

agencies will keep the inventory accurate. The rebuttal is, of course, that everything is still in favor of the federal government.

Despite such criticism, some action to reduce the uncertainty of the dimension of federal (and Indian) water rights would be welcomed by all concerned. The status quo is simply unacceptable. As a first step, then, this proposed legislation could serve to get the quantification process underway, and other lingering points of controversy--such as the issue of compensation--could be addressed at a later time in the process. Investors in energy development would have some sense of stability in their decision making for the first time since the Arizona v. California decision of 1963.

#### 8. The Mexican Treaty of 1944

Unquantified federal (and Indian) water rights act as a destabilizing influence on the western water-for-energy picture. The major destabilizing factor is the uncertainty of the amounts which might suddenly--or someday--be demanded. There is one instance in which the amount is quantified--the obligation to provide water 1.5 million acre-ft per year\* to Mexico under the treaty of 1944.<sup>37</sup> As an international treaty obligation, the pledge occupies a special place in both international and U.S. domestic law.

Treaties are made by the President, with the "advice and consent" of the Senate,<sup>36</sup> and, together with the Constitution and the laws

---

\*In addition, "...in any year in which there shall exist in the river water in excess of that necessary to satisfy the requirements of the United States and the guaranteed quantity of 1,500,000 acre-feet...the United States...[will attempt] to supply additional quantities of water... up to a maximum of 1,700,000 acre-feet...." (Reference 37, Article 15).

of the United States, they stand as "the Supreme Law of the Land."<sup>35</sup> Treaties, therefore, are superordinate to actions taken by the states individually or collectively:

It is the necessary result of the explicit declarations of the Federal Constitution...that where there is a conflict between a treaty and the provisions of a state constitution or of a state statute...the treaty will control. Its provisions supersede and render nugatory all conflicting provisions in the laws or constitutions of any state.<sup>48</sup>

This means that before a state can allocate "its" waters, or before a compact between two or more states can allocate the water of shared watercourses, provision must be made for deducting water amounts promised by treaty by the federal government. This is acknowledged in the Upper Colorado River Basin Compact:

Nothing in this Compact shall be construed as...affecting the obligations of the United States of America under the Treaty with the United Mexican States....<sup>41</sup>

Thus, the 1.5 million acre-ft promised to Mexico is to be deducted from the Colorado River flow for any given year before allocating the remainder via the pertinent compacts.

It has not been decided how the obligation is to be borne between the Upper Basin states and the Lower Basin states--in particular, whether or not the Lower Basin tributaries should be taken into account in computing the amount of surplus which, under the Colorado River Compact, is to be used for meeting the treaty commitment. If the Lower Basin tributaries share the burden, it would lessen the Upper Basin's share of the treaty obligation, thereby making available more Upper Basin water for oil shale development (or other) purposes.

In the drawn-out treaty negotiations, the original offer of the United States in 1929 was for one-half of the 1.5 million acre-ft, which was the amount used for irrigation and domestic purposes by Mexico

from the Colorado River in 1928.<sup>42</sup> However, the treaty covers three rivers: the Colorado River, the Rio Grande, and the Tijuana River. It is said that powerful political forces in Texas, desirous of getting a maximum amount of Rio Grande water for Texas agriculture, effectively bartered away "extra" Colorado River water to get additional Rio Grande water under the treaty.\* The result is that the United States, contributing approximately 30 percent of the flow of the Rio Grande, under the treaty takes about 50 percent, while Mexico, contributing virtually nothing to the flow of the Colorado, takes roughly 10 percent of the average annual flow of the Colorado River. From a quantity standpoint, considering these two major rivers, the figures are shown in Table 19-2.

Table 19-2

FLAWS AND ALLOCATIONS IN THE COLORADO RIVER  
AND THE RIO GRANDE  
(million acre-ft)

<u>River</u>	<u>Approx. Yearly Flow</u>	<u>U.S. Contribution</u>	<u>Mexican Contribution</u>	<u>U.S. Allocation</u>	<u>Mexican Allocation</u>
Colorado	15	15	0	13.5	1.5
Rio Grande	2	0.67	1.33	1.0	1.0

Thus, the United States contributes a total of 15.67 million acre-ft per year and receives 14.5 million acre-ft in allocations, while Mexico

---

\*As a matter of interest, from Ft. Quitman, Texas, to the Gulf of Mexico, 70 percent of the Rio Grande's water originates in Mexico (Reference 42, p. 375).

contributes 1.33 million acre-ft per year and receives 2.5 million acre-ft per year.

Although the Colorado River will soon be overallocated from the U.S. standpoint alone, it is practically impossible that any diplomatic adjustments will be made to the amounts of those obligations. In the first place, the parties have come to rely on the provisions of the treaty; for example, Mexico uses its Colorado River water to irrigate 450,000 acres in the Mexicali Valley, a field cultivation valued at \$200 million.<sup>42</sup> Second, now that Mexico has discovered significant quantities of oil, there will be a desire in Washington to preserve access to this oil as a hedge against future Arab (and other) embargoes.

