 41-3-903.

^{50.} Wyo. Const. art. 8, § 1.

^{51.} State v. Hiber, 48 Wyo. 172, 44 P.2d 1005, 1008 (1935).

^{52.} Bower v. Big Horn Canal Ass'n, 77 Wyo. 80, 307 P.2d 593, 602 (1957).

^{53.} Id.

^{54. &}quot;Beneficial use shall be the basis, the measure and limit of the right to use water at all times. . . ." Wyo. Stat. § 41-3-101 (Cum. Supp. 1989). In addition to requiring that water be applied to a beneficial use, some courts have required that the water be diverted out of the stream. See, e.g., Fullerton v. State Water Resources Control, 90 Cal. App. 3d. 590, 159 Cal. Rptr. 518, 526 (1979); D. GETCHES, WATER LAW IN A NUTSHELL 96-97 (1984). The Wyoming Supreme Court has suggested that a "diversion" may be required for an appropriation, Moyer v. Preston, 6 Wyo. 308, 319, 44 P. 845, 847 (1896), but no Wyoming case has clearly ruled that an actual diversion is required. If a diversion is required, those employing overflow irrigation techniques will be especially affected. Instream flows for fisheries should not pose a problem in Wyoming because they are expressly allowed under the law. Wyo. Stat. §§ 41-3-1001 to -1014 (Cum. Supp. 1989).

^{55.} WYO. STAT. § 41-3-101, -104 (1977 & Cum. Supp. 1989). But see id. at § 41-3-323 (1977) regarding reservoir water rights which "shall not attach to any particular lands except by deed, or other sufficient instrument. . . ."

the better right."56

A water right is a real property interest, which may be sold and conveyed separately from the land to which it was first applied.⁵⁷ Nonetheless, because a direct flow irrigation water right is appurtenant to the land any conveyance of the land without a specific devise of the water right conveys the appurtenant water right.58

A Wyoming water right may protect water quality as well as quantity. In Sussex Land & Livestock Co. v. Midwest Refining Co. 59 a federal appeals court held that a Wyoming oil producer had no right to deteriorate the water quality in a stream as against senior appropriators downstream, even though the defendant was not negligent and used every known method and device to prevent the loss of oil, which was polluting the stream.

2. Perfecting a surface water right

In Wyoming, all new water users are required to obtain a permit. 60 Permit applications are made to the State Engineer on a prescribed form.⁶¹ The State Engineer dates and records receipt of all applications. Defective applications are returned to the applicant for correction.⁶² A corrected application must be returned to the State Engineer within the time specified, which will not be less than ninety days, to avoid losing priority.⁶³ If a corrected application is not timely received, it is the duty of the State Engineer to cancel the filing covered by the application.⁶⁴

A permit application may be denied for one of three reasons: (1) no unappropriated water is available to the applicant; (2) the proposed use conflicts with existing water rights; or (3) the proposed use threatens to prove detrimental to the public interest. 65 Once a permit application is granted, the applicant may proceed with the project.⁶⁶ If the application is rejected, the applicant may appeal the decision to the Board of Control. An unfavorable determination by the Board of Control may be appealed to the state

^{56.} WYO. CONST. art 8, § 3; WYO. STAT. § 41-3-101 (Cum. Supp. 1989). Priority is determined from the date of the application for the water right. Wyo. STAT. § 41-4-512 (1977).

^{57.} Johnston v. Little Horse Creek Irrigating Co., 13 Wyo. 208, 225, 79 P. 22, 24 (1904). 58. Frank v. Hicks, 4 Wyo. 502, 528, 35 P. 475, 483, reh'g denied, 4 Wyo. 534, 35 P. 1052 (1894); Johnson, 13 Wyo. at 208, 79 P at 24.

^{59. 294} F. 597, 603 (8th Cir. 1923). Compare with A-B Cattle Company v. United States, 196 Colo. 539, 589 P.2d 57 (1978), where the Colorado Supreme Court held that the holder of a water right does not have a right to receive water of the same quality including the silt content thereof, as has historically been received under the right.

^{60.} Wyo. STAT. § 41-4-501 (1977). The 1890 requirement that appropriators obtain a permit was sustained against a claim that it was inconsistent with the constitutional require:nent that "priority of appropriation . . . shall give the better right." Wyoming Hereford Ranch v. Hammond Packing Co., 33 Wyo. 14, 236 P. 764 (1925) ("The constitutional declaration that priority of appropriation for beneficial uses shall give the better right was not intended to prevent the Legislature from prescribing reasonable conditions that must be complied with before a lawful appropriation could be made."). Id. at 20, 236 P. at 770.
61. WYO. STAT. §§ 41-3-301, 41-4-501 (1977 & Cum. Supp. 1989); Regulations and Instruc-

tions, Part I, State Engineer's Office, Chapter III, § 2 (1974).

 ^{62.} WYO. STAT. § 41-4-502 (Cum. Supp. 1989).
 63. Requests may be made for a further extension, though extensions will not be granted for requests made after the expiration of the time period the applicant seeks to extend. Id.

^{65.} *Id.* at § 41-4-503 (1977). 66. *Id.* at § 41-4-504 (1977).

district courts.67

The permittee must commence and complete construction of any water works necessary to appropriate the water within the time specified by the permit. The total time may not exceed five years, unless extended for good cause shown.⁶⁸ Final proof of appropriation must be filed within five years after the water is put to beneficial use, again subject to extensions for good cause.⁶⁹ An applicant's failure to meet any of these deadlines may result in cancellation of the permit.⁷⁰

Upon completion of the project applying the water to a beneficial use, the permittee submits final proof of appropriation to the water division superintendent. The superintendent advertises receipt of such proof in a newspaper of general circulation and the proof is open for public inspection. Other appropriators from the streams involved may contest the proof in a hearing held for that purpose. The proof is then forwarded to the Board of Control. If the Board is satisfied that the appropriation has been perfected, it issues a certificate of appropriation, and the permittee receives an adjudicated water right.⁷¹ These rights are then added to the data base of adjudicated water rights that is maintained for each of the four water divisions.

3. Beneficial use

"Beneficial use [is] the basis, the measure and limit of the right to use water "72 The earliest Wyoming decisions established that no appropriation is complete until the water is put to a beneficial use. The further, whatever the amount of an adjudicated water right, the true measure of the right is the amount of water put to beneficial use. With such a great emphasis placed on the beneficial use standard, it may seem surprising that the term has not been defined by the Wyoming courts or legislature, or even by the State Engineer. Nonetheless, beneficial use is commonly understood to concern the social and economic value of the use, its efficiency, and whether or not the use is wasteful. Generally, the State Engineer does not question the beneficial use of water usage that complies with the terms of the statute. Thus, for example, irrigators are allotted one cubic foot per second (cfs) for each seventy acres of irrigable land, and state water officials will assume that an irrigator who diverts that much water for irrigation purposes is applying

^{67.} Id. at § 41-4-517 (Cum. Supp. 1989).

^{68.} Id. at § 41-4-506 (1977). Applications for a ditch permit must also contain a deadline for the application of the water to a beneficial use. Id.

^{69.} *Id*.

^{70.} Id. The statute provides: "Default by the holder of the permit in any of the specified requirements shall work a forfeiture of the water right involved. The state engineer may upon such default cancel the permit." (Emphasis added) Id. The statute is not clear as to the effect of the forfeiture where the state engineer fails to cancel the permit. Perhaps it can be revived prior to cancellation through late compliance, though this construction seems inconsistent with the plain meaning of the word "forfeit."

^{71.} Id. at § 41-4-511 (Cum. Supp. 1989).

^{72.} Id. at § 41-3-101 (Cum. Supp. 1989).

^{73.} Moyer v. Preston, 6 Wyo. 308, 44 P. 845 (1896).

^{74.} Basin Electric Power Coop. v. State Bd. of Control, 578 P.2d 557 (Wyo. 1978).

^{75.} See, e.g., Nicholas v. Hufford, 21 Wyo. 477, 489, 133 P. 1084, 1087 (1913), wherein the Wyoming Supreme Court noted "a gradual and persistent tendency to restrict the appropriation and use to an amount reasonably necessary when properly applied."

that water to a beneficial use.⁷⁶ This policy seems reasonable in light of the ability of competing water users to seek abandonment of water rights that are not being used beneficially.77

4. Stream adjudications

The Wyoming statutes establish a scheme for adjudicating all water rights on a given stream system.⁷⁸ All of Wyoming's streams were adjudicated under these laws between 1892 and 1922.79 The Wyoming stream adjudication procedure is unique in its provision for a wholly administrative process.⁸⁰ The division superintendents must gather evidence for submission to the Board of Control.⁸¹ The Board then adjudicates all rights on the stream. The Board's decision is subject to review in the state district courts.82 Wyoming has enacted a separate statute to provide for judicial adjudication of federal reserved rights in accordance with the McCarran Amendment.83

5. Preferred uses

Prior to the enactment of the 1973 water transfer law, condemnation rights for preferred uses afforded one of the principle mechanisms for circumventing the statutory "no change" policy that otherwise precluded water transfers.84 Under Wyoming law, preferred uses, which are described by statute, have a right of condemnation over non-preferred uses or uses with a lower preference than the use for which condemnation is sought.85 The statute sets the order of preference as — (1) drinking water for human and stock consumption; (2) water for municipal purposes; (3) water for the use of steam engines and for general railway use, water for culinary, laundry, bathing, refrigerating (including ice making), for steam and hot water heating

^{76.} WYO. STAT. § 41-4-317 (1977). The Wyoming surplus and excess water laws, described in greater detail below, allow most irrigators to appropriate an additional one cfs for each 70 acres of irrigated land. §§ 41-4-318 to -324, -329 to -331. The Wyoming Supreme Court has made clear, however, that the statutory right to use up to 2 cfs for each 70 acres of irrigable land does not necessarily support a claim that the water has been beneficially used. Budd v. Bishop, 543 P.2d 368, 373 (Wyo. 1975). But see Cremer v. State Board of Control, 675 P.2d 250 (Wyo. 1984). The Cremer case suggests that a surplus water right may not be abandoned without abandoning the water right on which it depends. Id. at 257. This holding appears to be dictum and does not seem consistent with the general notion that water rights are subject to partial abandonment in proceedings brought by private parties. See infra Part IV. A.7.a. One way around the Cremer dictum would be to file for partial abandonment of the underlying right which would result in partial loss of the surplus right as well.

^{77.} See infra, discussion of abandonment, notes 140-47 and accompanying text.

^{78.} WYO. STAT. §§ 41-4-301 to -331 (1977 & Cum. Supp. 1989).

^{79.} F. TRELEASE & G. GOULD, supra note 1, at 174. Individual adjudication of water rights, of course, continues to this day, and the state engineer's office constantly updates its records to reflect the new appropriations and changes in existing appropriations.

^{80.} Wyo. STAT. § 41-4-206, -301 (1977). 81. *Id.* at §§ 41-4-302 to -310. 82. Wyo. Const. art. 8, § 2. 83. Wyo. STAT. § 1-37-106 (1977).

^{84.} See Trelease & Lee, Priority and Progress - Case Studies of the Transfer of Water Rights, 1 LAND & WATER L. REV. 1, 18-19, 30 (1966).

^{85.} Wyo. STAT. § 41-3-102(a) (1977). Surprisingly, however, such condemnation actions are exceedingly rare. Indeed, no instance has been found where the condemnation right has ever been exercised. Interview with Frank Carr, State Engineer's Office.

plants, and steam power plants; and (4) water for industrial purposes. Despite their inclusion in the preference statute, steam generators and industrial facilities are expressly precluded from exercising eminent domain power.86

The Wyoming Constitution also authorizes municipalities to acquire water rights either as an appropriator or by eminent domain "from prior appropriators upon the payment of just compensation. [The municipality may condemn] such water as may be necessary for the well being thereof and for domestic uses."87 The person condemning such rights must, of course, obtain approval from the Board of Control for transferring those rights before they can be used.

6. Surplus and excess water

The Wyoming legislature enacted the excess and surplus water statutes in response to farmers' desires for additional water resources to compensate for the short growing season that exists in many parts of the state. They also represent, in part at least, a legislative policy to encourage greater consumption of Wyoming water within the state. This policy reflects the fact that much of the water allocated to Wyoming by interstate compact currently flows out of the state unused. Whatever the justification for these laws, two dates well-known to Wyoming farmers must be remembered — March 1, 1945 and March 1, 1985.

