Adapting to the Changing Demand for Water Use through Continued Refinement of the Prior Appropriation Doctrine: An Alternative Approach to Wholesale Reallocation

Steven E. Clyde

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Adapting to the Changing Demand for Water Use Through Continued Refinement of the Prior Appropriation Doctrine: An Alternative Approach to Wholesale Reallocation

ABSTRACT

The prior appropriation doctrine facilitated western expansion and economic growth in the arid West. The doctrine rewarded those who were first by providing them with a relatively stable water supply by protecting them from unreasonable interference by junior appropriators. Beneficial use generally required both the diversion and consumption of water in some economic activity. Today, society recognizes other values in water. Some people fear that the prior appropriation doctrine may prevent the use of water for these non-consumptive purposes and are searching for novel legal theories to circumvent it. This effort is unnecessary. The doctrine is inherently flexible. Given time, it will be adapted to meet the competing needs and interests of society. The prior appropriation doctrine is not an obstacle to change. We do need, however, sufficient time to discern the true direction of our rapidly changing societal values.

INTRODUCTION

The prior appropriation doctrine originated from custom and usage in the early mining camps and irrigated farms of the West. Its basic tenet—first in time is first in right—rewarded those who were simply first, with little regard to the efficiency or economy of their use, or whether more beneficial uses of water were being precluded. Beneficial use became

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*Director-Shareholder in the Salt Lake City, Utah law firm of Clyde, Pratt and Snow, P.C. His practice emphasizes natural resources law, with a primary emphasis on water law. He has been a frequent lecturer on water rights transfer issues, and has published numerous papers. He served as vice-chairman of the Water Resources Committee of the Natural Resources Law section of the American Bar Association for three years. He chaired that committee for the period 1985-1986 through 1987-1988, and has recently been elected to serve on the governing Council of the Natural Resources Law Section. He is also the Chairman elect of the Energy and Natural Resources Law Section of the Utah State Bar Association.

the measure and the limit of the water right. To be beneficial, the use must promote economic activities, and generally there must be actual diversion and consumption of water.

Once perfected, the water right becomes a vested, perpetual property interest subject only to prior rights and the possible assertion of dominant federal interest. The water right is entitled to full legal protection including due process. The protection of prior rights has been given express judicial sanction as a matter of "natural justice."

The policy of most western states has been to maximize the economic development and use of its water resources. Little thought was given in the early days of western settlement to water conservation, or to the protection of the environmental or aesthetic values in water resources. Conservation, to the extent it was addressed, entailed the storage of the random flows of mountain streams for late season irrigation use.

The federal government's acquiescence in the settlement of the West and the appropriation of water rights under state law promoted western migration and the expansion of our national economy. The doctrine of "first in time, first in right" assured the early settlers of a relatively stable water supply and protected them against interference by junior appropriators. The doctrine served the West well in the past. Today, however, it has the potential to impede the reallocation of water resources to new uses. Strict application of the doctrine may even create artificial legal water shortages by protecting inefficient or unperfected water rights and uses from interference by junior appropriators.

The prior appropriation doctrine does not need to be an obstacle to change. It is inherently flexible. It can be adapted to meet today's changing economic, social, and environmental concerns. For example, non-diversionary, instream rights were essentially unheard of ten years ago. The only limited exceptions in the West were for livestock water from a stream

4. Perfection means that water has physically been put to use. Once an application is approved, the applicant is given a specific amount of time within which to complete the construction of his diversion works and to place the water to beneficial use. An applicant may be granted additional time within which to complete the appropriation upon a showing of diligence or reasonable cause for delay. Diligence requires the applicant to make a reasonable effort to accomplish his undertaking with the dispatch expected of men engaged in a like enterprise, who desire a speedy accomplishment of their designs. Carbon Canal Co. v. Sanpete Water Users Ass'n, 10 Utah 2d 376, 353 P.2d 916 (1960).
7. R. Dewsnup & D. Jensen, supra note 1 at 475, 719.
and the floating of logs to market.\textsuperscript{8} Today, several western states have given instream rights judicial or legislative sanction.\textsuperscript{9}

Further change in the prior appropriation doctrine will occur as a natural consequence of the shift in societal values and economic forces in the West. It is not necessary to force change through the grafting of theories such as the \textit{Public Trust Doctrine} onto the prior appropriation doctrine.\textsuperscript{10} This paper demonstrates the inherent flexibility of the prior appropriation doctrine and its adoption to accommodate societal and economic change.

The author is a practitioner in Utah and, as a result, the majority of the examples are drawn from that state. Virtually every example using Utah as the basis for illustration reflects a problem throughout the West.