Recent action in Washington reinforces this good faith commitment. In the Colorado River Basin Project Act,<sup>43</sup> Congress addressed the issue of projected water shortages, specifically mentioning the augmentation possibilities of desalination, weather modification (mountain snowpack augmentation) and interbasin transfers. With respect to such augmentation, Congress declared that

The satisfaction of the requirement of the Mexican Water Treaty from the Colorado River constitutes a national obligation which shall be the first obligation of any water augmentation project...authorized by Congress.\*

Still further evidence of the national commitment followed Mexican complaints about the poor quality of the water it was receiving. After discussions were held at the head-of-state level and lower diplomatic levels, Congress passed a law<sup>44</sup> aimed at decreasing the salinity

---

\*The figure used in the Act is 2.5 million acre-ft which represents the 1.5 million acre-ft Treaty obligation plus 1.0 million acre-ft for calculated Basin losses in supplying the Treaty amount at the border (Reference 42, Section 202).

of the Colorado River so that the quality of the water received by Mexico will be equal to (or better than) that found in the lower main stem of the river.\*

Both of these treaty-related actions have implications for the water-for-energy picture. With respect to augmentation, whatever water quantities are provided will be a dividend; the extra water will be a "bonanza" addition to the river's total flow while the amount dedicated to meeting the Mexican Treaty obligation will remain constant. The net increase represents additional water for energy development (or other) purposes. With respect to the water quality issue, until the desalination plant provided for in the legislation is built and comes on-line, low-salinity water is to be released upstream at federal water storage locations to dilute the high-salinity water heading for the border. Water for dilution will come "off the top" of the available water supply of the Colorado system as a federal obligation--reducing the net amount available for allocation under the compact and state law formulas.

#### 9. The Federal Government as a Disburser of Water

The Reclamation Act of 1902<sup>45</sup> provided authority and funding for the construction of storage and diversion facilities to provide water for irrigating semiarid lands, thereby "reclaiming" the lands from their near-desert condition. Later amendments broadened the uses to which the water could be put, such as municipal and industrial uses, and provided for production and sale of electrical energy in conjunction with reclamation projects.<sup>46</sup>

---

\*This diplomatic and political action made moot the legal question of whether or not the 1944 treaty addressed the issue of water quality.

In 1967, the Bureau of Reclamation of the Department of the Interior initiated a program under which it planned to sell water from the Boysen\* and Yellowtail† Reservoirs to industrial users for industrial purposes. Table 19-3 shows the status of these industrial water sales.

On October 16, 1973, the Environmental Defense Fund and others filed suit in U.S. District Court in Billings, Montana, to declare the water contracts null and void and to put a halt to the industrial water marketing program. Defendants in the original lawsuit included the Secretary of the Interior, the Army Corps of Engineers, the Commissioner of the Bureau of Reclamation, and others. The suit has been amended and parties to the suit have been added, but basically the stage is set for a probable trial in late 1975.

The plaintiffs maintain, inter alia, that<sup>47</sup>

- Both Boysen and Yellowtail Reservoirs were authorized by Congress for the exclusive purposes of providing water for agricultural irrigation, hydroelectric power, flood control, silt control, and supplementation of stream flows.
- Defendants have failed to provide water for agricultural irrigation purposes from these reservoirs.
- Defendants plan to sell to industry 697,000 acre-ft of water annually from Yellowtail which exceeds its usable storage capacity.

---

\*The Boysen Reservoir is in Wyoming on the Wind River, a tributary to the Bighorn and Yellowstone Rivers. Completed in 1952 by the Bureau of Reclamation, it has a total capacity of 952,400 acre-ft of water, of which 549,900 is usable.

†The Yellowtail Reservoir lies on the border between Wyoming and Montana on the Bighorn River. This Bureau of Reclamation project was completed in 1967, and has a capacity of 1,375,000 acre-ft of water of which 613,700 is usable.

Table 19-3

INDUSTRIAL WATER CONTRACTS  
BOYSEN AND YELLOWTAIL RESERVOIRS

Purchaser	Contract Date	Water To Be Used In	Acre-ft Per Year Sold
<u>Yellowtail Reservoir</u>			
Kerr-McGee Corp.	11/09/67	Unspecified	50,000
Shell Oil Co.	11/22/67	Unspecified	28,000
Humble Oil and Refining Co. (now Exxon Corp.)	12/14/67	Unspecified	50,000
Peabody Coal Co.	5/24/68	Montana	40,000
Reynolds Mining Corp.	6/19/69	Wyoming	50,000
International Geomarine Corp.	6/20/69		
-assigned to Coal Conversion Corp.	7/13/70		
-assigned to John S. Wold, Casper, Wyoming	8/25/71	Wyoming	50,000
Gulf Mineral Resources Co. (now Gulf Oil Corp.)	3/02/70	Montana	50,000
Peabody Coal Co.	5/22/70	Montana	40,000
Colorado Interstate Gas Co.	9/04/70	Wyoming	30,000
American Metal Climax, Inc.			
(Ayrshire Coal Co. Division)	1/20/71	Wyoming	30,000
Panhandle Eastern Pipe Line Co.	1/11/71	Wyoming	30,000
Shell Oil Co.	2/10/71	Montana	20,000
Norsworthy & Reger, Inc.	3/01/71		
-assigned to Westmoreland Resources	7/22/71	Montana	30,000
Norsworthy & Reger, Inc.	4/21/71	Wyoming	50,000
Cardinal Petroleum Co.	5/07/71	Wyoming	50,000
Yellowtail Reservoir Subtotal			623,000
<u>Boysen Reservoir</u>			
Sun Oil Co.	8/15/69	Wyoming	35,000
Total Yellowtail, Boysen Sales			658,000

Source: Reference 47.