As noted previously, Wyoming law allows agricultural users to receive one cfs for each seventy acres of irrigated land.88 Under the surplus water law, such users whose original rights have a priority date before March 1, 1945 are entitled to an additional one cfs for each seventy acres.⁸⁹ If insufficient water is available in the stream for all appropriators to take the second full cfs, then the remaining water is divided in proportion to the acreage covered by the permits.90 Surplus water is thus shared pro rata with a common March 1, 1945 priority date.91

Similar to the surplus water statute is the excess water law.92 Water rights with a priority date after March 1, 1945 but before March 1, 1985 are entitled to an additional one cfs through a distribution analogous to the sur-

^{86.} Id. at § 41-3-102(c) (1977).

^{87.} Wyo. Const. art. 13, § 5. See also Wyo. STAT. § 1-26-503 to -513 (1977), which describes the general process for condemnation by municipalities.

^{88.} WYO. STAT. § 41-4-317 (1977).
89. WYO. STAT. §§ 41-4-318 to -324 (1977).
90. Thus, for example, if one pre-1945 irrigation appropriator owns 70 acres and another pre-1945 appropriator 210 acres, and one cfs of surplus water is available to be divided among these two appropriators, the first will receive .25 cfs and the second .75. It does not matter whether the first appropriator has an earlier appropriation date than the second appropriator.

^{91.} In Budd, 543 P.2d at 368, Dan Budd, a Wyoming rancher and state legislator, challenged the constitutionality of the surplus water law. Budd held a post-1945 water right and accordingly was denied any water until all pre-1945 water users had received 2 cfs for each 70 acres of land. The court refused to address the constitutional questions raised by Budd, holding instead that Budd lacked standing to raise the issue. Nonetheless, the court set out a detailed and informative description of the surplus water law.

^{92.} WYO. STAT. §§ 41-4-329 to -331 (Cum. Supp. 1989). The excess water statute was introduced by Dan Budd, a state legislator who, as described in the preceding footnote, was unsuccessful in his efforts to have the surplus water law declared unconstitutional.

plus water law, but with a March 1, 1985 priority date. 93 Post-March 1, 1985 appropriators may also share proportionately in any remaining water that is available, but they have no vested right to such water.⁹⁴ Thus, unlike surplus and excess water holders, post-March 1, 1985 appropriators may lose their additional water rights over 1 cfs per 70 acres if new appropriators appear on the stream.95

Groundwater B.

Groundwater rights in Wyoming are acquired in much the same manner as surface rights.⁹⁶ As with surface water, priority of appropriation gives the better right.⁹⁷ Wyoming law expressly defines groundwater to include "hot water and geothermal steam." It also encompasses by-product water which is water that is developed as a by-product of some nonwaterrelated economic activity.99 Any person desiring to use by-product water for beneficial purposes must file a groundwater application in accordance with the statutory requirements. 100

The nature of groundwater is such that the resource cannot be managed in exactly the same way as surface water. To address this problem Wyoming provides for the establishment of "control areas," which are designated by the Board of Control where: (1) the use of groundwater is approaching the recharge rate; (2) groundwater levels are declining or have declined excessively; (3) conflicts between users are occurring or are foreseeable; (4) waste

^{93.} Id.

^{94.} Id. at § 41-4-317 (1977).

^{95.} Since surplus and excess water rights are vested water rights they are subject to transfer by the owner. See discussion infra, Part IV. Nonetheless, the process for transferring these water rights is unclear. As a practical matter, when the State Engineer considers a transfer application he generally does not distinguish between the original right and the surplus or excess right. Rather, he merely looks at the historic, consumptive use and authorizes a transfer of that amount of water under the original priority date. Conversation with Jeff Fassett, Wyoming State Engineer, May 27, 1988. This generally should not pose any problems since the historic, consumptive use by the transferor should reflect the fact that a portion of his right has a later priority date. Nonetheless, an appropriator along the stream might legitimately argue that such transfers should be treated as involving two separate water rights with two different priority dates. The transferee would thus acquire a water right with the original priority date and an additional right with the surplus or excess water right priority date. See id. at §§ 41-4-320, -330 (1977 & Cum. Supp. 1988). One case of a transfer of a surplus water right was documented by Frank Trelease and Dellas Lee in their study of the water transfer issue in 1966. Trelease & Lee, supra note 83, at 46. No other evidence of such transfers has been documented, however, despite the fact that many later transfers have involved water rights to which surplus water rights had attached.

^{96.} Wyo. Stat. §§ 41-3-906, -935(c) (1977).

^{97.} Id. at § 41-3-915(a)(ii) (1977). Unlike surface rights, however, any complaint of interference with a groundwater right must be accompanied by a \$100 fee. Id. at § 41-3-911(b). Because applications were not required for ground water wells before 1958, however, the priority date is the date of well completion for pre-April 1, 1947 wells, the date of well registration, for wells completed between April 1, 1947 and March 1, 1958, and the application date, for post-March 1, 1958 wells. Id. at §§ 41-3-905, -930 (1977).

^{98.} *Id.* at § 41-3-901(a)(ii) (1977).
99. *Id.* at § 41-3-903 (1977). Oil field discharges of water are the classic example of by-product

^{100.} Id. at § 41-3-904. What is not clear is whether the person who develops the water as a byproduct of some other activity must also file an application. By definition, that water has not been put to a beneficial use. Id. at § 41-3-903. Thus, it would not seem to qualify for appropriation under Wyoming's laws. Nonetheless, the state engineer does require applications from companies developing by-product water, and claims to have been successful in obtaining compliance.

is occurring; or (5) other conditions require regulation to protect the public interest, 101

Once a control area is designated, persons owning land or groundwater rights within the area elect a Control Area Advisory Board to advise the State Engineer about groundwater problems in the control area. 102 The State Engineer may impose certain corrective controls if immediate regulation is required. Generally, however, the State Engineer will await the adjudication of all groundwater rights in the area, which must be carried out by the division superintendent. Following adjudication, the State Engineer may, on his own motion, or on the petition of a certain number of appropriators, impose corrective controls that may include: (1) closing the area to further appropriations; (2) requiring junior appropriators to cease or reduce withdrawals; (3) requiring a system of rotation for using groundwater in the area; (4) instituting well spacing requirements. 103

In addition to these requirements, the law allows small domestic and stock users (< 25 gallons/minute) to take groundwater from under their land without regard to priorities. 104 Where such domestic and stock uses interfere with existing uses, the existing user may, at his option and expense, furnish replacement water for such uses. 105

C. Storage Water

Wyoming distinguishes between primary and secondary rights to storage water. Primary rights are the rights of the reservoir owner to appropriate the direct flow of a stream into a storage reservoir. 106 For most purposes, primary rights are much like any other surface water right, except that they are not appurtenant to any particular lands, 107 and the water right is measured in acre-feet instead of cubic feet per second.

Secondary rights are acquired by persons who receive water from the primary reservoir owner. 108 The terms of this acquisition are a private matter between the reservoir owner and the secondary user, 109 even though the secondary user may apply for a surface water permit from the State Engineer. Once a reservoir owner has appropriated his water right in accordance

^{101.} Id. at § 41-3-912 (Cum. Supp. 1989).

^{102.} Id. at § 41-3-913.

^{103.} Id. at § 41-3-915(a) (1977).

^{104.} Id. at §§ 41-3-907, -930. These requirements apply irrespective of whether the land has been designated a control area. Further, the water cannot be used on more than one acre of land. 105. Id. at § 41-3-911(a) (Cum. Supp. 1989).

^{106.} The chief virtue of a reservoir is that it can be filled during times of the year when water is plentiful, usually the spring. In order to take full advantage of this virtue, the State Engineer may direct the reservoir owner when to fill his reservoir, and if the reservoir owner fails to take the water at that time, the amount he could have taken will be allocated to his annual share. Id. at § 41-3-603 (a). Regulations and Instructions, Board of Control, Part IV, Ch. 1, § 7.a (1982). Reservoirs in Wyoming are subject to the "one-filling" rule which means that the amount of water taken in any one year cannot exceed the capacity of the reservoir. Wheatland Irrigation Dist. v. Pioneer Canal Co., 464 P.2d 533, 540 (Wyo. 1970). Furthermore, "carryover storage," i.e. water left over from the previous year, is counted against the reservoir owner's appropriation for the succeeding year. Wyo. STAT. § 41-3-603(a). Regulations and Instructions, Board of Control, Part IV, Ch. 1, § 7.b. (1986). 107. *Id.* at § 41-3-323 (1977). 108. *Id.* at § 41-3-303 (1977).

with his priority, the prior appropriation scheme has been satisfied. Thus, secondary users may take their water according to the terms of their contract without regard to priorities.

Despite the provision allowing the secondary water users to apply for a permit, ¹¹⁰ the Board of Control does not require that they do so. Under the Board's policies, a secondary user who has not obtained a permit may transfer the use, place of use, or point of diversion of his water right without adhering to the Wyoming water transfer statutes, ¹¹¹ and subject only to his agreement with the primary right holder. By contrast, the secondary user with a permit must comply with the water transfer laws before changing the use, place of use or point of diversion of his water right. Moreover, because these laws are quite restrictive, ¹¹² the secondary right permittee may be denied the right to complete a transfer that could have lawfully taken place without the Board's knowledge or approval had the user not obtained a permit.

Persons holding secondary water rights generally apply for a permit only when they need proof of their water right. Such proof may be necessary or desirable, for example, where a person is using their property as collateral on a loan. Unfortunately, the person who obtains a permit is subject to all of the rules and limitations that apply to other permittees, including those that have no relevance to these secondary water rights. To avoid the inherent inequities in this system, the state should simply provide persons holding secondary water rights with evidence of ownership that does not involve issuance of a permit.

A reservoir owner with surplus water, that is, water beyond that necessary to satisfy obligations to existing users, must furnish such water at reasonable rates to the owners of land who desire to irrigate their land with water from that reservoir. Furthermore, any water user who used water from the reservoir in any particular year has a preference to use the same amount of water the following year. 115

D. Miscellaneous Sources

1. Imported water

The term "imported water" describes water that is imported from the basin of origin into another drainage basin. As with most other prior appropriation states, Wyoming treats this water right as if it were a 100% consumptive use. As a result, a person holding a right to imported water can

115. Wyo. Stat. § 41-3-325 (1977).

^{110.} Id. at § 41-3-302 (1977).

^{111.} Id. at §§ 41-3-104, -114 (1977 & Cum. Supp. 1989). See also, infra at Part IV.

^{112.} For example, a change of use or place of use cannot be approved if such change would increase the consumptive use or decrease the amount of return flow, even where no one would be harmed by such changes. Wyo. STAT. § 41-3-104 (1977). See infra Part IV.B.

^{113.} Property with a secure water right is much more valuable than property without water. 114. Wyo. Stat. § 41-3-325 (1977). The reader should be careful to distinguish between the use of the term "surplus" water in this section of the statute and the use of the term at § 41-4-318 which was described previously. See Lake De Smet Reservoir Co. v. Kaufman, 75 Wyo. 87, 292 P.2d 482 (1956) (definition of "surplus water" in Wyo. Stat. § 41-4-318 does not apply to water impounded by reservoir owner in excess of that used for irrigation and other beneficial purposes).

use and reuse that water without regard to others in that stream system who may have grown to depend on return flows. 116 Nonetheless, a person holding an imported water right does not necessarily have the right to transfer the entire water right to another use. As described in greater detail below. the Wyoming Supreme Court has held in a similar context that water transfers are limited to the amount of water historically and beneficially used by the transferor.117

2. Foreign water

Foreign water is defined by law as water that flows into the state of Wvoming from another state, but which has been determined to belong to that other state by compact or other decree. 118 Such water is not subject to appropriation under Wyoming law, although it may be acquired for use in Wyoming under the laws of another state. 119 However, a person desiring to divert such foreign water from a point on a stream within the state of Wyoming must obtain the approval of the Board of Control. The statute sets few standards for approving such appropriations, but does preclude foreign water rights in excess of one cfs for seventy acres of irrigated land. 120

3. Salvaged and recaptured water

The limits established by Wyoming law on the use of salvaged water¹²¹ relate directly to the provisions regarding change of use and place of use. Those provisions are described in greater detail below. 122 For purposes of this discussion, however, it is sufficient to note that changes in use or place of use cannot be approved unless the proponent of the change can demonstrate. among other things, no increase in consumption and no decrease in return flows. These facts must be shown even if no one will be injured by the proposed changes.

Wyoming's court decisions on recapture and reuse of water impose barriers to reuse beyond those imposed by the change of use statute. In Binning v. Miller, 123 the court affirmed the right of a water user to recapture and reuse water on the same lands for which it was appropriated, without regard to historic use patterns. But in Fuss v. Franks, 124 the court made clear that recapture efforts must occur on the land of the original appropriator, and that such water can only be used on the lands for which the water was originally appropriated. 125

^{116.} Thayer v. City of Rawlins, 594 P.2d 951, 955 (Wyo. 1979).117. See discussion of Basin Electric Power Coop. v. State Bd. of Control, 578 P.2d 557, 563 (Wyo. 1978), infra note 175 and accompanying text.