PROTECTION OF EXISTING RIGHTS THROUGH THE RULE AGAINST INTERFERENCE

A water right acquired under the appropriation doctrine becomes a vested, perfected property interest.\textsuperscript{11} It is entitled to protection against unreasonable interference from other water users.\textsuperscript{12} An appropritor may change his or her place of use, nature of use, or point of diversion of his or her water right.\textsuperscript{13} The right to change is held to be an inherent, but not an absolute right.\textsuperscript{14} The right to change is qualified in that a change of use may be made only so long as no other rights, whether junior or senior in priority, are impaired.\textsuperscript{15}


\textsuperscript{11} Hunter v. United States, 388 F.2d 148, 153 (9th Cir. 1967).


\textsuperscript{13} \textit{E.g., UTAH CODE ANN. § 73-3-3} (Supp. 1988).

\textsuperscript{14} Langenegger v. Carlsbad Irrigation Dist., 82 N.M. 416, 483 P.2d 297 (1971); White v. Wheatland Irrigation Dist., 413 P.2d 252 (Wyo. 1966).

Under most change of use statutes, an appropriator may reallocate his or her water to other beneficial uses any number of times without loss of their original date of priority. This is clearly of importance. It allows appropriators to reallocate their water to new uses, while still being assured of protection against interference by other water users. The requirement of non-interference, however, limits the nature and extent of any such change of use by the appropriator. The proposed change of use may not interfere with the vested rights of others, nor may the water right be expanded by virtue of the change of use.

Interference means the deprivation of water. It may occur in any number of ways. An appropriator may seek to change his or her point of diversion along a stream or from a surface stream to the underground basin. The new point of diversion may enable the appropriator to intercept water that previously reached the points of diversion of others downstream, thereby depriving them of the water they need to satisfy their vested rights. The appropriator may change his or her place of use so that the return flow from this use may return to another drainage basin. The water may return at a point in time when the downstream appropriator may no longer need it or be able to use it. The point of return may also change so that water returns to the same water course, but at a point below where downstream user may gain access to the water.

Downstream water users generally acquire a vested right against all upstream water users to have stream conditions remain substantially as they were when they made their appropriations. This right extends both to the time of year when the water is needed and to quantity of water available. Any excessive disruption to the established return flow pattern by an upstream junior appropriator will not be tolerated if these fluctua-


16. E.g., UTAH CODE ANN. § 73-3-3 (Supp. 1988).


tions unreasonably interfere with prior vested rights. The law requires this result, and the rule has been strictly enforced. The necessity to protect vested rights against unreasonable interference could be a deterrent to the reallocation of water to new uses. That, however, has not proven to be the case.

THE STATE ENGINEER'S ROLE IN MITIGATING IMPACTS

State Engineers have a variety of choices when reviewing a new appropriation or a change of use. Conditions may be imposed in approving either an application to appropriate or to change the use of water to minimize interference. These may include restrictions on the duration of pumping, limiting the depth of a well, or specifying the zone from which well production may occur. An application may be approved in part (authorizing a change of use of only a portion of the underlying right), or restricted as to the time of year or total diversion of water that can be made during the year. State Engineers must deny an application if the interference cannot otherwise be mitigated.

THE APPLICANT'S ABILITY TO VOLUNTARILY MITIGATE INTERFERENCE

Junior appropriators of groundwater, whose appropriation or change of use may interfere with the rights of others, may make perpetual replacement at his or her own expense. If the cost of replacement is too steep, it may discourage the junior appropriator from attempting further water development or reallocating water to some new use, thus perpetuating the old and possibly inefficient use of the water. The appropriator might acquire the conflicting right thereby mooting the controversy altogether. In Utah, an appropriator is granted a right of eminent domain to assist him or her in doing so. The cost of acquisition may curtail the use of this remedy as well.

The law favors change provided that the rights of others are not damaged in the process. The risk of interference is on the junior appropriator. If, however, the costs of mitigation are placed totally on the junior appropriator, it may restrict the reallocation of water to non-revenue producing uses. The costs of mitigation may simply be too steep for anyone

21. See e.g., id. at 20, 242 P.2d at 775; Reynolds v. City of Roswell, 99 N.M. 84, 86, 654 P.2d 537, 539 (1982) (citing supporting cases and statute).
22. See, e.g., Tanner v. Humphreys, 87 Utah 164, 48 P.2d 484, 487 (1935) (citing UTAH REV. STAT. §§ 100-3-3, -8 (1933)).
23. E.g., UTAH CODE ANN. § 73-3-23 (1980).
24. Id.
to incur but those who can afford to reallocate water to some higher economic use.

The Utah Supreme Court held in *Current Creek Irrigation Company v. Andrews*,\(^{26}\) that a subsequent groundwater appropriator must drill a deep replacement well, equip it and pay the power bills perpetually as a condition to using his new wells. The new wells had lowered the water table, thereby reducing the artesian pressure in the aquifer to a point where the senior appropriator could no longer obtain its water without pumping its wells. The holding of the court essentially assured the senior appropriator a vested right to a full underground reservoir and artesian pressure.