- Defendants have also received applications from industrial firms and other nonagricultural entities for water option contracts covering an additional 1,281,000 acre-ft of water per year as follows:

<u>Acre-ft</u>	<u>To Be Diverted From</u>
431,000	Yellowtail and Boysen Reservoirs
630,000	Unspecified locations on Wind-Bighorn-Yellowstone River System
<u>220,000</u>	Powder River
1,281,000	Total Additional Applications

- Other major appropriations of water from the Yellowstone River and tributaries have been made by industry, without recourse to the U.S. Government, totalling in excess of 1,000,000 acre-ft of water per year.
- In violation of federal law, defendants have not determined rights of existing water users; determined future agricultural water needs in the region; determined availability of alternative water supplies; required industrial water users to employ best available water conservation techniques; analyzed alternative sources of energy supply; or adequately analyzed any alternative course of action other than maximum U.S. Government promotion and subsidy of maximum private industrial and energy development.

The averments continue, but the point is very clear: is this action on the part of executive agencies of the U.S. Government ultra vires, i.e., is it in fact not authorized by, or even in derogation of, laws passed by Congress? The question in the Yellowstone Basin will be answered by the District Court (and the Appeals Courts), but a look at congressional intent in the Colorado River Basin is enlightening.

The Colorado River Basin Project Act of 1968, which authorized the Central Arizona Project, states that:



...long-term contracts relating to irrigation water supply shall provide that water made available thereunder may be made available by the Secretary [of the Interior] for municipal or industrial purposes....<sup>48</sup>

The legislative history of the Act elaborates on this section:

The provision for conversion of irrigation water supply to municipal and industrial uses was included so that it would be possible to progressively increase the amount of water available for municipal and industrial supply as the needs for these uses increase.<sup>49</sup>

It is particularly interesting that this inclination on the part of the Congress toward municipal and industrial uses took place five years before there was an "energy crisis." It is very likely that Congress will observe the above-described litigation in the Yellowstone River Basin. If the ultimate outcome of the suit supports the principal argument of the plaintiffs--that the scope of the original authorizing legislation, dating back to 1902, does not provide for industrial use of reclamation water--Congress may move quickly to amend that legislation so that water for energy development is available from the Boysen and Yellowtail storage projects. However, at that juncture Congress will have to deal with the other value-laden issues in the suit. This will require an open discussion, at the national level, of the tradeoffs between agriculture and energy development for this pristine but increasingly visible region.

Another reclamation-related issue is the degree to which the federal reclamation scheme operates in respect of the laws of the state in which the project is located. Section 8 of the Reclamation Act of 1902<sup>50</sup> provides:

That nothing in this act shall be construed as affecting or intended to affect or to in any way interfere with the laws of any State or Territory relating to the control, appropriation, use, or distribution of water used in

irrigation, or in any vested right acquired thereunder, and the Secretary of the Interior, in carrying out the provisions of this act, shall proceed in conformity with such laws....

As clear as this language may appear, the courts have interpreted it in recent years in a way that gives great flexibility to federal action. Thus, in Ivanhoe Irrigation District v. McCracken<sup>51</sup> the U.S. Supreme Court said, in regard to Section 8 of the Act:

It merely requires the United States to comply with state law when, in the construction and operation of a reclamation project, it becomes necessary for it to acquire water rights or vested interests therein.\*

In addition, in City of Fresno v. California<sup>52</sup> the Court said:

The effect of Section 8...is to leave to state law the definition of the property interests, if any, for which compensation must be made [under the federal government's constitutional obligation to compensate for the taking of property.]†

The sum of these two cases would indicate that Section 8 applies only to the acquisition of waters for a reclamation project in a given state and not to the distribution of those waters. In the landmark case of Arizona v. California, the Court again considered the effect of Section 8 and affirmed the concept that state law can have no control over the issue of reclamation water distribution:

[Where Congress has] undertaken a comprehensive project for the improvement of a great river and for the orderly and beneficial distribution of water, there is no room for inconsistent state laws....

---

\*Reference 51, p. 291.

†Reference 52, p. 630.

The Court went on to say that no water could be had under the Boulder Canyon Project other than through contract with the federal government's designated agent, the Secretary of the Interior.

If Section 8 of the Reclamation Act leaves only the acquisition of water for reclamation projects to state law, it is an open question as to the interplay of federal water rights under the navigation servitude and the reservation doctrine vis-a-vis the Section 8 provisions. In an analysis of the broad federal power over water, developed earlier in this paper, it was concluded that the federal power to acquire water was virtually unlimited. If that is the case, the combined powers of acquisition and distribution would appear completely vested in the Congress. A major problem is that this result has been reached in piecemeal fashion through judicial decisions culminating in Arizona v. California.<sup>21</sup> Juxtaposing the Boysen/Yellowtail and Boulder Canyon situations, it may evolve that the Supreme Court will be constrained to find different national purposes for different major river basins--the encouragement of energy development in the Colorado River Basin but not in the Yellowstone Basin. All of this calls for clarification and positive statements by the Congress on the "details" of our unstated national energy policy.