^{118.} WYO. STAT. § 41-3-201 (1977). 119. *Id.* at §§ 41-3-202, -205 (1977).

^{120.} Id. at § 41-3-213 (1977).121. The term "salvaged water" is used here to describe that part of a water right that was previously lost to the system, but that can now be made available for consumption as a result of human effort.

^{122.} See infra Part IV. B.

^{123. 55} Wyo. 451, 102 P.2d 54, 61 (1940).

^{124. 610} P.2d 17 (Wyo. 1980).

^{125.} Id. at 20-21.

4. Supplemental water rights

Supplemental water rights are defined by law as a water right "from a new source of supply for application to lands for which an appropriation of water from a primary source already exists." Such water rights are intended to augment an unreliable or insufficient primary supply source. Supplemental rights may not be used until the rights from the primary source have been exhausted. Moreover, water diverted for agricultural purposes may not exceed the statutory amount of water authorized for such purposes. 128

5. Appropriations for use outside the state

In Sporhase v. Nebraska, the United States Supreme Court held that water was an article of commerce that must be available to residents of the various states on essentially the same terms as it is available to the residents of the state of origin. A state statute that regulates even-handedly, however, to effectuate a legitimate local interest, will be sustained unless it imposes more than incidental burdens on commerce. 130

In 1983, Wyoming adopted legislation for using water outside the state which appears to have been aimed, at least in part, toward meeting the *Sporhase* standards.¹³¹ Under this provision, appropriations or transfers of water from Wyoming to another state are subject to prior legislative approval.¹³² The legislature's decision is made following the State Engineer's recommendation on an application for an out-of-state water right. Both the State Engineer and the legislature are required to consider ten criteria before acting. For the most part, these criteria concern the impact of the appropriation on the water resources and the economic well-being of the state of Wyoming.¹³³ Furthermore, the Board does not consider most of these fac-

^{126.} Wyo. Stat. § 41-3-113 (1977).

^{127.} Regulations and Instructions, Part IV, Board of Control, Ch. 1, § 10 (1986).

^{128.} Generally, the laws allow diversion of one cfs for each 70 acres of irrigable land, plus one additional cfs for lands that qualify under the surplus and excess water statutes. WYO. STAT. §§ 41-3-318 to -324, -329 to -331, and 41-4-317 (1977 & Cum. Supp. 1989). Unfortunately, the supplemental water rights statute was not amended in 1985 when the excess water law was passed. Thus, it can be argued that persons with post-1945 water rights are not eligible for supplemental water rights beyond one cfs for each 70 acres of irrigable land. See the discussion of surplus and excess water rights, supra notes 87-94 and accompanying text.

^{129. 458} U.S. 941, 954, 956-58 (1982). The holding in this case casts serious doubt on the vitality of Wyoming's assertion to "ownership" of the water flowing in the state. WYO. CONST. art. 8, 8 1.

^{130. 458} U.S. at 954 (citing, Pike v. Bruce Church, Inc., 397 U.S. 137 (1970)). The Court suggests that a balancing test must be employed to determine the legality of the statute. If a legitimate public purpose is found, the court should look at the nature of the local interest involved, and whether it could be promoted as well with a lesser impact on interstate activities. *Id.*

^{131. 1983} Wyo. Sess. Laws, ch. 167, § 1; Wyo. STAT. § 41-3-115 (1977 & Cum. Supp. 1988). 132. It is unclear whether the statute applies to appropriations of less than 1,000 acre feet. Wyo. STAT. § 41-3-115(b) concerns appropriations of water for mineral transport purposes but contains general language suggesting that legislative approval is not needed for appropriations under 1,000 acre feet. Subsection (c) of that statute, however, suggests that legislative approval is required for all uses of Wyoming water outside the state. The Wyoming Supreme Court has yet to resolve this apparent inconsistency.

^{133.} WYO. STAT. § 41-3-115 (o), (r) (Cum. Supp. 1989). The factors to be considered are: (1) the amount of water and proposed use; (2) the amount of water available from the proposed source; (3) the benefits to Wyoming from the proposed appropriation; (4) the benefits to Wyoming that will

tors when reviewing an in-state application.134

6. Indian reserved water rights

The Wyoming Supreme Court recently quantified Indian reserved water rights for the Arapahoe and Shoshone Indians of the Wind River Reservation in central Wyoming as part of the general adjudication of the Big Horn River under the McCarran Amendment.¹³⁵ The court awarded to the tribes reserved water rights with an 1868 priority date (the year the reservation was established) for agricultural and related purposes, including domestic purposes. The court, however, denied water rights claimed by the Tribes for fisheries, mineral and industrial purposes, and wildlife and aesthetic purposes.¹³⁶ Somewhat surprisingly, the court also held that the reserved water rights doctrine does not apply to groundwater.¹³⁷ Finally, over conflicting dissents, the court declined to decide whether the Tribes were authorized to transfer their reserved water rights off the reservation.¹³⁸

E. Loss of Water Rights

Most states define abandonment of water rights to require a specific intent to abandon. These states distinguish abandonment from forfeiture which occurs automatically following a period of non-use specified by statute. Wyoming, however, distinguishes abandonment from forfeiture based on who may bring the proceeding. Furthermore, neither abandon-

be foregone by the proposed appropriation; (5) the benefits from return flows that will be eliminated by the proposed use; (6) the injury to existing water rights from the proposed use; (7) whether the use is consistent with Wyoming's water development and water resources policies; (8) whether the use will significantly impair the state's ability to preserve and conserve water for reasonably foreseenable in-state uses; (9) whether proposed use will adversely affect the quantity or quality of water available for domestic or municipal use; and (10) whether the correlation between the proposed use and associated surface or groundwater supplies has been determined to avoid injury.

134. Compare with id. at § 41-4-503 (1977).

135. In Re The General Adjudication of All Rights to Use Water in the Big Horn River System, 753 P.2d 76, 88 (Wyo. 1988), aff'd by an equally divided court, Wyoming v. United States, 109 S.Ct. 2994 (1989) (certiorari granted on the narrow question of whether reserved water rights may be obtained for practicably irrigable acreage that cannot presently be irrigated because of a lack of a water delivery system).

136. Id. at 99.

137. Id. at 99-100. But see Cappaert v. United States, 426 U.S. 128, 143 (1976) (holding that "since the implied-reservation-of-water doctrine is based on the necessity of water for the purpose of the federal reservation, . . . the United States can protect its water from subsequent diversion, whether the diversion is of surface or ground water." (Emphasis added). Thus, the Wyoming court's holding on this issue seems suspect. The court cites no authority to support its holding, although it does discuss several cases that arguably address the relation between reserved rights and groundwater. The essence of the reserved rights doctrine is the notion that when Congress set aside reservations it implicitly reserved sufficient water to fulfill the purposes of that reservation. United States v. Winters, 207 U.S. 564 (1908). Thus, the source of the water does not seem relevant to the application of the doctrine. Compare, Meyers, Federal Groundwater Rights: A Note on Cappaert v. United States 13 Land and Water R. Rev. 377 (1978) with Abrams, Implied Reservation of Water Rights in the Aftermath of Cappaert, 7 Env. L. Rep. 50043 (1977).

138. The two dissents reached opposite results on this question. Justice Thomas would have found no right to transfer water off the reservation, 753 P.2d at 119; District Judge Hanscum, sitting by designation, would have found that the Tribes had the right to transfer their water off the reserva-

tion. Id. at 135.

139. D. GETCHES, supra note 53, at 179-82.

140. Actually, the State Engineer's office describes all such proceedings as abandonment proceedings. The statute, however, refers specifically to forfeiture proceedings only in the context of the

ment nor forfeiture requires a specific intent to abandon, and loss of the water right occurs only after appropriate proceedings are completed.

1. Abandonment

Under Wyoming law, if an appropriator fails, either intentionally or unintentionally, to use water for beneficial purposes for five consecutive years, the water right is deemed abandoned. 141 Although the statute is silent. Wyoming case law suggests that reuse after the five year period precludes an abandonment action. 142 No intent to abandon need be shown. The total absence of water to divert tolls the 5 year period of nonuse required for abandonment. Thus, the failure to use the water must be "voluntary" for abandonment to occur. 143 Abandonment proceedings are initiated by filing a written request for a declaration of abandonment with the Board of Control.¹⁴⁴ If the allegations appear to justify the claim, the Board must refer the matter to the superintendent of the appropriate water division. The superintendent must then notify the holders of all water rights for which abandonment is sought by certified mail. 145 A formal hearing must then be held in accordance with the contested case procedures of the Wyoming Administrative Procedure Act. 146 Following the hearing, the superintendent transmits his report to the Board which decides at its next meeting whether or not to declare a total or partial abandonment.147 Any water user who might benefit from a declaration of abandonment of existing water rights or who might be injured by the reactivation of the water right can bring an action for abandonment under this section. 148

2. Forfeiture

A separate section of the Wyoming statute authorizes the State Engineer to initiate forfeiture proceedings against an appropriator under language that roughly parallels the language of the abandonment statute.¹⁴⁹ Two significant differences between the two procedures must be noted.

141. Id. at § 41-3-401 (Cum. Supp. 1988).

143. Ramsey v. Gottsche, 69 P.2d 535, 540-41 (Wyo. 1937).

144. WYO. STAT. § 41-3-401(b) (Cum. Supp. 1989).

146. Id. at §§ 16-3-101 to -115 (Cum. Supp. 1989).

147. Id. at § 41-3-401(d), (e).

agency initiated proceedings. Compare, WYO. STAT. § 41-3-401 (Cum. Supp. 1989) with id. at § 41-3-402 (Cum. Supp. 1988).

^{142.} Laramie Rivers Co. v. Wheatland Irrigation Dist., 708 P.2d 20, 31 (Wyo. 1985). Undertaking repairs on a water delivery system preparatory to reuse will not, however, prevent abandonment. The water itself must be used. Wheatland Irrigation Dist. v. Laramie Rivers Co., 659 P.2d 561, 567 (Wyo. 1983).

^{145.} Id. at § 41-3-401(c) (Cum. Supp. 1989). If notice cannot be accomplished by mail, the statute provides for advertising in a local newspaper.

^{148.} Id. at § 41-3-401(b). În Cremer v. State Bd. of Control, 675 P.2d 250, 256 (Wyo. 1984), the Wyoming Supreme Court held that a person had standing to maintain an abandonment action only if he could show injury. The fact that he might be benefited by a declaration of abandonment was held insufficient to confer standing. The Wyoming legislature amended the abandonment statute in 1985 to overturn Cremer, thus making Wyoming law consistent with traditional notions of standing, at least in so far as abandonment is concerned.

^{149.} WYO. STAT. § 41-3-402 (1977). This discussion refers to abandonment as an action initiated by another water user; forfeiture proceedings refer to actions initiated by the state engineer. In fact, however, the Wyoming state engineer refers to both as abandonment proceedings.

First, the forfeiture section specifically provides that the State Engineer may not initiate forfeiture proceedings after the holder of the water right has resumed use of the water right. 150 No parallel provision appears in the abandonment section. Thus, this restriction arguably may not apply to private abandonment actions. Nonetheless, the common law in Wyoming before the enactment of this abandonment statute in 1973 expressly denied the right to initiate abandonment proceedings after reuse had begun, and the Wyoming Supreme Court has continued to adhere to this precedent without discussing the implications of the 1973 legislation. 151

A second distinction between abandonment and forfeiture is that the forfeiture section contains language that has been construed by the State Engineer to preclude actions for a partial forfeiture. 152 This interpretation severely limits the State Engineer's authority to reclaim unused water rights. In fact, the Wyoming statute contains contradictory language and it would seem reasonable for the State Engineer to construe the law in a manner that affords him sufficient discretion to declare portions of water rights as forfeited. 153

F. Rotation of Water Rights

Since 1909, Wyoming water users have been permitted to rotate water rights. 154 Wyoming allows several water users to pool their water rights such that a single water user can take more than his share of water rights on a given day, in accordance with a specified schedule, in exchange for relinquishing all or part of his water rights on another day in accord with the schedule. Rotation allows several water users who have insufficient supplies to water their crops more efficiently and effectively.

WYOMING'S WATER TRANSFERS LAW

A. Background

The original Wyoming water laws did not address water transfers, but as early as 1894, the Wyoming Supreme Court suggested that water rights were severable from the land, 155 a result which reflected the prevailing law in other western states. 156 In Johnston v. Little Horse Creek Irrigating Co., 157 decided in 1904, the court confirmed its earlier dictum, and expressly

^{150.} Id. at § 41-3-402(f).