Under the *Andrews* rule, each new appropriator would be faced with the economic burden of providing replacement water to every more senior appropriator in the basin. Had this policy prevailed throughout the West, groundwater development would be limited to only those with sufficient economic resources to pay the extreme costs of replacement to all senior appropriators or the acquisition of all senior rights.

The strict application of the rule against interference by the *Andrews* court appeared too restrictive to other courts. They circumvented the rule by redefining interference in the groundwater context to facilitate more full development of this valuable water resource. For example, the New Mexico Supreme Court in *City of Roswell v. Reynolds*,\(^{27}\) held that the lowering of the groundwater table did not by itself constitute interference with another’s water right. The court suggested that impairment might occur only where the lowering of the groundwater table caused a reduction in water quality. The Supreme Court of Colorado has taken a similar position. In *City of Colorado Springs v. Bender*\(^{28}\) the Court held that an owner of a shallow well was not entitled to enjoin the pumping of a deeper well on the basis that it might impair his earlier priority water right. The Court affirmed his priority, but stated that the obligation of any appropriator of water is to provide a reasonable means of effectuating his or her own diversion. The prior appropriator could not assert his priority as a means of commanding the entirety of the water supply in order to protect his ability to withdraw only a fraction of the whole. No injunction would issue unless the appropriator demonstrated that his means of diversion were reasonably adequate to meet the historical purposes of his appropriation. Other states have followed this approach.\(^{29}\)

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\(^{26}\) 9 Utah 2d 324, 344 P.2d 528 (1959); see also Salt Lake City v. Gardner, 39 Utah 30, 114 P. 147 (1911).

\(^{27}\) 86 N.M. 249, 522 P.2d 796 (1974).


More recently, in *Alamosa-La Jara Water Users Protection Association v. Gould*, the junior appropriators were depleting the surface stream. Their heavy groundwater withdrawals caused increased recharge from the surface stream to the groundwater aquifer. The Supreme Court of Colorado suggested that the senior appropriator’s historic method of diversion should not stand as an impediment to full utilization of the available water resource by junior appropriators. The Court held that where the surface and groundwater sources were integrated, a senior surface appropriator may be required to withdraw underground water tributaries to the stream in order to satisfy his or her appropriation.

The Court further suggested that a junior appropriator may be assessed a portion of the cost of improving the senior appropriators means of diversion, where those improvements were necessitated by the junior’s diversion. So long as those costs are reasonably within the junior appropriator’s ability to pay, this requirement should not be too serious an impediment to change.

The senior appropriator’s right is vested. It is clearly entitled to recognition and legal protection from unreasonable interference. However, it is not unreasonable to impose at least some of the costs of mitigation on the senior appropriator where his or her means of diversion are inefficient or wasteful. The courts must strike a reasonable balance in determining where the economic burden should fall.

A NEEDED REFINEMENT—PROVIDING INCENTIVES FOR CONSERVATION

In the law, it is well established that a water right cannot be enlarged by virtue of a change of use. The enlargement or increased consumption of water may cause interference with the rights of downstream appropriators. Thus, an appropriator who changes his or her point of diversion from one tributary to another cannot withdraw more water from the new point of diversion than would have been available to them at their historic point of diversion. Similarly, an appropriator generally cannot use the water he or she saves through employing more efficient means of application to irrigate additional land. This rule is based on the notion that applying the same amount of water to a larger surface area may increase evaporation and decrease return flow, thereby increasing consumptive use of water. Since water rights are limited to that quantity needed for the purposes of the original appropriation, such an expansion is prohibited.

30. 674 P.2d 914 (Colo. 1983).
31. Id. at 935.
32. Id.
This rule, however, makes no sense where consumptive use is not increased, as in the case of a change to a drip trickle irrigation system or to sprinklers. Its application also creates little incentive to curtail existing flood irrigation practices. Water lost through seepage or evaporation in open irrigation ditches and canals can be saved through a variety of conservation measures. Cement lining or piping an open ditch is expensive. Because the law is unsettled as to who actually owns the water salvaged through conservation efforts, the economic return is rarely worth the investment. In Utah, an appropriator must file an application to appropriate the conserved water if he or she intends to legally use it. To be approved, the appropriator must demonstrate that the water conserved was not already appropriated by others and must also meet the other statutory criteria for a new appropriation. If the appropriation is approved, the water right acquired is the most junior priority right on the stream. It is also one of the first rights curtailed during times of drought or other shortages. Thus, little economic incentive exists to abandon wasteful irrigation practices.