#### 10. Indian Claims to Western Water

##### a. The Problem

A factor in the quest of water for energy development in the West is the ultimate water demand likely to be made by the many Indian reservations through or near to which flow watercourses feeding the Yellowstone and Colorado Rivers (Figure 19-1). A serious problem does exist as shown by the following situation.

In February 1973, John Love Enterprises received a permit from the state of Wyoming to construct a \$4.3 million water reservoir

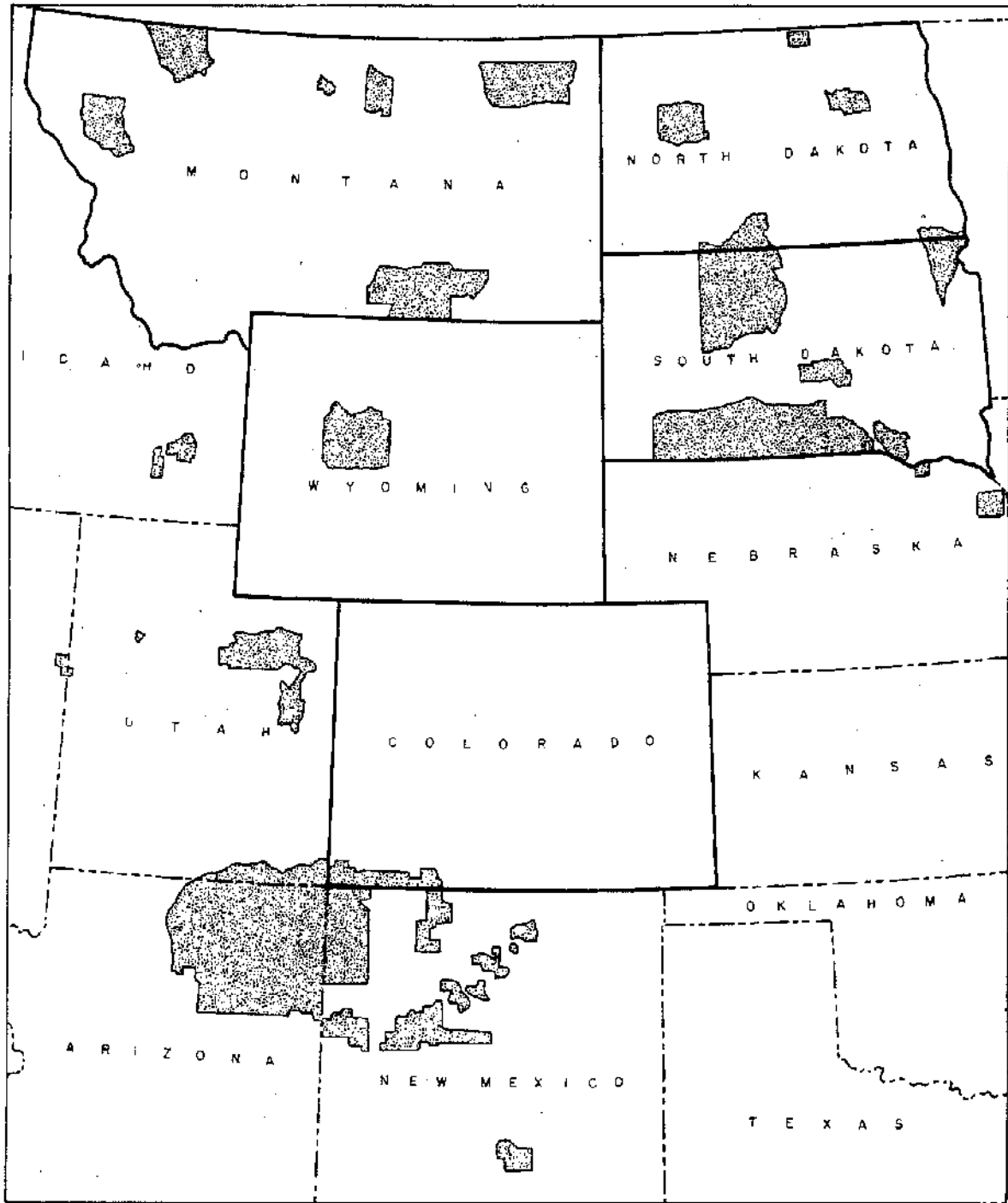


FIGURE 19-1. INDIAN RESERVATIONS IN THE COAL- AND OIL-SHALE-RICH REGIONS OF THE WEST

and pipeline facility for industrial and commercial purposes in the Powder River Basin. The amount of water was 42,500 acre-ft to be drawn from the Little Big Horn River, which feeds the Bighorn River and thence the Yellowstone. The Crow Indians of Montana, through whose reservation the Little Big Horn flows, have protested the proposed appropriation through an announcement published in several newspapers (Figure 19-2). The Indians warned that "...the Crow Tribe has paramount rights to the water of the Little Big Horn River and all other rivers and streams or other bodies of water which flow through or exist upon the Crow Indian Reservation, Montana,"<sup>153</sup> The announcement went on to say that anyone negotiating for water from the proposed project would do so "at their own risk" (Figure 19-2). In other words, mere compliance with state law might not be enough for John Love Enterprises to be assured of the water right it sought.