^{151.} In Laramie Rivers Co., 708 P.2d at 31, the court held that a private person cannot maintain an abandonment action after reuse has commenced. No mention is made of the implications of the 1973 law. Instead, the court relies exclusively on two pre-1973 decisions to support this conclusion, Wheatland Irrigation Dist. v. Pioneer Canal Co., 464 P.2d 533 (Wyo. 1970), and Sturgeon v. Brooks. 281 P.2d 675 (Wyo. 1955).

^{152.} Wyo. STAT. § 41-3-402(j) (1977).

^{153.} Compare id. at § 41-3-402(a) ("When any appropriator has failed, intentionally or unintentionally, to use any portion of ... water appropriated to him ... for a period of five successive years, the state engineer may initiate forfeiture proceedings") with id. at § 41-3-402(j) ("Nothing in this section shall be construed to allow the state engineer to initiate forfeiture proceedings against water rights which are being put to beneficial use, wholly or in part.")(Emphasis added).

^{154.} Id. at § 41-3-612. 155. Frank v. Hicks, 4 Wyo. 502, 528, 35 P. 475, 484 (1894).

^{156.} See Trelease & Lee, supra note 83, at 7.

^{157. 13} Wyo. 208, 79 P. 22 (1904).

held that an appropriator could sell his water right separate from the land so long as the right was for water that was being beneficially used, and was not unneeded surplus water, and so long as other appropriators were not injured.¹⁵⁸

Even before *Johnston*, which sustained the decision of the district court, State Engineer Elwood Mead openly criticized the district court opinion. In his most famous work, *Irrigation Institutions*, Mead complained:

If [the right to transfer water] is [sustained], water rights . . . will become personal property. The water of the public streams will become a form of merchandise, and limitations to beneficial use a mere legal fiction. It will render futile and useless the requirement of the State statute that the lands to which the appropriation is attached must be described in certificates, because the right can be separated from this land without any legal formality as soon as the certificate is recorded. If water is to be so bartered and sold, then the public should not give streams away, but should auction them off to the highest bidder. 159

Mead acknowledged that transfers that are made "under a specific procedure" could "work much good." He noted further that they might "promote a more economical use of water." Ultimately, however, Mead remained persuaded that transfers encouraged water rights speculation. "[S]o far as this writer's observation has gone [economy] is not the moving purpose of these sales. In every instance investigated the real purpose has been to make money out of excess appropriations." 162

Mead's influence on Wyoming law was substantial and in 1909 he persuaded the state to enact legislation that prohibited the transfer of water rights or the change of use or place of use "without loss of priority." ¹⁶³ It was not until 1973 that Wyoming adopted language which expressly authorized transfers, but many exceptions to the 1909 "no change" law had been carved out well before that time. ¹⁶⁴

^{158.} Id. at 214, 79 P. at 24-25.

^{159.} E. MEAD, supra note 1, at 264. Notwithstanding Mead's criticism, water rights have, of course, become a form of merchandise that are bought and sold often for large amounts of money. Regarding the decision in Johnston, Trelease and Lee note that Mead's characterization of the facts is at odds with the statement of facts by the court. Mead suggested that the sale of water more than doubled the demand for water on the stream. The court states, however, that the total acreage of land irrigated by the water sold was less than that which was irrigated before the sale. See Trelease & Lee, supra note 83, at 10.

^{160.} E. MEAD, supra note 1, at 173-74.

^{161.} Id. at 174.

^{162.} Id. Mead made clear, however, that his objection to sales of water rights "does not apply to the law which recognizes exchanges of water between reservoirs and ditches. Here there is an undoubted gain, both to public and private interests. It is a recognition of natural needs and gives sanction of law to the most convenient and effective means of putting to the best use the ditches already built, and of storing the surplus water in the most convenient and economical manner. E. MEAD, supra note 1, at 175.

^{163. 1909} Wyo. Sess. Laws, ch. 68, § 1 (codified Wyo. STAT. § 41-3-101 (1977 & Cum. Supp. 1988)). In 1941 the legislature dropped the phrase "without loss of priority." 1941 Wyo. Sess. Laws, ch. 25 § 1. The significance of this change is not apparent. Despite the fact that Wyoming has now adopted explicit provisions authorizing water transfers, the general language from 1909 which seemingly prohibits transfers has never been repealed.

^{164.} These exceptions are described in great detail in a 1966 article by Professors Trelease and Lee, and to the extent of their continuing relevance they are described elsewhere in the body of this article. Trelease & Lee, supra note 83, at 11-21. See also infra notes 202-03 and accompanying text.

This article is concerned primarily with changes in the use of water. Nonetheless, other categories of transfers, some of which commonly occur in conjunction with a change of use, are also considered. Accordingly, the procedures for six categories of transfers are described below. These include: (1) changes in use or place of use; (2) exchanges; (3) changes in the point of diversion; (4) changes in location of wells; (5) temporary changes and (6) transfers of secondary reservoir rights.¹⁶⁵

B. Change in Use and Place of Use

Changes in use and place of use for water rights authorized under the 1973 legislation¹⁶⁶ are the most common type of water transfer in Wyoming. They are initiated by filing a petition with the Board of Control.¹⁶⁷ The petition must set forth information about the existing use and the proposed change in use, and the Board may hold one or more public hearings at the petitioner's expense.¹⁶⁸ The decision to grant or deny the petition is based on a statutory modification of the common law "no injury" rule.¹⁶⁹ The Board may not grant a petition unless the following requirements are met:

- (1) The quantity of water transferred does not exceed the amount of water historically diverted.¹⁷⁰
- (2) The proposed new use will not divert water at a higher rate than the historic rate of diversion.¹⁷¹
- (3) The proposed new use will not consume more water than was historically and beneficially consumed by the existing use. 172
- (4) The proposed new use will not decrease the historic amount of return flow, nor change the place of return flow so as to injure another water user, nor cause any other injury to a lawful appropriator.¹⁷³

^{165.} State law does not expressly require approval for changes in the point of discharge. In Thayer v. City of Rawlins, 594 P.2d 951 (Wyo. 1979), the plaintiff claimed that the City was obliged to obtain approval for a change of the point of discharge under the general change of use statute. The court declined to reach the issue, holding instead that because the water involved was imported water, the City had an unrestricted right to dispose of those waters as it saw fit. *Id.* at 955-56.

^{166.} Wyo. Stat. § 41-3-104 (1977).

^{167.} Id. at § 41-3-104(a). A sample petition appears in the Board of Control's regulations. Regulations and Instructions, Part IV, Board of Control, Ch. VI, § 15 (1986).

^{168.} Regulations and Instructions, Part IV, Board of Control, Ch. VI, § 15 (1982). The Board's regulations set out detailed requirements for such petitions. Among other things, such petitions must include a map certified by a professional engineer or land surveyor licensed to practice in Wyoming. The rules also contain examples of petitions which are helpful in complying with the law. Regulations and Instructions, Part IV, Board of Control, Ch. V (1986).

^{169.} See D. GETCHES, supra, note 53, at 165-67.

^{170.} WYO. STAT. § 41-3-104(a) (1977). Thus, for example, the fact that an appropriator has the right to divert 10 acre feet per year does not guarantee the right to transfer that amount unless, historically, that full amount was diverted.

^{171.} Id. If, for example, the existing water right authorizes diversions at the rate of two cfs, but only one cfs was historically diverted, the new use is limited to that historic rate.

^{172.} Id. See also Basin Electric Power Cooperative v. State Bd. of Control, 578 P.2d 557 (Wyo. 1978).

^{173.} The Board of Control's regulations require that a petition include a comparison, in the form of a study on return flows, of the proposed use with the historic use of the water right. Regulations and Instructions, Part IV, Board of Control, Ch.V, § 15(c), Item 6 (1986). The Board's stated policy is to "disfavor" petitions for change of use where at least five years of historic use cannot be documented. Id. at Ch. V, § 15(f).

In addition to the above requirements, the Board may consider other factors unrelated to other water users including:

- (1) The economic loss to the community and the state if the use from which the water right is transferred is discontinued;
- (2) The extent to which the economic loss will be offset by the new use; and
- (3) Whether other sources are available for the new use. 174

Arguably, the Board of Control may also deny a transfer under its general constitutional authority to deny original applications on public interest grounds.¹⁷⁵

One of the more interesting limits on transfers relates to the historic and beneficial consumptive use. The statute itself limits transfers only to that water which has been historically consumed but in Basin Electric Power Cooperative v. State Board of Control, the Wyoming Supreme Court held that this water must be consumed beneficially as well. 176 In Basin Electric, the transferor was using water for agricultural purposes. The transferee, Basin Electric, proposed to use the water for power production in another watershed. Under the 1973 transfer statute, the amount of water available for transfer was limited to the amount of water consumed by the transferor in his agricultural use. The dispute in this case centered on the amount consumed. A portion of the water used by the transferor was returned to the stream as irrigation return flows. No one disputed that these return flows could not be transferred. Because of the configuration of the land, however, another portion of the irrigation run off was captured in a closed basin where it eventually evaporated. Because this water was essentially lost to the water system under the existing use, Basin Electric argued that this water was "consumed" and should be available for transfer. The court disagreed, holding that the legislature intended to limit water transfers to the amount of water "beneficially" consumed.

Although the peculiar facts in *Basin* might suggest a rather narrow holding, in fact the decision has broad implications. For example, imported water, i.e., water that is taken from one basin and put into another, is considered a 100% consumptive use of water. Thus, in some western states, imported water may be transferred without regard to the amount of water consumed.¹⁷⁷ In Wyoming, however, the transfer of such water rights would appear to be strictly limited by the beneficial consumptive use of the water, even though no one would suffer a legal harm if the entire water right was transferred.

The right to permanently change the use of water under the 1973 statute is limited to those with an adjudicated water right. In *Green River Development Co. v. FMC Corp.*, ¹⁷⁸ the Wyoming Supreme Court distinguished a "water permit" which gives the permittee a right to apply water to a benefi-

^{174.} Wyo. STAT. § 41-3-104(a) (1977).

^{175.} Wyo. Const. art. 8, § 3.

^{176. 578} P.2d 557 (Wyo. 1978).

^{177.} See, e.g., Twin Lakes Reservoir & Canal Co. v. Aspen, 193 Colo. 485, 568 P.2d 45, 50 (1977).

^{178. 660} P.2d 339 (Wyo. 1983).

cial use for a particular purpose, from a "water right", which attaches to water applied to a beneficial use, and for which a certificate of appropriation has been issued. The statutory provisions for change in use and place of use were held applicable only to "water rights". Furthermore, the court expressly held that the statutory provision authorizing the State Engineer "to amend any water permit . . . prior to adjudication . . . for the purpose of correcting errors or otherwise, when in his judgment such amendment seems desirable or necessary", 179 did not authorize the State Engineer to approve a change in use or place of use of a water permit. 180 Following the decision in Green River, the Wyoming legislature amended the law to authorize limited changes of the place of use for a water permit. 181 Changes in use of unadjudicated water permits, however, are still precluded. 182

C. Exchanges

Since 1947, Wyoming law has encouraged interested parties to exchange water resources to better conserve and use the state's water. 183 Unlike other forms of permanent changes which must be approved by the Board of Control, exchanges need approval only from the State Engineer. 184 The statute authorizes exchanges for "any combination of direct flow, storage, and groundwater rights." They are, of course, subject to the general "no injury" rule, and to the requirements of "beneficial use and equality of water exchanged."186 In determining the equality of the exchange, the State Engineer may consider relative consumptive uses and transmission losses. The statute, however, fails to address how the State Engineer should consider any disparity between the priority dates of the rights that are involved. This disparity may very well affect the value of the water right and the availability of the water during given times of the year.

D. Change in the Point of Diversion

Any person desiring to change the point of diversion of their water right must file a petition with either the Board of Control or the State Engineer. depending on whether the right has been adjudicated. 187 If the right has not been adjudicated a change in the point of diversion may only be approved if it is in the vicinity of the original diversion, the water is being diverted from the same source of supply, and the change does not alter the original project

^{179.} WYO. STAT. § 41-4-514(a) (Cum. Supp. 1989) (Emphasis added).

^{180.} Green River, 660 P.2d at 349, 351-55. Compare with Trelease & Lee, supra note 83, at 13-15. In that article, the authors suggest that a broader construction of an earlier version of the statute was reasonable.

^{181. 1947} Wyo. Sess. Laws, ch. 116, § 1-4; WYO. STAT. § 41-4-514(a) (Cum. Supp. 1989). Such changes must be within the same area and concept as described in the original permit.