Economic incentives can be created to encourage conservation. One such effort is under discussion in the Imperial Irrigation District of California as a result of a 1984 decision of the California State Water Resources Control Board. The board concluded that the Imperial Valley irrigators were wasting water in violation of Article X, Section 2 of the California Constitution. The district was ordered to eliminate its high seepage loss and excessive return flow to the Salton Sea. The Metropolitan Water Board of Los Angeles provided the economic incentive to try. The irrigation district and the water board are working to salvage water previously lost to seepage and evaporation. The Metropolitan Water Board offered to provide the financing for the water conservation activities. The economic incentive to the Metropolitan Water District is the acquisition of an additional approximate 100,000 acre feet of water annually for municipal and industrial use in Los Angeles. This water has previously been lost to everyone. The incentive to the irrigators is the elimination of potential liability for flood damages to land adjacent to the Salton Sea, and the prospect of selling this salvaged water to Los Angeles. Thus, a

liability has the potential of becoming a salable, valuable asset.

The Imperial Valley is essentially at the tail end of the Colorado River system. There are few downstream appropriators in the United States who could assert a prior claim to this salvaged water. Mexico's share of the Colorado river is protected by Treaty. California has also adopted a statute which rewards the conserver of water with title to the salvaged water. This insures the appropriator of the right to sell and obtain a return on the dollars invested in conservation.

Thus, this project may succeed where others may fail. However, the legal uncertainties over title and the right to use or sell the salvaged water have not yet been resolved. These legal uncertainties impede conservation efforts. These risks and expenses simply outweigh the gains to make conservation worth the effort.

The law should reward those who conserve by giving them clear title to the water they salvage through conservation. Title alone may not be sufficient incentive to promote conservation. If the priority of the salvaged water is the most junior on the stream, the existence of a valid title provides little comfort during times of shortage.

In some states, State Engineers could add additional incentives for conservation by defining the salvage practice to be in the "public interest." For example, in Utah, an application to appropriate salvaged water could be moved ahead of a prior pending application which the State Engineer considers to be less in the public interest. A priority earlier than other applications waiting in line could afford a degree of protection for this conserved and appropriated water right, thus encouraging its development.

OTHER POTENTIAL IMPROVEMENTS TO THE PRIOR APPROPRIATION SYSTEM

State Engineers generally lack express statutory authority to expand the season of use or to change the period of diversion. There is case authority that the protection against unreasonable interference afforded to downstream appropriators extends not only to the quantity of water being used, but also to the time of year when water is used.

41. See infra, text accompanying notes 50-56.
42. UTAH CODE ANN. § 73-3-3 (Supp. 1988), expressly authorizes changes in the place and nature of use and in the point of diversion.
The irrigation season, at least in the mountainous West, is clearly seasonal. It runs roughly from the first of April to the end of October of each year. Irrigation rights generally yield the largest quantity of water available for a change of use simply because irrigation use consumes a great quantity of water. Thus, irrigation rights have been generally more attractive for acquisition and conversion to new uses than rights appropriated for some less consumptive use. They also generally have some of the earliest dates of priority on a given stream system. This affords some insurance in case of drought or other shortage conditions.

Industrial water users generally need water on a year-round basis, rather than during a seven-month irrigation season. The inability to convert seasonal irrigation rights into year-round municipal and industrial uses threatened to lock many states into an agrarian economy and push industrial growth and economic expansion into neighboring states without such rigid policies. Practicality, however, has prevailed. In states such as Utah, even though no express statutory authority exists to alter the season of diversion and use, the Utah State Engineer has approved change applications that request an expanded season of use as a matter of administrative policy. In doing so, strict conditions have been imposed governing the volume of water that can be both diverted and depleted from the river system through the new use. This helps ensure that no more water will be consumed through the new use, even though the period of diversion and use is expanded to a year-round basis.

Thus, the prior appropriation doctrine has not prevented the reallocation of seasonal irrigation rights to year round municipal and industrial uses in Utah, even when no express legal authority may exist. The uses have changed as a natural consequence of the change in the economic base of the West. Vested rights have been protected without disrupting the orderly transition of land and water use to accommodate the urbanization of the West.

ADOPTION TO CHANGE THROUGH INTERCHANGES OF WATER SOURCES

In some western states, an appropriator may exchange his or her water source for another, so long as he or she can replace the same quantity of water to those downstream.44

An exchange often involves the use of water in storage. The individual enters into an agreement with the owner of the stored water. The agreement provides the individual the right to divert and use some tributary

source of water, either upstream or downstream from the reservoir, in exchange for which an identical quantity of water is released from storage to meet the rights of those downstream. The individual must also file an application to exchange with the State Engineer and gain State Engineer approval of an exchange application before he or she may use the water by exchange. The exchange application is approved if replacement can be made and no interference occurs at the new point of diversion.

Exchange applications are fairly unusual in water law in that there is no requirement that they ever be perfected. Most water right appropriation statutes require the appropriator to construct diversion works and place the water to beneficial use within the statutory time period. The application is lapsed if this is not accomplished.

An exchange application is based upon a perfected right. It involves an exchange of water sources rather than constituting a new appropriation of water. Consequently, there is no requirement that the exchanged water ever be put to beneficial use. Although the owner of an exchange application is not required to use the water, he or she nevertheless has an approved water right. This right is entitled to be protected from unreasonable interference. This anomaly can lead to some interesting results.