There is ample authority for the position taken by the Indians, as will be demonstrated. The basic questions in an analysis of Indian water rights are threefold:

- What is the theory on which the rights are based?
- What is the measure of the right? (i.e., the quantity of water).
- What is the relationship of the Indian rights to water rights administered under state law?

b. Theory of Indian Water Rights

The key to Indian water rights is a 1908 U.S. Supreme Court case, which produced what is widely known as the "Winters Doctrine."<sup>17</sup> The facts of the case reveal a dispute between Indians of the Fort Belknap Reservation and non-Indian appropriators of waters of the Milk River, a nonnavigable Montana waterway. The Fort Belknap Reservation was created in 1888 by a treaty between the Indians and the United

# PUBLIC NOTICE

## Re: Paramount Rights of the Crow Tribe of Indians to the Waters of the Little Big Horn River

To Whom It May Concern:

The Crow Tribe Water Resources Commission of the Crow Indian Reservation, Montana, has learned that one John Love, who may be acting for himself or as an agent for an organization known as John Love Enterprises, has obtained from the State of Wyoming permits for diversion of waters from the Little Big Horn River and other streams for creation of a reservoir in Wyoming. The Tribe has reason to believe that Mr. Love has been and is negotiating with certain parties for the prospective sale of waters from this planned reservoir. It is even reported that he intends to bring these waters back onto the Crow Reservation for industrial and other purposes there.

You are hereby advised that the Crow Tribe has paramount rights to the water of the Little Big Horn River and all other rivers and streams or other bodies of water which flow through or exist upon the Crow Indian Reservation, Montana. The Tribe has held these water rights by virtue of its aboriginal title to the lands of the Reservation and beyond, as well as by virtue of the Treaty of May 7, 1868, with the United States government, 15 Stat. 649-51. You should be aware that federal courts has consistently held that these and other Indian water rights apply not only to present but also future tribal needs and uses, of any variety, on the Reservation.

The Tribe, with the assistance of expert water engineers and officials of the United States government, has been seriously engaged in the development of plans for construction of its own reservoir entirely within the Reservation. The reservoir would be created by diversion of waters from the Little Big Horn River.

In view of the Tribe's aboriginal, paramount rights to the waters of the Little Big Horn River and the existing plans for use of the same in the creation of a tribal reservoir, it is evident that any efforts by Mr. Love, or anyone else, to divert the waters of this river upstream for any purpose constitute a clear violation of tribal water rights. Moreover, the Crow Tribe will not permit any waters diverted from the Little Big Horn River without tribal permission to be brought back on the Crow Reservation.

A letter from the Director of the Office of Indian Water Rights, United States Department of Interior, makes clear, the federal government intends to take any necessary legal action, including suits in federal court, to protect tribal water rights. Therefore, the government can be expected to enjoin any efforts to divert waters of the Little Big Horn River upstream from the Crow Reservation. The government or the Crow Tribe might well seek money damages for any injuries or violations of its rights in this connection.

You are advised that any interests negotiating with Mr. Love, or any other parties other than the Crow Tribe, do so at their own risk. If you find yourself in such a situation at present, you are urged to immediately contact the Office of Indian Water Rights, Bureau of Indian Affairs, United States Department of the Interior, Washington, D. C. 20242; or the Crow Tribe, Crow Agency, Montana, 59022, Telephone (406) 638-2671; or the tribal attorneys, Wilkinson, Cragun & Barker, 1735 New York Avenue, N.W., Washington, D. C. 20006, Telephone (202) 833-9800.

Sincerely,  
David Stewart, Chairman  
Crow Tribal Council

Daniel C. Old Elk, Chairman  
Crow Tribal Water Resources Commission  
Crow Indian Reservation  
Crow Agency, Montana 59022

Paid Advertisement

FIGURE 19-2. CROW INDIAN NEWSPAPER ANNOUNCEMENT

States. Subsequent to the treaty, and before the Indians put the water to use, Winters and other non-Indians, at a point upstream from the reservation, diverted the waters of the Milk River for their own use. The United States, as trustee and on behalf of the aggrieved Indians, filed suit to enjoin the upstream appropriations.

The Court held that, although not explicitly mentioned in the documents creating the Fort Belknap Reservation, there existed an implied reservation of rights to the use of waters that rise on, traverse, or border on the Indian land, with a priority dating from the time of creation of the reservation by treaty. The language of the Court has led to two interpretations of the source of the right. One line of reasoning argues that with regard to Indian reservations created by treaty,\* water rights were retained by the Indians at the time the treaty was made. Furthermore, so the reasoning goes, the documents were silent on the question because there was no intent on the part of the Indians to transfer the water rights.† The alternative view (and apparently the view of most legal writers) holds that the water rights were in fact transferred, but that the federal government, under its own powers, "reserved" an amount of water from proximate streams to support an agricultural existence for the Indians. In the case of Arizona v. California,<sup>17</sup> in which the Court approved water allocations to various Colorado River Basin Indian reservations, the Court alluded to "...the broad powers of the United States

---

\*Some Indian reservations were created by Executive Order and Act of Congress. For example, the Northern Cheyenne Reservation was created by Executive Order on November 26, 1884. The Fort Peck Reservation was created by Act of Congress on May 1, 1888.