^{182.} Id. at § 41-4-514(a)(v). The only exception to this rule is for temporary changes. See infra at notes 192-98 and accompanying text.

^{183.} Wyo. STAT. § 41-3-106(d) (Cum. Supp. 1989).

184. Id. at § 41-3-106(b) (Cum. Supp. 1989).

185. Id. at § 41-3-106(d) (Cum. Supp. 1989).

186. Id. at § 41-3-106(d) (Cum. Supp. 1989).

187. Id. at § 41-3-114 (Cum. Supp. 1989).

188. Id. at § 41-3-114 (Cum. Supp. 1989). Board of Control.

concept.¹⁸⁸ The statute also sets detailed filing requirements and provides for a public hearing before the petition may be granted. As with other transfers, no change of point of diversion may be granted if "other appropriators will be injuriously affected."¹⁸⁹

E. Change in Location of Wells

Changes in well location to a point within the same aquifer and in the vicinity of the original well may be made without loss of priority if approved by the Board of Control. The Board may grant changes in location of unadjudicated groundwater rights if the applicant demonstrates that the water has been applied to a beneficial use. For reasons that are unclear, the State Engineer has the authority to change the well location of unadjudicated water rights which have *not* been applied to a beneficial use, including domestic or stock water wells. 191

Presumably no loss of priority occurs in changes of well location approved by the State Engineer; otherwise the provision authorizing such changes would be meaningless since a person might just as easily apply for a new water right in that instance. Nonetheless, the statute itself is silent on this issue. New well locations are limited to the total amount of water appropriated in the original permit. A petition to change a well location is, of course, subject to the "no injury" rule. 192

F. Temporary Changes

In addition to the other change provisions, Wyoming law has allowed temporary changes of both adjudicated and valid but unadjudicated water rights since 1959.¹⁹³ Temporary changes of water rights may not exceed two years and may be acquired by purchase, gift or lease.¹⁹⁴ Temporary changes are subject to the prior approval of the State Engineer and are limited to the historic consumptive use and by the "no injury" rule.¹⁹⁵ The statute allows the State Engineer to assume 50% return flow for temporary changes of direct flow irrigation rights, although he may adjust that figure, in his discretion, if such figure would be "significantly in error." When a temporary

^{188.} Id. at § 41-1-114(a)(ii) (Cum. Supp. 1989). This provision was adopted after the Wyoming Supreme Court's decision in Green River Development Co. v. FMC Corp., 660 P.2d 339 (Wyo. 1983), and authorizes an extremely limited exception to the Supreme Court's decision that unadjudicated water rights are not subject to transfer.

^{189.} WYO. STAT. § 41-3-114(f) (Cum. Supp. 1989). See Regulations & Instructions, Part IV, Bd. of Control, Ch. V, § 12-13 (1986) for further information regarding petitions for changing the point of diversion. Additional standards apply to a change in the point of diversion of a reservoir. WYO. STAT. § 41-3-329 (Cum. Supp. 1989). It should further be noted that changes in the point of diversion of foreign water (i.e., water belonging to another state) that occur in the state of Wyoming are subject to approval by the Board of Control. Id. at §§ 41-3-209 to -215 (1977).

^{190.} Id. at § 41-3-917 (Cum. Supp. 1989).

^{191.} Id.

¹⁹² Id.

^{193.} Id. at § 41-3-110 (Cum. Supp. 1989). The original 1959 statute limited temporary transfers to highway construction projects. 1959 Wyo. Sess. Laws, ch. 148, § 1.

^{194.} WYO. STAT. § 41-3-110(a) (Cum. Supp. 1989).

^{195.} Id. at § 41-3-110(a), (c).

^{196.} Id. at § 41-3-110(c) (Cum. Supp. 1989). The statute makes clear, however, that the 50% assumption shall have no application to any other provision of Wyoming law.

change is approved, the State Engineer enters an order designating the method, place and period of use.¹⁹⁷ During the period of the approved temporary change, the original owner suffers no impairment of his right and when the period ends he is automatically reinvested with the same rights previously held.¹⁹⁸ Thus, temporary changes can be used to toll the period for abandonment of water rights. A serious disadvantage of temporary water rights is that they are wholly subordinate to permanent water rights, including those with a later priority date.¹⁹⁹ This is unfortunate since it undoubtedly limits the utility of temporary changes which can help ensure efficient use of water resources.

G. Transfers of Secondary Reservoir Water Rights

Since at least 1921, reservoir water rights have not been considered appurtenant to any particular tract of land, and, according to statute, so long as the water is used for beneficial purposes, it can be "sold, leased, transferred, and used in such manner and upon such lands as the owner of such rights . . . may desire."200 Given the nature of reservoir rights this provision seems unremarkable. As a practical matter, the owner of a large reservoir right often intends for that water to be used by many different people. Indeed, often the reservoir owner will not even be an end user of water, as in the case of an irrigation or conservancy district or a mutual ditch company. Thus, the freedom to sell and transfer reservoir water among various end users on different lands without resort to the transfer statute seems a virtual necessity. The language authorizing the sale and transfer of reservoir water rights is not without limits, however. Most likely, it was intended to apply principally to transactions between the reservoir owner and the end user. Arguably, it does not extend to transactions between end users.²⁰¹ Moreover, it clearly ought not encompass the transfer of primary reservoir rights for purposes that do not involve filling the particular reservoir for which the rights were granted. Finally, since many large reservoirs were built through loans of public money, restrictions on transfers may be imposed under the relevant repayment contract, or under the state or federal law which authorized the water project.

Despite, or perhaps because of, the ambiguity surrounding the provision for transferring reservoir water a considerable amount of transfer activity between end users of reservoir water takes place without the approval or involvement of the Board of Control.²⁰² Ironically, the right to transfer such

^{197.} Id. at § 41-3-110(b).

^{198.} Id.

^{199.} Id. at § 41-3-111 (1977).

^{200.} Id. at § 41-3-323. The reservoir owner, however, does not have unlimited authority to transfer water. Any person who uses water from a reservoir has a preference right to the use of that water the following year. Id. at § 41-3-325.

^{201.} The statute applies by its terms to "reservoir water and rights acquired under reservoir permits and adjudications." *Id.* at § 41-3-323 (1977). Although end users may acquire secondary permits to use reservoir water they do not acquire water rights "under reservoir permits and adjudications." *Id.*

^{202.} Trelease and Lee documented such activity in the 1966 article, supra note 83, at 36-38, 48-50.

water appears to favor a person who fails to obtain a secondary water permit. Once a person obtains a secondary right he must comply with the transfer statute.²⁰³ By contrast, the person who fails to apply for a secondary permit may freely transfer his water without the approval of the Board of Control. Since the end user of reservoir water falls outside the prior appropriation system, it seems unnecessary to subject any such end user to the transfer statute. As noted previously, some persons holding secondary rights may be compelled to obtain a permit to prove ownership and secure financing.²⁰⁴ Yet some alternative proof of ownership can probably be devised that would satisfy lending institutions without imposing unwarranted limits on the transfer of secondary water rights. If such a scheme cannot be devised through rulemaking proceedings, the law should be changed so that all secondary users are treated equitably.²⁰⁵

The most common type of transfer of reservoir water rights involve the temporary transfer of water. In many irrigation districts or other such entities, some farmers have excess water while others insufficient water during the latter part of the growing season. In these cases the water should be reallocated to the farmers who need it and many districts have established procedures to accomplish this result. The procedures are largely informal and they are not uniform among the districts. Some districts allow individual farmers to arrange their own deal. In this manner the seller can command the best price that the market will bear. The district's involvement is limited to a requirement that the parties notify the district of the change so that the ditch riders know how much water each user should receive.

Other districts have evolved more sophisticated practices. For example, the Horse Creek Irrigation District sends a letter to each farmer around the middle of August asking whether they would like to sell or buy water. If more water is available for sale than there are purchasers, each seller is allowed to sell a *pro rata* amount to each buyer. Conversely, if there are more buyers than sellers, the buyers receive a *pro rata* share of that available for sale. All such transfers are limited to the current growing season, and the price paid is set at the normal price established by the district for its water.

While the informal systems appear to work reasonably well, they are technically not authorized by the statute.²⁰⁷ Moreover, inequities and other problems may surface. For example, the opportunity to sell water at a price above that charged by the irrigation district may lead some farmers to specu-

^{203.} See WYO. STAT. § 41-3-104 (1977). Issuance of a secondary permit has the effect of making the water right appurtenant to a particular tract of land. Thus, the water cannot be transferred to other land without petitioning for a change in the place of use of the water right.

^{204.} See supra note 112 and accompanying text.

^{205.} The problem identified here is not one that can be handled through *pro forma* administrative action to approve the transfer of all secondary water rights. On the contrary, transfers that must comply with the stringent statutory standards might often be denied even where no one suffers injury if, for example, the new use reduces the return flows.

^{206.} For example, if 10 farmers each want to sell one share of water but buyers want only five shares, each farmer is allowed to sell one half a share.

^{207.} Indeed, some of the programs may run afoul of the requirements of WYO. STAT. § 41-3-325 (1977), which requires the reservoir owner to make available at reasonable rates any water that the individual landowners cannot beneficially use on their own lands.

late with their water rights. Furthermore, unlike water rights that are temporarily transferred under the provisions of Wyoming law, informal transfers do not toll the period for abandonment. Thus, if a farmer ceases to use a water right every year on August 15 for five consecutive years because he has transferred that water to another user, he may be deemed to have abandoned any water rights after August 15.²⁰⁸ To avoid these problems, some legal recognition of and standards for these transfers, perhaps in the form of regulations from the State Engineer, should be promulgated.

V. WYOMING'S WATER TRANSFERS EXPERIENCE

Wyoming's early experience with water transfers is thoroughly described by Frank Trelease and Dellas Lee in a study published in the premier issue of the Land and Water Law Review in 1966.²⁰⁹ That study ably refuted the notion held by some practitioners that water transfers in Wyoming were virtually non-existent due to the "no change" language of the 1909 Wyoming statute.²¹⁰ Trelease and Lee accomplish their objective by reviewing the myriad legal provisions which carved out exceptions to the "no change" rule, and by describing numerous cases demonstrating the feasibility of various types of transfers. The authors concluded, nonetheless, that Wyoming's water transfers laws could be much improved.

Some improvements have been made since Trelease and Lee looked at Wyoming water transfers. Most significantly, of course, the legislature adopted specific legislation in 1973 that expressly allows transfers. But many restrictions on transfers remain. During the past several years, substantial data on water transfer activity in Wyoming has been gathered in conjunction with a regional study funded by the U.S. Geological Survey.²¹¹ This section describes and attempts to interpret that data.

A. Background

The 1973 water transfers legislation applies to all applications filed after February 1, 1974. Since that time, the Board of Control has received 42 water transfer applications.²¹² Of these, 25 were granted without conditions, 7 were granted conditionally, and 9 were denied. One application is currently pending. The time for processing transfers of agricultural water to a non-agricultural use ranged from 3 to 61 months, with an average processing time of 16.67 months.²¹³ Twelve transfer applications were protested and

^{208.} By contrast, the period of abandonment is tolled for temporary transfers that are carried out under the terms of the statute. *Id.* at § 41-3-111 (1977).

^{209.} See Trelease & Lee, supra notes 83 & 94 and accompanying text; see also Trelease, Transfer of Water Rights—Errata and Addenda—Sales for Recreational Purposes and to Districts, 2 Land and Water L. Rev. 321 (1967).

^{210.} Trelease & Lee, supra note 83.

^{211.} Other states in the study include: Arizona, California, Colorado, New Mexico and Utah.

^{212.} One additional case, the Casper-Alcova Irrigation District (CAID) project is included in the study even though the transfer involved there was accomplished through special legislation rather than the general transfer provisions of the law. The CAID project is described in greater detail, *infra* notes 248-56 and accompanying text.

^{213.} Transfers that did not involve a change in use (agriculture to agriculture) took considerably less time to process. On average such transfers were processed in 6.78 months.

two decisions were challenged in court - in both cases by the applicant and not a protestant. Transfers from agricultural to a non-agricultural use resulted, on average in reducing the total water right by 57.4%. Transfers of agricultural water that did not involve a change in use generally did not affect the amount of the water right.²¹⁴ The chart set forth in the appendix to this article describes all of the water transfer activity in Wyoming since February 1, 1974 which is the effective date of the 1973 statute.

The dearth of transfer applications in Wyoming contrasts sharply with transfer activity in other states in the Rocky Mountain region where substantial transfer activity has been recorded.²¹⁵ Wyoming's relatively small population base surely accounts for some of this difference. But other factors appear to have contributed to the lower level of transfer activity as well.