In the Park City, Utah recreational area, water users have contracted for approximately 10,000 acre feet of water per year to be used by exchange through the release of stored water. The water is to be diverted from numerous individually owned wells upstream from the reservoir. Approximately half of this water is currently in use. The remaining 5,000 acre feet of water is annually held under approved contracts and approved exchanged applications—primarily by land speculators—but is unused. The water was subscribed for to assist in the development of real property in the ski resort and recreational areas near Park City, Utah.

The economic downturn of the mid-1980s brought land development in this area to a halt. As a result, the water has gone unused, but is still tied under contract and approved exchange applications that, under Utah law, could not be lapsed. Their existence prevented the State Engineer from approving any other exchanges due to his fear that approval of any further upstream exchanges may over-draft the safe-yield of this ground water basin if these previously approved exchanges ever came into use. They also prevented the owner of the stored water upon which the exchanges are based from selling this water to others who have the need.

48. Id.
and interest in using it. Thus, the existence of the previously approved but unused exchange applications have created a cloud over further groundwater development in this area of the state.

Utah amended its exchange application statute in 1985 largely in response to this situation. The State Engineer may now require an applicant to provide him with information, on request, demonstrating that the exchange is in fact occurring and that the applicant has the legal right to use the underlying water right for the exchange. The State Engineer may lapse an exchange application if: the water right upon which the exchange is based has terminated; if the exchange can no longer be carried out as contemplated in the application; or if the applicant fails to comply with any conditions prescribed by the State Engineer in approving the exchange. One condition being frequently inserted today is that the water so exchanged be placed in use within a prescribed period of time. Failure to do so will result in the lapsing of the exchange, thus freeing up water for other existing uses.

MEETING CHANGING DEMANDS THROUGH USE OF "PUBLIC INTEREST" CRITERIA

State Engineers could aid the prior appropriation doctrine to adapt to changes through a more expanded use of their public interest powers. Many states recognize a public interest component in a water right. The public interest component has been expressed in a variety of ways, but always in vague and general terms. For example, Utah defines it as an application that will interfere with a more beneficial use of the water for other purposes, or one that will prove detrimental to the public welfare or the natural stream environment. Wyoming authorizes its State Engineer to deny an application that threatens to prove detrimental to the public interest. These determinations are left to the State Engineer. State Engineers are not necessarily the best judges of what is or is not in the public interest. However, the initial decision must be made by someone. State Engineer decisions are subject to judicial review so that an appropriator whose application is denied on public interest grounds may seek redress if the State Engineer has been too zealous in asserting his or her authority.

The extent of the public interest power of a State Engineer is largely untested. If used properly, it could be a powerful tool to assist in encouraging conservation and the reallocation of water to new uses. For

49. Id. at §73-3-20.
50. IDAHO CODE §42-1737 (Supp. 1987); NEV. REV. STAT. §533.370 (1986); N.M. STAT. ANN. §72-5-7 (1978); UTAH CODE ANN. § 73-3-8 (Supp. 1988); WYO. STAT. § 41-203 (1977).
51. UTAH CODE ANN. § 73-3-8 (Supp. 1988).
52. WYO. STAT. § 41-203 (1977).
example, State Engineers and their counterparts might use their public interest powers to require appropriators to abandon their wasteful and inefficient diversion and application practices as a condition to approval of a change application or a new application to appropriate. California has taken this idea to the extreme by giving its Water Resources Control Board authority to impose conservation measures designed to protect the public's interest in the state's water on existing vested rights. Other states have vested their State Engineers with broad regulatory powers to protect their groundwater supplies from over-drafting.

The public interest standard has been asserted only sparingly in the past. It is not well defined either in the statutes or in the cases that have employed it to defeat or promote a particular use or project over another. One of the early public interest decisions was by the Utah Supreme Court in 1943 in Tanner v. Bacon. There, the Court approved a junior multi-purpose application over a senior single-purpose application in the same stream. While the Court did not clearly articulate that the public interest should be controlling, it did hold that where a large multi-purpose project was ready for construction, the project should be given preference over the other more speculative, competing power projects.

The storage project would have provided municipal water for numerous cities as well as irrigation water for thousands of acres of new farm land. It also had incidental public benefits, such as flood control, power generation and recreation. The private power project would have taken the river flow out and above and returned it to the river below the dam site. Thus, the two projects could not co-exist. The Court agreed that the multi-purpose project should be approved with a priority ahead of the prior and competing power application. Other public interest decisions have reached similar results.

The public interest statutes generally lack specific guidelines for application. In the absence of express legislative policies, the courts and administrative agencies have been reluctant to stray too far from traditional views regarding water appropriation, priorities, and development.