†"...(T)he treaty (in Winters) was not a grant of rights to the Indians, but a grant of rights from them--a reservation of those not granted." (Reference 55)

to regulate navigable waters under the Commerce Clause and to regulate government lands under Act 4, Section 3 of the Constitution."<sup>54</sup> The Court stated that Winters was good law, and that as the United States government did in that case it did here--reserve water rights for the Indians effective as of the time the Indian reservations were created. The court did not directly answer the question of the source of the water right itself (i.e., aboriginal rights, reserved by the Indians and therefore reserved by the federal government versus rights reserved by the federal government as a government gesture to enable the purposes of the Indian enclaves to be fulfilled). To this date the issue has not been directly litigated.

Nevertheless, whatever the source of the right, case law and legal scholars are in agreement that there is an Indian water right associated with each reservation, and the priority of that right is at least as old as the reservation itself.

c. Measurement of Indian Water Rights

The measurement of the right is related to which of the above sources the courts eventually recognize. In Arizona v. California,<sup>21</sup> the U.S. Supreme Court was dealing with Indian reservations located on the "hot, scorching sands" of the lower Colorado River Basin. The Court held that the amount of water reserved is to be measured by the irrigable acreage of the Indian reservations. The National Water Commission points out that this may be acceptable for reservations on which farming and ranching are expected to take place, but that other reservations better suited for other types of occupations (e.g., hunting, fishing) may have water rights measured by different formulas.<sup>8</sup> In Winters,<sup>17</sup> the Court asked the following rhetorical question: "The Indians had command of the lands and the waters--command of all their beneficial use, whether kept for hunting, and grazing roving herds of



stock, or turned to agriculture and the arts of civilization. Did they give up all this?" Even under the restrictive view of the measurement of Indian water rights, the phrase "command of the...waters...(which might be) turned to...the arts of civilization..." indicates that one possible measurement for reservations located in the coal and oil shale areas is an amount of water necessary for development of these industries. The view that Indian water rights are aboriginal and are to be used as the Indians desire, would certainly allow for the use of the water rights for energy development.<sup>57</sup> Remaining untested is the freedom with which these water rights could be sold for use at a greater distance from the reservation and whether such marketing constitutes an acceptable use of the water rights.

d. Relation of Indian Water Rights to Water Rights Adminis-  
tered Under State Law

Unfortunately for the states, no matter which "source" theory is propounded, Indian water rights are not subject to control under state allocation systems. If the rights are seen as flowing from Indian treaties with the United States, the treaties take precedence over state law under the supremacy clause of the U.S. Constitution.<sup>58</sup> The supremacy clause applies with equal force to remove the water rights from state jurisdiction where the rights stem from congressional and executive authoritative action. Thus, state laws regarding acquisition, vesting, priority, preference, and transfer of water rights have no applicability to Indian water rights.

Indian rights are similarly a thing apart from interstate compacts governing distribution of the water in interstate watercourses. The Yellowstone River Compact provides that "Nothing contained in this Compact shall be so construed or interpreted as to affect adversely any rights to the use of the waters of the Yellowstone River and its Tributaries owned by or for Indians, Indian Tribes, and their Reservations."<sup>59</sup>

Both the Colorado River Compact<sup>60</sup> and the Upper Colorado River Basin Compact<sup>41</sup> exclude Indian water rights from their consideration; that is, they are dividing up water left after Indian (and other federally protected) water rights are deducted from the respective river's total flow.

e. Scope of the Problem

Returning to the original problem of John Love Enterprises, it perhaps is clear just how open-ended the rights of the Crow Indians are. The Crow Reservation was formed by the Treaty of May 7, 1868. At best, only holders of vested rights prior to that date can be sanguine about the sanctity of their rights. State-approved water rights with a later date are subject to being denied by the higher priority of the Indian rights--and no compensation would be paid.

The oil shale region is just as vulnerable. The rights adjudicated in the case of Arizona v. California<sup>21</sup> amounted to 1 million acre-ft of water. A look at the number of Indian reservations on the Colorado River or on tributaries of the Colorado is instructive. With the exceptions of those noted, water quantities demanded and ultimately adjudicated for these reservations remain to be determined. Whatever the amounts, the water will come off the top of the available water in the Colorado River Basin, cutting down on the amounts remaining to the states for allocation for agricultural, energy development, municipal, recreational, and other uses.