First, Wyoming has a long-standing reputation as a state with restrictive transfer laws. 216 Despite the effort to liberalize Wyoming's transfer laws, Board and court decisions continue to fuel the perception that Wyoming is not receptive to water transfers. To some extent, this reputation is undeserved. The Board of Control fully and fairly considers transfer applications and, as the data suggest, several significant water transfers have been approved. But the Board does show a decidedly conservative approach to transfer proposals. Moreover, whether deserved or not, Wyoming's reputation as hostile to water transfers undoubtedly discourages would-be applicants from looking at transfers as possible sources of water supplies.

Second, the 1973 statute which authorizes transfers is extremely narrow. In addition to prohibiting transfers that cause injury to other appropriators, the statute precludes transfers that increase the amount of water historically diverted, or increase the historic rate of diversion, or increase the historic amount consumptively used, or decrease the historic amount of return flows.²¹⁷ Moreover, as noted previously, the Board has discretion to deny a transfer after considering: (1) the economic loss to the community and the state where the use from the transferred right is discontinued; (2) the extent to which the economic loss will be offset by the new use; (3) whether other sources of water are available for the new use.²¹⁸ Finally, the Board narrowly interprets the law which further limit transfers. One of the best examples of the Board's attitude toward transfers is its decision in *Basin*

^{214.} The only arguable exception to this was the Big Horn Ranch transfer, Docket No. II-83-2-5 which resulted in a reduction of the water right from 45.72 cfs to just 3 cfs. The Board's decision, however, makes clear that the reduction was based entirely on the fact that most of the water right had been abandoned through non-use. The entire amount of water that had been beneficially used was allowed to be transferred.

^{215.} The three states in the Rocky Mountain region which are included in the USGS study, Colorado, New Mexico and Utah, all found significantly higher levels of transfer activity. Some of this difference can perhaps be attributed to the smaller population base in Wyoming, but other factors appear to have contributed to this phenomenon and are described in the text.

^{216.} See Trelease & Lee, supra note 83, at 11. ("[T]here is a widespread general perception among Wyoming irrigators that water rights are inseverably attached to land in Wyoming.")

^{217.} WYO. STAT. § 41-3-104(a) (1977).

218. Id. It seems likely that the Board may also take into account general public interest considerations, which apply generally to all original water appropriations under the constitution. Cf. Bonham v. Morgan, No. 88-0143, slip op. (Utah, Feb. 23, 1989), where the Utah Supreme Court rejected the Utah State Engineer's claim that he lacked authority to consider the public interest in the context of a transfer decision.

Electric, confirmed by the Wyoming Supreme Court, which prohibits transfers of water that have been historically used and consumed, but which were not beneficially consumed.²¹⁹ The Board's abundance of caution in its decisions on transfer applications effectively limits the value of transfers. The cases described below amply demonstrate the numerous obstacles to transferring water in Wyoming.

B. Obstacles to Transfer as Revealed by Case Studies

In an effort to better determine how the Board responds to a transfer application, the USGS study reviewed in great detail approximately one-half of the 42 transfer applications that have been filed since February 1, 1974. Selection of these cases was not random, but was based on subjective factors which suggested that the case might prove instructive of the Board's practices. For example, the nine transfer applications involving agricultural water that did not involve a change in the end use of the water were not studied extensively because such transfers were unlikely to illustrate the utility of water markets. A detailed review of the study cases suggests that several factors are particularly important in decisions on water transfer applications.

1. Evidence in support of the transfer

The burden of proving that a water transfer meets the statutory criteria falls on the applicant, and the burden is substantial.²²⁰ Successful petitions generally include detailed studies or other information regarding — (1) the historic consumptive use of the particular water right; (2) the historic rate of diversion and return flows; and (3) the losses attributable to the distance between the original and new points of diversion.

a. consumptive use/return flows

A consumptive use and return flow study should be based upon the prior or historic use of the water right. Applicants have the burden of showing that the transfer will not increase the demand on the water supply. When an applicant submits a consumptive use study and fails to show that the transfer will not increase the demand, the Board can be expected to reduce significantly the amount of water transferred, or to reject the application outright.

For example, Pacific Power & Light submitted a consumptive use study based solely on use during the year 1980.²²¹ Protestants to the Pacific Power transfer sharply criticized the submission of consumptive use figures for only one year.²²² The Board of Control, which denied the Company's transfer, agreed: "The Board does not feel that diversion records for only one year are

^{219. 578} P.2d at 567; see supra notes 170-71 and accompanying text.

^{220.} State Bd. of Control Order, Docket No. III-77-1-2 (A & T Enterprises, Inc., petitioner), Conclusion of Law at 4 (Wyo. 1980).

^{221.} State Bd. of Control Order, Docket No. I-80-4-5, Finding of Fact at 10 (Wyo. 1981).

^{222.} Transcripts for Bd. of Control Docket No. I-80-4-5, at 36 (opening statement of protestants' attorney Bob Sigler) ("[W]hen we say historically, and when the statute says historically, that isn't the year 1980, the year 1980 does not establish history.").

adequate to establish historic use."223

Where an applicant desires to transfer the full amount of a water right, he must show that the consumptive use will not increase as a result of the transfer. To support its proposed transfer of an entire water right, the Town of Pinedale merely claimed that it was "a fairly typical municipality" and that return flows from municipal water are between 60 and 75 percent of the water diverted.²²⁴ The Board of Control assumed the lowest figure — 60 percent — and cut Pinedale's transfer request substantially to insure that Pinedale would not consume more water than had been consumed historically.²²⁵

Even if a water transfer is considered primarily a correction of records, the Board of Control will limit the transfer to the historic rate of diversion. The City of Casper had been diverting water for many years that had been appropriated for use on certain agricultural lands before 1896. The amount of water included in the appropriations far exceeded the capacity of the pipeline carrying the diverted water. Since the City could not have historically diverted any more water than the pipeline could carry, the Board declared the rest forfeited.²²⁶

The Board of Control defines consumptive use for agricultural purposes as water that is beneficially consumed by the crop.²²⁷ Not surprisingly, when historic use on the land far exceeds the adjudicated water right, a petitioner is allowed to transfer only the adjudicated right. In 1982, the Town of Pine Bluffs appealed a Board of Control order to the Wyoming Supreme Court contending that since its predecessor appropriators had irrigated much more than a well's adjudicated right, the Town should be able to transfer the historic actual consumption. The state supreme court affirmed the lower court's holding that the Board was correct in denying a transfer in excess of the adjudicated right.²²⁸

b. conveyance loss

Where an applicant seeks to change the point of diversion over long distances as a part of its water transfer, a realistic conveyance loss report should be included in the application. The Board of Control has noted that multiple factors contribute to water losses during transit. Accordingly, the amount of water upstream is not equivalent to the amount of water downstream.

In the Pacific Power case, the company proposed to transfer the point of diversion 223 miles downstream on the North Platte River. Pacific Power submitted a conveyance loss estimate of less than one percent which the Board closely scrutinized during hearings on the proposed transfer. Pacific Power based its conveyance loss estimate on evaporation and the incremen-

^{223.} State Bd. of Control Order, Docket No. I-80-4-5, Finding of Fact at 10 (Wyo. 1981).

^{224.} State Bd. of Control Order, Docket No. IV-82-3-9, Finding of Fact at 7 (Wyo. 1984).

^{225.} Id. at 14

^{226.} State Bd. of Control Order, Docket No. I-83-3-4, Finding of Fact at 14 (Wyo. 1985).

^{227.} State Bd. of Control Order, Docket No. I-75-1-6, Conclusion of Law at 6 (Wyo. 1976); see also Basin Electric, 378 P.2d at 566-68.

^{228.} In re Petition for Change v. State Bd. of Control, 649 P.2d 657 (Wyo. 1982).

tal increase in the surface area of the river.²²⁹ One protestant argued that the report "should include evaporation, transpiration, bank storage and inadvertent diversions associated with the incremental increased flow plus any additional losses of the original flows caused by the increase."230 The Board of Control essentially agreed, finding that the estimate should have taken into account factors such as "bank storage, deep percolation into underlying geologic formations, and inadvertent diversions due to sporadic raising of water elevation, all of which admittedly occur on the North Platte River."231

By contrast, the Town of Granger's engineer testified that he expected a conveyance loss of 0.2 percent per mile on the Green River. The transfer involved a change in point of diversion 95 miles downstream. Over 95 miles, conveyance losses would be 19 percent under this evidence. The Board accepted Granger's estimate as reasonable.232

An applicant unable or unwilling to provide the pertinent data may succeed simply by accepting a transfer of a relatively small percentage of a water right. For example, the Town of Granger had little difficulty transferring 1.5 cfs of water to municipal use from a water right of 9.61 cfs. In this case, the Board of Control waived the consumptive use information requirement and Granger submitted only the conveyance loss estimate.²³³ For some small transfers it may perhaps make sense to accept a small percentage of the water right proposed for transfer in exchange for not having to supply detailed evidence. Such an approach, however, will reduce substantially the market value of the water rights which are being transferred since a much smaller percentage of the original water right will be available for the transferee's use.

Other limitations on transfer

The Board of Control looks at many other factors when it examines a proposed water transfer, including the amount of land actually irrigated, the economic impacts of the transfer, alternative sources of water near the destination of the new water use, and the agricultural growing season.

a. actually irrigated land

The Board of Control expects applicants to submit maps of the land that has historically been irrigated. The maps must depict the irrigated land areas from which water is to be transferred. Typically, the Board will also conduct an on-the-ground inspection of the area to verify the petitioner's claims. If the Board finds that the land has not been irrigated, the Board will declare the water right appurtenant to that land forfeited.

The Board was favorably impressed with efforts by the Town of Sara-

^{229.} State Bd. of Control Order, Docket No. I-80-4-5, Finding of Fact at 6 (Wyo. 1981).

^{230.} Letter by David Wilde, Project Manager of the North Platte River Project, read into transcript of record at page 25. An attorney for protestants, labelling the report a "humdinger," also questioned the adequacy of the conveyance loss estimate. Transcript of Hearing for Docket No. I-80-4-5, at 44 (opening statements of attorney Bob Sigler).

^{231.} State Bd. of Control Order, Docket No. I-80-4-5, Finding of Fact at 6 (Wyo. 1981). 232. State Bd. of Control Order, Docket No. IV-83-3-4, Finding of Fact at 20 (Wyo. 1985). 233. Id. at 7.

toga in 1982 to document irrigated lands within Saratoga. To support its claim of irrigated acreage, Saratoga submitted not only a map but an aerial infrared photograph of the town showing vegetation resulting from irrigation in red.²³⁴ In that case the Board allowed Saratoga to transfer water rights within town limits for municipal use, except for water rights on the lands of residents who objected to the transfer.²³⁵

By contrast, when the Town of Baggs sought to detach 0.93 cfs from lands in 1976 and transfer the water to municipal industrial use, the Board conducted a field inspection and discovered that 24 acres of the 65 acres involved were above a slough and had not been historically irrigated. Accordingly, the Board declared 0.34 cfs of the proposed transfer to be forfeited and allowed a transfer of only 0.59 cfs — an amount directly proportional to the amount of land historically irrigated.²³⁶

The forfeiture ordered by the Board of Control against Baggs (as well as those previously described against the City of Casper and Basin Electric) seems inconsistent with the forfeiture statute.²³⁷ The statute requires that owners of lands covered by the contested appropriation receive notice by certified mail, or by newspaper advertisements for three successive weeks, followed by a hearing. That hearing is supposed to be held for the express purpose of declaring water rights forfeited, assuming the evidence supports such a decision. Transfer hearings are held to consider whether a transfer application should be approved. Thus, they are arguably not a proper forum for forfeiting water rights.²³⁸ This is significant because once the appropriator resumes use of the water right, the Board may no longer initiate forfeiture proceedings. To avoid any possible question about the legality of its efforts to forfeit water rights in transfer proceedings, the Board would be wise to follow the formalities of the forfeiture law in any decision involving water transfers requiring a partial forfeiture of water rights.

Voluntary abandonment may also play a role in water transfers. As part of its water transfer proposal in 1983, the Town of Granger agreed to take 673 acres, with an appropriation of 9.61 cfs, out of production and use only 1.5 cfs, the amount it needed for municipal use.²³⁹ Under these circumstances, the Board of Control allowed Granger to omit the consumptive use and return flow study normally required for such transfers. The Board found that of the 673 acres that Granger proposed to take out of production, 350 were actually irrigated.²⁴⁰ At the statutory rate of one cfs per seventy acres, that meant the water right on the land was 5.0 cfs. Subtracting 50 percent from that figure to account for return flows and 20 percent for conveyance losses, Granger was allowed to transfer the 1.5 cfs.²⁴¹

^{234.} State Bd. of Control Order, Docket No. I-81-1-6, Finding of Fact at 17 (Wyo. 1984).