Individual appropriators could further this process by agreeing to the sequential use of the same water supply. The State Engineer could approve

55. 103 Utah 494, 136 P.2d 957.
the application in the public interest, knowing that the more senior right that might have been impaired by the new appropriation is no longer an obstacle and need not be protected against interference. This arrangement could last indefinitely, or for a period of years equal to the useful life of the favored use or project. Upon the end of the project's useful life, the deferred use could commence.

This process would allow a desired project or use to go forward with reduced fear that its water rights would be stripped from it through the assertion of priority by some earlier priority right. It also allows two water users to utilize the same water right thereby reducing pressure to develop additional water supplies. The remaining undeveloped water could be left in the stream for in-stream uses, or appropriated to some other beneficial use. The parties could negotiate the issue of what constitutes adequate consideration for the deferral of the senior appropriator's use of water. If the junior user is willing to pay the senior user more for not using the water than the senior would gain by using it, chances are greater that the water will remain unused by the senior.

PROMOTING ADAPTION TO CHANGE THROUGH BETTER USE OF RETURN FLOWS

Much of the readily developable water in the West is already fully appropriated and in use. The economics of developing the remaining unappropriated water is questionable, and may never be politically feasible again. It is more probable that this water will be withdrawn from further appropriation to protect in-stream flows for fish habitat or wilderness areas. Thus, future economic growth and development may well depend upon the better utilization of existing appropriated water rights and developed resources.

One water source that goes largely unused in the West is treated sewage effluent from municipal treatment plants. Although sewage effluent usually is not treated to potable standards, it can be used for irrigation and some industrial uses. This would make higher quality water available for other uses without developing additional water resources to meet these needs. The law regarding the right of ownership and the use of sewage effluent, however, is unsettled. This uncertainty creates a legal constraint on the ability of municipalities to sell or lease this available and potentially valuable water resource. It also restrains State Engineers from approving applications to appropriate, or from allowing other uses of effluent water to occur.

In many states, a city has the legal ability to recapture and re-use its sewage effluent within its boundaries for uses consistent with its original appropriation.57 This is consistent with the rule of law applied to some

appropriators regarding their right of recapture and re-use.\textsuperscript{58} The conflict develops when the effluent is made available for new uses outside the city or for uses not covered by the original appropriation.

The above concept is based on the legal doctrine that so long as water remains within the dominion and control of the original appropriator, he or she has the right to recapture and re-use it so long as he or she has some beneficial use for the water and the use is not beyond the original appropriation.\textsuperscript{59} Any water allowed to escape the original appropriator may be intercepted and used by others before it reaches the natural water course, and in some instances, it may even be appropriated by them.\textsuperscript{60} A problem with this doctrine is that the downstream junior appropriators acquire no vested rights against upstream appropriators that could entitle them to compel the upstream appropriator to continue wasting water for their benefit.\textsuperscript{61} At the same time, the upstream use has no right to sell because, once the wastewater reaches a natural water course, it loses its identity as the property of the upstream appropriator. It becomes part of the public water supply and is available for reappropriation by those downstream.\textsuperscript{62}

While one cannot compel continued upstream waste, downstream water users relying on irrigation return flows are entitled to rely upon the continued availability of return flow water to help satisfy their vested rights.\textsuperscript{63} A proposed change of use by an upstream water user may be enjoined if it threatens to impair his or her ability to receive it.\textsuperscript{64} Fortunately, as just noted above, this expectation of continued irrigation return flows does not go so far as to require an inefficient irrigator to continue inefficient irrigation practices. No appropriator can compel another to continue to waste water for the benefit of the former.\textsuperscript{65} The upstream appropriator may cease to irrigate or may modify his or her irrigation practice to more efficiently utilize his or her water. In some states, they may recapture and reuse all of their own wastewater so that all water diverted by the upstream appropriators is fully consumed. In the case of 100 percent

\begin{itemize}
  \item \textsuperscript{59} Smithfield West Bench Irr. Co., 113 Utah 356, 195 P.2d 249; Thayer v. City of Rawlins, 594 P.2d 951 (Wyo. 1979).
  \item \textsuperscript{62} Pulaski Irr. Ditch Co. v. City of Trinidad, 70 Colo. 565, 203 P. 681 (1922); Wyoming Hereford Ranch v. Hammond Packing Co., 33 Wyo. 14, 236 P. 764 (1925).
  \item \textsuperscript{63} Brantley v. Carlsbad Irrigation Dist., 92 N.M. 280, 587 P.2d 427 (1978).
  \item \textsuperscript{65} Bower v. Big Horn Canal Ass'n, 77 Wyo. 80, 307 P.2d 593 (1957).
\end{itemize}
consumptive use through improved efficiency, no water is returned to the water course. Alternatively, there may be return flow to the stream, but at a different location. No downstream appropriator has standing to object to loss of this waste water.

The same rule has apparently been applied in the case of sewage effluent. Downstream users have no vested rights in the point of return or discharge of municipal sewage effluent even where the effluent has been allowed to return to the water course. It has also been held that State Engineers have no authority to condition a change of use by a city in a way that would force a municipality to continue wasting effluent for the benefit of those downstream.