<u>Tributary</u>	<u>Indian Reservation</u>
Green River	Uintah Ouray
Kanab River	Kaibab
San Juan River	Ute Mountain Southern Ute Jicarilla Navajo
Little Colorado River	Hopi Zuni (via Zuni River)
Gila River	San Carlos Fort Apache (via Salt River) Salt River (via Salt River) Ft. McDowell (via Salt River) Gila River Papago
Colorado River	Hualapai Fort Mojave* Chemehuevi* Colorado River* Ft. Yuma* Cocopah*

f. Conclusions

The open-ended nature of Indian water rights is unacceptable to all concerned. As one observer has noted:

This uncertainty is not good for Indians; it is not good for non-Indians. It gives neither Indians nor non-Indians a clear title, and leaves as the source of Indian water rights a conglomerate mass of unconstrued treaties, agreements and executive

---

\*The total of these entries were adjudicated at 1,000,000 acre-ft in Arizona v. California.<sup>21</sup>

orders. Indians occupy thousands of square miles in the Western states...The time for an orderly procedure which will end the Indian water right chaos has long passed.<sup>61</sup>

The National Water Commission believes that an across-the-board adjudication is not necessary. Instead, the Commission calls for the following:<sup>62</sup>

- Inventory of existing Indian water uses (to be placed in state records for informational purposes).
- Quantification of water necessary to accomplish a sound economic development plan for each reservation (responsibility to rest with the Secretary of the Interior).
- Quantification of rights wherever a non-Indian project is planned for a basin in which there is an Indian reservation (e.g., the John Love-Crow Indian situation).

When Indian rights are exercised in a basin whose water is completely appropriated, the Commission recommends that the Indians get the water, and that the persons who lose the water be compensated by the federal government as follows:<sup>63</sup>

- No compensation for projects developed after June 3, 1963, the date of the Arizona v. California. (Presumably, this case put the water developer on notice regarding Indian water rights.)
- Where possible, the federal government will provide substitute water from its own water rights.
- No compensation when developer had actual notice of a conflicting Indian claim at the time of development.
- No compensation for values created by federal subsidy.

Because the Yellowstone and Colorado Basins are virtually closed to further appropriations (especially the Colorado), it would seem that complete adjudication of Indian water rights in these regions would be desirable to create some certainty for future decisions.

C. Interstate Allocation of Water

1. Allocation by the Court

When a river flows across the boundaries of two states, or forms the boundary between two states, disputes can arise over the proper use of the waters by each of those states. When a case or controversy exists between two states, the U.S. Constitution provides that the U.S. Supreme Court shall have original jurisdiction.\* This means that in such disputes the Supreme Court acts as a trial court, determining not only the law but resolving questions of fact as well.

A good example is the U.S. Supreme Court case of Wyoming v. Colorado.<sup>64,65</sup> Wyoming sued Colorado, and two Colorado corporations, to prevent a proposed diversion from their natural basins of the waters of the Laramie River, a nonnavigable interstate stream rising in Colorado and flowing into Wyoming. Colorado maintained that it could dispose of all the waters within its borders. The Court held otherwise:<sup>66</sup>

The contention of Colorado that she as a state rightfully may divert and use, as she may choose, the waters flowing within her boundaries in this interstate stream, regardless of any prejudice that this may work to others having rights in the stream below her boundary, cannot be maintained. The river throughout its course in both states is but a single stream, wherein each state has an interest which should be respected by the other.

---

\*U.S. Constitution; Article III, Section 2. Federal law adds that the jurisdiction shall be exclusively in the Supreme Court in disputes between two states: United States Code; Volume 28, Section 1251(a). Note that because the trial is held in the highest court in the land, there is no opportunity for appeal.

The Court went on to say that the doctrine of prior appropriation would apply and the Court enjoined Colorado from diverting water from the Laramie River in a manner that would deny water rights held by prior appropriators in Wyoming. The Court determined the dependable flow of the river and then proceeded to make firm allocations to Colorado and Wyoming. The rule of law applied by the Court is known as the doctrine of "equitable apportionment."

The Supreme Court does not see itself as an expert in water allocations, and encourages what amounts to "out of court settlements" by the states. In this regard, the U.S. Constitution states that "No state shall, without the consent of Congress...enter into any agreement or compact with another state...."<sup>67</sup> However, Congress had made it clear that it also encourages the resolution of interstate water disputes by the concerned states themselves, and that approval of such agreements or compacts would be readily given.

## 2. The Colorado River Basin

The implications of Wyoming v. Colorado were not lost on the states of the Upper Colorado River Basin; they knew that there was much water development activity going on in the Lower Basin states, and they feared that an interstate application of the doctrine of prior appropriation to those developments in the Lower Basin could eventually deny any use of the Colorado River to the more slowly developing Upper Basin states. Accordingly, they sought an agreement with the Lower Basin states, which would preserve to them some water rights in the Colorado River Basin.<sup>68</sup> The result of those negotiations was the Colorado River Compact of 1922.<sup>69,70</sup>

The Colorado River Compact has the following features:

- Designates two basins--Upper and Lower with dividing point at Lee Ferry, Arizona (near Utah/Arizona border).
- Each basin to receive in perpetuity 7.5 million acre-ft of water per year.
- Lower Basin may increase its annual consumptive use by 1 million acre-ft in addition to the initial allocation of 7.5 million.
- Upper Basin is obligated not to deplete the flow at Lee Ferry below an aggregate of 75 million acre-ft for any period of 10 consecutive years.
- Within each basin, no specific allocation is made to individual states.
- The Compact does not apply to Indian water rights.

In the Boulder Canyon Project Act of 1928,<sup>70</sup> Congressional consent was given to the River Basin states

to negotiate and enter into compacts or agreements, supplemental to and in conformity with the Colorado River Compact...for a comprehensive plan for the development of the Colorado River and providing for the storage, diversion and use of the waters of the River.