^{235.} Id. at 13.

^{236.} State Bd. of Control Order, Docket No. I-76-2-10, Finding of Fact at 8 (Wyo. 1977).

^{237.} Wyo. Stat. § 41-3-402 (1977).

^{238.} Id.

^{239.} State Bd. of Control Order, Docket No. IV-83-3-4, Finding of Fact at 7 (Wyo. 1985).

^{240.} Id. at 17.

^{241.} Id. at 18.

b. economic loss to the community

Under the change of use statute, the Board of Control may consider, among other factors, "[t]he economic loss to the community and the state if the use from which the right is transferred is discontinued," and "[t]he extent to which such economic loss will be offset by the new use." The unsuccessful Pacific Power water transfer provides the best example among the case studies of the Board's consideration of economic harm. There, the Board found that the transfer could cause "serious, adverse effects on the economy of Carbon County." The Board also raised concerns about the supposed benefits of the transfer and "the extent to which the economic benefits from power generated for possible out-of-state use would offset injury to Carbon County."

c. alternative water sources

The statute also allows the Board to consider "[w]hether other sources of water are available for the new use." Again, the Pacific Power case provides the prime example of the Board's consideration of this factor. The Board found that Pacific Power had not shown that it had considered the availability of water supplies closer to its power plant, 223 miles downstream from the original point of diversion on the North Platte River. Along that stretch of river are the Seminole, Kortes, Alcova and Pathfinder Reservoirs—which the Board determined were potential alternative sources of water for Pacific Power.²⁴⁶

d. irrigation season

Agricultural water rights are generally used seasonally. Thus, when such rights are transferred the right to the water is limited to the time over which the water was historically diverted. Generally, the Board uses a conservative estimate of the growing season to limit the period of time which water can actually be used. In the Town of Pinedale's case, for instance, the Board of Control found that the historic irrigation season in the area of the transfer ran from the beginning of June to the end of August, or 92 days, rather than the 180 days the Town had requested.²⁴⁷

e. water needs of transferee

In two separate transfer applications filed by Basin Electric, the Board severely restricted the total volume of water allowed to be transferred. The Board imposed these limits not on the basis of the volume historically used

^{242.} Wyo. Stat. § 41-3-104 (1977).

^{243.} State Bd. of Control Order, Docket No. I-80-4-5, Finding of Fact at 13 (Wyo. 1981).

^{244.} Id.

^{245.} Wyo. Stat. § 41-3-104 (1977).

^{246.} State Bd. of Control Order, Docket No. I-80-4-5, Finding of Fact at 14 (Wyo. 1981).

^{247.} State Bd. of Control Order, Docket No. IV-82-3-9, Finding of Fact at 13 (Wyo. 1985). See Wyoming Water Planning Program, Wyoming Water Planning Report No.5, Consumptive Use of Irrigation Water in Wyoming 9 (1970)(Provides, among other things, estimates of growing seasons in varius parts of Wyoming. The growing season for Pinedale for example, is given as 164 days. Id. at 9.).

or consumed, but rather, on the perceived needs of the transferee. The two transfer applications filed in 1981 proposed to transfer water rights of 1.78 cfs and 2.67 cfs. The Board reduced these amounts to 1.25 cfs and 2.01 cfs to account for return flows. In both applications, Basin Electric stated that it would only draw upon the water intermittently. Accordingly, the Board set a limit of 100 acre-feet on each transfer. Because of this limit, Basin Electric would use all of it water rights for these two transfers in 40 days and 25 days respectively by pumping at the allotted rates.²⁴⁸

C. The Future of Water Marketing in Wyoming

Some water marketing is taking place in Wyoming but the restrictions on water transfers imposed by the state appear to discourage significant transfer activity. By artificially limiting the water market, the state discourages the most efficient use of its limited water resources. In some respects, this may have a salutary, if unintended, consequence. By discouraging greater consumptive uses of water, state policy may help ensure that more water finds its way into streams where it helps to protect the stream environment and dilute the effects of water pollution. Additionally, Wyoming's current water policies may increase the amount of water stored in the stream system for use later in the irrigation season. But the policy may also encourage new (and expensive) water development projects that might be unnecessary if existing water rights could be used more efficiently.

The CAID project is an excellent example of how incentives for more efficient use of existing water rights can provide substantial quantities of water for other uses at a cost that is competitive with the cost of developing new sources of water. In 1982, the City of Casper and the Casper-Alcova Irrigation District (CAID) entered into a 40-year cooperative agreement under which Casper was to fund improvements to prevent losses in CAID's water delivery system. In return, Casper would be entitled to the amount of water saved by the improvements, which consist typically of concrete ditch lining and pipelines.

Under the 1982 agreement, Casper agreed to pay off a \$750,000 debt owed by CAID to the Bureau of Reclamation. The City also agreed to pay \$150,000 per year for water conservation projects and to pay a \$23 storage fee to the Bureau of Reclamation for each acre-foot used by the City.²⁴⁹ In 1985, the Wyoming Legislature passed special legislation allowing the Casper-Alcova rehabilitation project to proceed.²⁵⁰ Special legislation was necessary because the project could not go forward under the change of use statute, which prohibits transfers of water rights that increase the consumptive use of the water.²⁵¹

Under the CAID-Casper agreement, the City is entitled to the amount

^{248.} State Bd. of Control Orders, Docket Nos. I-U-81-3-2 (Restriction 2) & I-U-81-3-1 (Restriction 2) (Wyo. 1982).

^{249.} L.K. Horsch, A Cooperative Agreement to Augment a Municipal Water Supply Through Water Loss Reductions in Irrigation Canals 1-3 (June 1988) (unpublished article available from the author).

^{250. 1985} Wyo. Sess. Laws, ch. 90.

^{251.} WYO. STAT. § 41-3-104 (1977).

of water that is determined to be saved by the capital improvements it furnishes, although the amount the City uses is not to exceed 7,000 acre-feet per year. If Casper does not use all of its entitlement during a year, it cannot carry over the unused portion for use during the following year. Casper can, however, borrow water from CAID to be saved under future construction projects if its water supply proves insufficient. If there is a shortage in the overall water supply, the City must share the shortage with CAID, but CAID must allow Casper to use 5,000 acre-feet if there is at least that much available. Under the contract, CAID's main obligation is to make 7,000 acre-feet of water available as soon as possible. CAID is also responsible for administering the conservation program.²⁵²

Thus far, the project participants have confirmed a total savings of 1,633 acre-feet of water per year as a result of five completed water conservation construction projects at the Kendrick Project.²⁵³ The total cost to the City of Casper for this project is uncertain at this time, but it appears the City will obtain the saved water cheaply as compared with other methods. An early estimate was that the project would cost the City about \$56 per acre-foot per year.²⁵⁴ As is typical with these types of projects, the final cost figures may be somewhat higher.²⁵⁵ Still, the \$56 per acre-foot per year Casper was projected to pay as a result of the CAID rehabilitation compares very favorably to the \$100 to \$125 per acre-foot projected annual cost to Casper for use of water generated by the Deer Creek Dam and Reservoir.²⁵⁶ While the reservoir project includes other benefits, such as recreation and large scale water storage (for Deer Creek an estimated 66,000 acre-feet²⁵⁷), it seems clear that conservation and improvement of existing water systems can be a more cost-effective means of obtaining municipal water supplies.

State law should build on its experience with the CAID project to pro-

^{252.} Horsch, supra note 248, at 3.

^{253.} In 1984, an irrigation pipeline replaced the entire 2.9 miles of Lateral 41 for a water savings of 382 acre-feet per year. The project cost was \$182,596. The cost per acre-foot for the saved water was \$478. In 1985, 2.6 miles of Lateral 210 was lined with concrete. The total cost of the project was \$268,000 for a water savings of 353 acre-feet, or \$759 per acre-foot. The City's share of the project costs was \$134,000, or \$379 per acre-foot. In 1986, an additional 2.5 miles of Lateral 210 was lined at a cost of \$183,795. This resulted in a savings of 450 acre-feet of water at \$408 per acre-foot. The City's share of that project was \$91,898, or \$204 per acre-foot. The final phase of the improvements on Lateral 210 was completed in 1988 at a cost of \$156,320 for a savings of 275 acre-feet of water or \$568 per acre-foot. The City's share of the construction costs was \$78,160, making the cost per acre-foot to the City just \$284. Letter from L.K. Hosch, former CAID project hydrologist (July 20, 1988). In addition, phase one of improvements on Lateral 102 was completed in early 1989 at a cost of \$81,700 and saved 172.8 acre-feet of water. The cost per acre-foot of the water saved was \$473. The City's share of the costs was \$40,850, which means that the cost to the City of this water per acre-foot is \$237. Telephone interview with Bob Perala, CAID project hydrologist (July 18, 1989).

^{254.} Engels, Augmenting Municipal Water Supplies Through Agricultural Water Conservation 8 (paper given at the Joint Regional Conference of the Rocky Mountain Section of the American Water Works Association and the Rocky Mountain Water Pollution Control Association, Snowmass, Colorado, Sept. 11-14, 1988) (available from the author).

^{255.} David Engels, utility director for the City of Casper, estimated that costs over the first 20 years could run as high as \$120 per acre-foot per year, id. at 9, although the costs are likely to decrease drastically after the 7000 acre-feet of savings have been accomplished. Telephone interview with David Engels (July 24, 1989).

^{256.} Final Environmental Impact Statement, Deer Creek Dam and Reservoir 2-35 (U.S. Army Corps of Engineers, 1987).

^{257.} Id. at vi.

mote more efficient use of its limited water resources. Special legislation should not be necessary to make a project like this work. Set forth below are some suggestions for improving Wyoming's current water transfer laws and policies.

D. Improving Wyoming's Water Transfers System

Despite the difficulty in gathering accurate data on the effects of a water transfer on the water system, the state's insistence that the applicant provide sufficient evidence of those effects is reasonable. Nonetheless, improvements over existing law can be made. At the outset, the state should shed its historical distrust of water transfers. Perhaps transfers do reward speculation and waste as Elwood Mead feared. But Wyoming water law currently affords few sanctions against those who speculate or use water less efficiently than can reasonably be achieved. Nor can it realistically do so, absent a total overhaul of the prior appropriation system.²⁵⁸ Many in Wyoming's farming community simply cannot afford to change their historical irrigation practices, however wasteful they might seem to the casual observer.²⁵⁹ Instead. the law should provide water users with incentives to make the use of scarce water more efficient. One obvious way to achieve this objective is by promoting water transfers. The following changes to current law would help to achieve this objective.

- Water Transfers Policy: A statement of policy in the proposed law should reflect the state's fundamental support for water transfers, particularly those that promote efficient use of scarce water resources.
- Return to the "No Injury" Rule: Wyoming should join other western states and allow transfers in any case so long as no injury is shown to other appropriators or the public interest.²⁶⁰ The phrase "public interest" should be expressly defined to encompass protection of the stream environment and such other values as determined by the State Engineer after the promulgation of rules. Several transfer applicants have expressed concern over the broad discretion afforded the Board of Control in deciding whether to approve transfers.²⁶¹ Some discretion to assess injury and the extent of

^{258.} A compelling argument for such a change has been suggested by Charles Wilkinson, See Wilkinson, Aldo Leopold & Water Law: Thinking Perpendicular to the Prior Appropriation Doctrine, 24 LAND & WATER L. REV. 1 (1989). Whatever the merits of this proposal, however, it does not seem a realistic option at this time.

^{259.} An excellent comparison of irrigation techniques and their relative efficiency is provided in Shupe, Waste in Western Water Law: A Blueprint for Change, 61 OR. L. REV. 483, 502-07 (1982). Predictably, Shupe criticizes flood irrigation techniques as particularly wasteful and inefficient. Though some of its bad reputation is certainly deserved, flood irrigation may not be as wasteful as it seems. Substantial return flows from flood irrigation techniques are stored in the ground before slowly returning to the stream during the irrigation season. This may have the salutary effect of actually extending the irrigation season for downstream farmers beyond the time that might exist if more efficient irrigation practices were used.

^{260.} Wyoming should continue, however, to prohibit transfers of water uses that exceed the adjudicated right. Any other rule would encourage abuse of the adjudication system.

^{261.} Respondents to the water transfers survey representing the Town of Pine Bluffs, Pacific Power and Basin Electric criticized what they saw as an overly-protective attitude by the Board towards existing appropriators. Pine Bluff and Basin Electric officials also supported a return to a simple "no injury" test. Pacific Power argued for a judicial forum rather than an administrative forum for deciding water transfer cases.

injury is wholly appropriate. But current law affords such broad discretion as to make the Board of Control's decision on a particular application difficult to predict. Lack of certainty is bound to discourage transfer activity.