Thus, cities in some states may recapture and reuse their sewage effluent with minimal regard to the impact on those downstream provided, however, that the reuse is consistent with the original appropriation. If the city can recapture and reuse it, it could probably also sell or lease the water to another for use within its corporate boundaries. There remains a split of authority as to the cities' title to such wastewater, and as to the ability to use it to serve areas outside the original boundaries of the municipalities.

The problem of title and out-of-boundary use of sewage effluent is compounded in Utah by a state constitutional provision that prohibits cities from leasing, selling or otherwise permanently encumbering or alienating their water rights or water works.

Thus, a variety of legal uncertainties to the use of sewage effluent still exist. These uncertainties may impede the use of one of our more continuously available sources of water—a use which would free higher quality water for other desirable purposes.

70. Utah Const. art. XI, § 6.
71. The intent of the provision is to preserve the water supplies and water works for the future needs of a city's inhabitants. The effect of this provision, however, is to prohibit cities that have suffered declining populations from selling water rights that are surplus to their foreseeable needs.

A city in Utah is authorized by statute to sell water, as distinguished from the water right, for use outside its boundaries, provided that the water being sold is currently surplus to the city's needs. Any such sale, however, is subject to a perpetual right of recall by the city in the event the water is no longer surplus. Therefore, any sale of effluent or other surplus waters to another for use beyond the city's boundaries would be interruptible and unreliable. Utah Code Ann. § 10-8-14 (1986); County Water Sys., Inc. v. Salt Lake City, 3 Utah 2d 46, 278 P.2d 285 (1954).
IMPROVING EFFICIENCY OF THE PRIOR APPROPRIATION SYSTEM THROUGH SALES OF SHARES IN MUTUAL WATER COMPANIES

Much of the irrigation water in the West is held in the name of mutual irrigation companies. These companies were formed by water users who banded together through the formal structure of a corporation to facilitate the efficient and economical distribution of their water and the construction and maintenance of their diversion and distribution facilities. The incorporators conveyed their water rights to the corporation in exchange for stock certificates. Legal title to the water right was held by the corporation. Equitable title and the right to beneficially use the water was retained by the individual shareholders.

The shares of stock in a mutual company represent a proportionate ownership interest in the water rights and distribution facilities of the company. It entitles the shareholder to call for his or her undivided portion of the water rights in accordance with the company's method of distribution. The company is obligated to deliver the water to the shareholder's place of use.

Many mutual irrigation companies have taken the position that they have the exclusive right to file a change application or otherwise take formal action affecting the water rights of the company. Articles of Incorporation of mutual companies occasionally provide that the water is perpetually tied to the land upon which it is used as a means of deterring the movement of irrigation water to other land outside the companies' distribution systems. It has been this writer's experience that mutual companies frequently protest any effort by a shareholder to change either the nature of use or place of use of his water represented by shares of stock in the mutual corporation.

The mutual irrigation company is really nothing more than a corporate water master. Shareholders are the only ones entitled to use water. The right to make a change of use is an inherent, pre-existing part of the water right. It is not dependent upon statutory authorization. Under most change of use statutes, the party entitled to the use of water is the party

76. C. KINNEY, A TREATISE ON THE LAW OF IRRIGATION AND WATER RIGHTS, § 1487, at 2674 (2d ed. 1912) states. The shareholders in mutual water corporations have certain individual rights which
entitled to make a change of use. Efforts by mutual irrigation companies to deprive their shareholders of their legal right to effect a change of use clearly promote inefficiency and may even constitute an unlawful restraint on alienation or be ultra vires. The prior appropriation doctrine should be interpreted to promote alienation of these shares.

On the other hand, the movement of a large block of water out of a company’s system for use on other lands and for other purposes could harm the remaining shareholders of the company. At a minimum, it could cause some disruption and expense in adjusting distribution schedules and modifying diversion or distribution facilities to respond to the transfer. Where this occurs, the shareholder causing the harm should bear the costs of mitigation. If mitigation cannot occur, the change of use ought to be denied—as in the case of any other change application.

Another problem relating to the transfer of shares involves the hydrological interconnection of all the rights. Water diverted into the company’s system jointly shares conveyance losses with all other users and contributes to the company’s return flow available to downstream water users. If a shareholder withdraws all of the water represented by his or her shares in the company, the other shareholders may well, in the future, bear a disproportionate share of the future seepage and conveyance losses and downstream users may be denied return flow they previously received. These disgruntled users may look to the company to recoup their losses. This type of harm should be mitigated by imposing conditions on the sale. A shareholder seeking to move his or her water out of the company’s system should be required to leave sufficient water in the system to meet his or her proportionate share of the conveyance losses and return flow compensation to the downstream users. This action should avoid any unreasonable impairment to the other shareholders and would enable the shareholder to move the balance of his or her water to its intended new use. This result could be reached through agreement of the parties. The change application also could be structured to achieve this end result. The irrigation company will have met its obligations or protecting the rights of the remaining shareholders and the transferring shareholder will

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77. See, e.g., UTAH CODE ANN. § 73-3-3 (Supp. 1988).
be allowed to exercise his or her legal right of change. Any potential harm to the company or its remaining shareholders will have been addressed.

A shareholder's change application should be allowed to stand or fall on its own merits, like any other change application. It should not be defeated by the erroneous argument that the mutual company alone has the right to authorize a change of use.

This writer believes it is desirable to obtain the company's consent to a shareholder change application where that is possible. Consent, however, is not always possible to obtain and it should not be legally required of the shareholder as a condition of approval. So long as the change of use does not unreasonably interfere with the company or its shareholders, the change of use should be approved regardless of whether the company has given its consent or not. The case law supports this proposition.

The landmark case regarding the ability and right of a shareholder to change his point of diversion, place, or nature of use is Wadsworth Ditch Company v. Brown. There, a shareholder sought to move his water to lands which were not irrigated under the company's distribution system. The defendant ditch company complained that the shareholder could not change the water out of the company's system. The Colorado Supreme Court held that a change could be made so long as it imposed no additional burdens on the company or other shareholders. This rule was reaffirmed by the Colorado Supreme Court in 1975 in Jacobucci v. District Court, where the Court unequivocally held that shareholders have the right to change the place of use if other water users—including other shareholders—are not impaired by the change. The courts of the few jurisdictions that have address this issue have generally followed the Colorado rule.

The shareholder who transfers his or her water out of the company's distribution system still remains a shareholder of the company. As a shareholder, he or she is still subject to annual assessments by the company to pay its annual operation and maintenance expenses. The shareholder must pay or subject his or her shares to statutory sale for non-payment, notwithstanding the fact that he or she no longer has any water being distributed through the company's system. Wadsworth Ditch Co. v. Brown, 39 Colo. 57, 88 P. 1060 (1907); In Re Rice, 50 Idaho 660, 299 P. 664 (1931); Twin Falls Canal Co. v. Shippen, 46 Idaho 787, 271 P. 578 (1928).

The company should also be able to impose reasonable conditions on such a change to protect...
CONCLUSION

The prior appropriation doctrine can be an instrument of change. It can be used effectively to promote more efficient utilization of appropriated water. It can facilitate the reallocation of existing rights to new (but not necessarily economic) uses, and protect uses that are perceived to be more in the public's interest. Through proper administration, State Engineers may force an appropriator to relinquish his or her claim so that the water becomes available for beneficial use by others.

Uncertainties in the law need to be resolved in our favor of creating incentives to conserve and better use our existing appropriated water resources. When this occurs, water rights will more freely move in the market place to other uses. If the appropriators do not react to marketplace incentives, State Engineers should use their public interest powers to provide additional incentives to investors and other water users to undertake conservation measures as an alternative to developing additional water supplies.

The author has demonstrated that the prior appropriation doctrine has adapted and will continue to adapt to change. While the system is far from perfect, the potential clearly is there.

Some argue that change in the prior appropriation doctrine is not fast enough to satisfy the "public will." The public's will, however, often shifts like the wind. The wholesale reallocation of vested water rights through the assertion of the Public Trust Doctrine is not the best way to address the reallocation issues. The basis of prior appropriation is the notion that water is a marketable commodity. Water rights will be allocated to new uses by the current appropriators or their successors in interest when the right economic incentives exist to cause it to occur.

Reallocation has a cost. Society must determine who should bear or who can best bear the cost of reallocation. If reallocation is forced through the application of the Public Trust Doctrine or through too aggressive use of the State Engineer's public interest powers, the costs of reallocation will likely be unfairly heaped on the agricultural water user. That user will be told that the property right he or she once had is reduced or gone because the courts have redefined the rules of the game.

The erosion of the "vested water right" in the 1980s is troubling at best. The costs of forced reallocation are steep. Whether those costs should be borne by the irrigators alone, or should be shared by those who seek the rights of the remaining shareholders. These conditions should not be so onerous that they make it physically or economically impossible for the shareholder to exercise his or her legal right to make a change of use. They should, however, protect the interests of the remaining shareholders to ensure that their rights are not impaired by the change.

81. See cases cited supra note 10.
to take these water rights from their appropriator and out of economic use and apply it to some public trust use is an interesting philosophical question. The debate is likely to continue for many years to come. The author believes that debate should not be forced upon private water uses today if our existing system is capable of accommodating existing needs.

The prior appropriation doctrine can assist in the reallocation process if it is given the time and opportunity to do so. The doctrine is inherently flexible. It can be molded by the courts and legislatures to accommodate our changing social values. The evolutionary process occurs slowly, however, and may move too slowly to satisfy all segments of society. If change is forced, the results may not justify the costs.