3. Shift the Burden of Proof to Show "Injury" to the Protestants. The Board should promulgate regulations requiring the applicant for a water transfer to come forward with return flow studies, historical water usage data, and other information, including conveyance loss studies, sufficient to make a prima facie case that the proposed transfer will not injure other appropriators. In order to encourage transfers, however, the ultimate burden of persuasion that an injury will occur should fall on the person claiming injury. The Board should avoid conducting its own investigations, and should limit its role to that of the impartial decision-maker. Such a scheme would make water transfer procedures consistent with administrative practice in most other cases.²⁶³

To help soften the blow that such a scheme might inflict on other water users, the law should allow any protestant to demand that the transfer be approved conditionally for a trial period of three years or some other time that would be fixed by the Board. If actual injury is demonstrated within the trial period, or if evidence is gathered showing that additional water could have been transferred without injury, the decision could be reviewed and the transfer rights changed to prevent injury or allow the additional transfer of water rights. Another trial period might then be established to account for information obtained following the adjustments. In each case, the transfer applicant would be required to pay for monitoring devices to assess potential injury, and to pay damages for injuries sustained.

The proposed system would encourage transfers by establishing more certainty in the water transfer process, and by avoiding overly pessimistic projections of the impacts of water transfers. At the same time it would help insure that all parties affected by the transfer are treated fairly.

4. Establish a Statewide Water Conservation Bank. Water banks are not new. They are used in a variety of contexts, but primarily for short term water transfers such as those that take place informally within irrigation districts.²⁶⁴ The bank proposed here would be fundamentally different from any of those currently in use. Under current law, a person holding water rights must use his water or risk losing it to abandonment or forfeiture. Moreover, a person cannot use appropriated water on land other than that for which it has been appropriated or for other uses without first complying with the water transfers process. In most cases such transfers cannot be approved even where no one is injured because they will increase the total amount of consumed water or reduce the amount of return flows. Thus a person with adequate water supplies to flood irrigate would be foolish to consider more efficient irrigation or salvage techniques. The initial capital costs for a pivot sprinkler are substantial and though the water rights holder would save water, he would eventually lose all rights to the water that was

^{262.} These regulations should be sufficiently detailed to apprise the applicant of the amount and quality of the data required.

^{263.} See, e.g., Glenn v. Board of County Commissioners, 440 P.2d 1, 4 (Wyo. 1968).

^{264.} See, e.g., IDAHO CODE § 42-1761 (Supp. 1989).

saved. Suppose, however, that the water saved by using a more efficient technique could be banked. The state would issue the water rights holder a certificate indicating the amount of water banked. Banked rights could not be lost through abandonment or forfeiture and they would retain their original priority date. Certificates would be freely marketable. The purchaser would still have to comply with the general transfer provisions of a revised and less onerous state law; but the assessment of water savings should be readily available to the applicant, thus holding promise for a simpler administrative approval process.

The State might bolster such a program by subsidizing the replacement of inefficient water systems and then banking all or part of the saved water in the State's name. The State could thereby focus its water conservation efforts in those areas where water needs are perceived to be greatest and where the physical circumstances would yield the greatest quantity of water at the lowest cost. In order to provide the state with an appropriate incentive to tackle such a program, the State should be assured the right to hold any water bank certificate resulting from water savings from a state-funded project. In this manner, the sale of such water rights would accrue directly to the State. Such a program might also help redirect the energy of the Wyoming Water Development Commission away from costly and questionable water development projects, and toward smaller scale water conservation projects.

No doubt, such a program would be controversial. But controversy could be minimized by assuring the water rights owner the first opportunity to carry out a water salvage program. Only after the owner refused to do so should the State step in, and even here, the program might be limited to volunteers who are assured appropriate incentives to participate. If Wyoming carefully selected its initial projects and successfully gathered new water supplies while appeasing existing users, others might then be encouraged to become involved. Once substantial quantities of water are banked along a given stream segment, a large new user would find it relatively easy to assemble a block of water rights. If water could be easily obtained in such a fashion, Wyoming might more easily attract economic development projects, particularly those that are water intensive, without building large new dams.

VI. CONCLUSION

Wyoming has seen only limited water marketing activity since liberalizing its water transfer laws in 1973. One of the reasons for this is that the 1973 legislation retained too many restrictions on transfer rights. In states like Wyoming where water resources are scarce, efficient use of existing water resources is imperative. By promoting water marketing, states like Wyoming can help bring about more efficient uses without seriously impeding the existing water rights system. Some of the changes suggested here will require new legislation; others can be carried out through administrative action. This article is offered as a first step toward moving Wyoming in the direction of these much-needed changes.

APPENDIX A: WYOMING WATER TRANSFERS¹

	POS AMT	N/A	0.59CFS	41.86CFS	6.62CFS	N/A	1.25CFS	N/A	2.01CFS	3CFS	.44CFS	.51CFS	0.08CFS 7000AF	2.37CFS	0.17CFS	1.2CFS	5000AF	0.03CFS	0.39CFS	0.33CFS	0.15CFS	0.37CFS	0.73CFS	1.5CFS	1779AF	N/A	N/A	N/A	1.01CFS	N/A	1.74CFS	1.71CFS	294.25AF	Z/A	0.14CFS
	PRE AMT	10 AF	0.93CFS	98.73CFS	13.24CFS	1.78CFS	1.78CFS	2.67CFS	2.67CFS	45.72CFS	0.86CFS	1.02CFS	0.08CFS	5.5CFS	0.54CFS	1.84CFS	5000AF	0.09CFS	1.03CFS	0.84CFS	1.37CFS	0.37CFS	1.22CFS	9.61CFS	1779AF	0.85CFS	13.5AF	8.81CFS	1.35CFS	(220 ACRS)	1.74CFS	1.80CFS	294.25AF	137.5AF	0.14CFS
	PRIORITY DATE	1906	1901	1884	1878	1971	1971	1973	1973	1889	1883	1883	1961	1884	1895	1904	1909	1977	1875	1875	1915	1896	1904	1908	1908	1902	1902	1969	1879	1884	1898	1951	1910		1891
	APPL	Z	z	>-	z	Z	z	z	Z	Z	z	•	z	Z	Z	Z	z	z	z	:	:	z	z	z	z	Z	=	z	Z	Z	z	:	Z		z
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	DIV	H	H	_	—	_	—	H	–	Π	Ξ,	:		_	H	_	H	—	2	=	=	Σ	H	Ν	_	⊢ :	:	-	H	H	≥	=	Ħ	_	2
	POST USE SRCE	_	•,	• 2	~ .	_	_	_	-	•,	•4		AG STRM MUN RES	• 4	•	92	_	• 3	V 3			0,	Φ3	41	_	V 2 1	_		•	93	U		_	•	•
	PRE USE	AG	AG	AG	AG.	AG	ΑĠ	AG	AG	AG	AG.		AG AG	AG	AG	AG	AG	AG	AG	:	:	AG	AG	AG	AG	AG.	:	AG	AG	AG	AG	:	RR	AG	AG
	DEC DATE	1-80	2-77	4-76	8-77	2-80	3-82	2-80	3-82	3-84	2-76	:	2-78	5-85	5-87	8/-9	1-75	11-87	5-75	:	=	11-85	1-80	8-85	11-83	3-81	:	3-80	3-84	10-74	5-83		8-87		3-84
	APPL DATE	10-76	11-76	1-75	1-76	1-80	7-81	1-89	8-81	4-83	4-71		8-77	10-84	98-8	1-77	4-74	8-87	4-74	:		1-83	4-77	11-83	8-83	11-79	:	8-79	11-83	5-74	11-82	:	8-87	I-89	8-83
	DOCKET#	III-77-1-2	I-76-2-10	I-75-1-6	I-76-1-12	I-O-80-1-2	I-U-81-3-2	I-U-80-1-3	I-U-81-3-1	II-83-2-5	II-71-2-2-1.2		I-77-3-9	I-8-3-3, 3-4	III-86-3-9	I-77-1-17	I-74-2-7	I-87-3-11	IV-74-1-10			IV-83-1-2	III-77-2-2	IV-83-4-3	I-83-3-5	I-80-1-2		I-U-79-3-2,4-1	III-83-1-1	I-74-1-B	IV-82-4-6	= ;	II-87-3-3	1-89-1-4	IV-83-3-7
	APPL	A&T	BAGGS	BSN EL-1	BSN EL-2	BSN EL-3	BSN EL-4	BSN EL-5	BSN EL-6	BG HRN RH	BUF-1A	DOF-1D	BURGESS CAID ⁶	CASPER	CODY	DOUGLAS	DOUG RES	DUMLAO	EVNSTN-1A	EVNSTN-1B	EVNSTN-1C	EVNSTN-1D	GERBER	GRANGER	HRSE CRK	IND SP-1A	IND SP-1B	NSN	LANDER	LATHROP	LSR V-1A	LSR V-IB	MILLER	MILLS	MCCULLOCH

POS	AMT	,Ą	Ķ	SCFS	CFS	1CFS	2CFS	7CFS		OAF	1CFS	7CFS	4CFS	6CFS	SCFS	88AF	45AF	45AF	366.95AF	2CFS	Ϋ́	Á
	•	ż	ż	2.4	1.4	0.1	0.1	0.0		20.	2.0	0.0	0.0	0.0	0.2	13	28.	38.	36	0.0	ż	Ż
PRE	AMT	31.72CFS	0.88CFS	2.45CFS	1.49CFS	0.43CFS	0.47CFS	0.26CFS		35.96AF	2.01CFS	0.27CFS	0.14CFS	0.21CFS	0.76CFS	1388AF	38.45AF	38.45AF	366.05AF	0.02CFS	1.39CFS	1.23CFS
RIORITY	DATE	1882	1911	1920	1898	1899	1901	1906		1951	1900	1888	1961	1961	1907	1959	1905	1906	1950	1912	1940	1946
14	APPL									Z	z	z	=	2	z	z	z	:	z	Z	z	=
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	CNTY	CARBON	LARAME	LARAME	SUBLTE	:	:	:		CROOK	CARBON	CARBON	:	:	LINCLN	UINTA	ALBAND	:	WASHKE	SHERDN	LARAME	=
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	USE									AG	RR	ΑĞ	:	=	AG	AG	ΑĞ	2	AG	DOM	AG	:
DEC	DATE	10-81	2-80	2	11-85	2	2	=		1-85	11-86	5-84	=	=	98-8	8-82	8-83	:	3-84	11-83	5-81	•
	DATE									1-85	11-85	1-81	:	=	11-85	11-81	1-83	:	8-83	4-83	11-78	:
	DOCKET#	I-80-4-5	I-U-79-4-2	:	IV-82-3-9	=	:	:		I-85-1-2	I-85-4-8	1-81-1-6	=	*	IV-85-4-5	IV-81-4-18	1-83-1-7	2	III-83-3-5	11-83-2-2	I-U-78-4-2	2
	APPL	PAC PWR ⁹	PNE BF-1A	PNE BF-1B	PNEDLE-1A	PNEDLE-1B	PNEDLE-1C	PNEDLE-1D	KSAUIH	RCH	RAWLINS	SRTOGA-1A	SRTOGA-1B	SRTOGA-1C	THAYNE	UT WDRF	WLX CP-1A	WLX CP-1B	WY G&F1	WY G&F2	WY POT-1A	WY POT-1B

Transfer applications that share the same docket number (designated 1A, 1B, etc.) involve cases where separate water rights were addressed separately by the Board. The notes indicate multiple water rights handled in a single transfer.

This transfer involved three separate water rights, with appropriations of 5.76 cfs, 82.71 cfs and 10.26 cfs respectively. All had an 1884 priority date. This transfer involved 25 separate water rights that were addressed cumulatively by the Board.

This transfer was denied by the Board without prejudice and invovled the same water rights later approved for transfer in Basin Electric-4.

This transfer involved a cooperative agreement between the City of Casper and Casper-Alcova Irrigation District (CAID) in which the City agreed to fund improvements to prevent losses in CAID's irrigation delivery system. In return, the City is entitled to the amount of water saved by those improvements. The Board denied this transfer without prejudice but approved transfer of the same water rights in Basin Electric-6. 26.4.6.6

The Johnson transfer involved 10 separate rights.

The Board of Control had not rendered a decision on this water transfer at the time this study was completed. **6.8** €

Pacific Power desired to detach the water rights from 1,150.8 acres, amounting to 1915 acre feet per year.