Representatives of the Upper Basin states of Wyoming, Utah, Colorado, Arizona, and New Mexico, in 1946, joined with President Truman's appointee in forming a Commission to develop what was to be the Upper Colorado River Basin Compact. The Commission worked for two years to produce the document. One of the major stumbling blocks was how to deal with water rights of the federal government and Indian tribes in the Basin. The Commission's difficulties in this regard are illustrated by the following response of the U.S. Department of the Interior to a Commission inquiry:<sup>71</sup>

The Compact should not attempt, in our judgment, to define, limit, or in any manner to determine the powers of the United States in, over, or to the waters of the

Colorado River System. The extent to which those powers should be exercised is a matter for determination by the Congress.

Recognizing that the federal landholdings are extensive in the Upper Basin, this significant water factor's absence weakened the impact of the final product. The applicable section of the resulting Compact contains the following critical language:<sup>41</sup>

Nothing in this Compact shall be construed as

- (a) Affecting the obligations of the United States of America to Indian tribes;
- (b) Affecting the obligations of the United States of America under Treaty with the United Mexican States;
- (c) Affecting any rights or powers of the United States of America...in or to the waters of the Upper Colorado River System...;
- (d) ...;
- (e) Subjecting any property of the United States of America...to the laws of any state....

Other provisions of the Compact are

- Detailed apportionment
  - 50,000 acre-ft per year of consumptive use to Arizona.
  - Balance of consumptive use to Colorado (51.75%); New Mexico (11.25%); Utah (23%); Wyoming (14%).
- Existing rights must be satisfied out of apportionments.
- Apportionments only for beneficial use.
- Procedures for equitable curtailment in time of water shortage.
- Procedures for dealing with evaporation and seepage losses.
- Consumptive use of water by United States (and Indians) to be charged as a use by the state where made.



- Each state and the United States can acquire water rights or construct project works in a signatory state (subject to certain conditions).
- Power generation is "subservient" to agricultural and domestic uses.
- Failure of a state to use apportionment shall not constitute a relinquishment of such right.
- No prohibition on trans-basin (interbasin) transfers of water.

In addition to the aforementioned problem of unquantified federal and Indian water rights, there are energy development water problems between the lines of the two Colorado River Compacts. The initial problem lies in the use by the draftsmen of the Compact of the figure of 15 million acre-ft of virgin flow\* at Lee Ferry, Arizona, as the average flow of the river for making allocations between the Upper Basin and the Lower Basin. From 1922 to 1967, the average virgin flow was only 13.7 million acre-ft.<sup>72</sup> Because the Lower Basin is guaranteed an average annual flow of 7.5 million acre-ft with the Upper Basin receiving the balance, the corresponding average annual flow available to the Upper Basin for these years was only 6.2 million acre-ft. When the Upper Colorado River Basin Compact percentage allocations are applied, the following figures result:

	<u>Acre-ft</u>
Arizona	50,000
Colorado (51.75%)	3,183,000
Utah (23.00%)	1,414,000
Wyoming (14.00%)	861,000
New Mexico (11.25%)	692,000

---

\*"Virgin flow" is the water which, e.g., would flow by Lee Ferry if there were no man-made diversions of the River Basin.

The resulting allocation to Colorado is far less than that state's contribution to the flow of the River, estimated at 11.46 million acre-ft per year.<sup>73</sup> Of its total contribution, then, Colorado is allocated only 28 percent.

When these compacts were drawn up, it was not foreseen that large scale energy development in the national interest would take place in western Colorado. From the following statement of a Conservation District official, it is clear that the water squeeze on the state is not appreciated by Colorado:<sup>74</sup>

It appears that Colorado is going to be asked to produce large amounts of both liquid and electrical energy with the largest percentage of both of them to be exported. But right now we are not really sure what our answer to that result will be....If Colorado is to be asked (and right now it is more like a demand) to furnish energy for the rest of the U.S., then it may be necessary to re-examine the allocations of the already limited Colorado River supplies....Colorado may be forced to prevent or limit the building of energy-exporting facilities in the future unless other states are willing to make some kind of agreement with Colorado to help us solve this problem.

But the other states in the Colorado River Basin have their own energy development, irrigation, and municipal growth water requirements. It is difficult to get more water out of a river by describing it differently--no new compact could perform that miracle. It would seem that allocations of values will be of equal importance with allocations of quantities; i.e., a reassessment of how a given amount of water should best be used. In this regard, the Colorado water official stated:<sup>89</sup>

Colorado is pressing forward with planned irrigation projects; we are not willing to totally trade off our western Colorado agricultural base for the production of energy.

The answer, of course, is not to deal in "total trade offs," but to negotiate in a new and open manner national, regional, and state concerns and values.

### 3. The Northern Great Plains

There are two interstate rivers near the coal development region of the Northern Great Plains. These are the Belle Fourche River, rising in Wyoming and flowing into South Dakota, and--more significantly--the Yellowstone River, beginning in Wyoming, running through Montana and on into North Dakota. There are interstate compacts covering each of these rivers.

The Belle Fourche Compact of 1943 makes a division of the unappropriated waters of the Belle Fourche River Basin as follows:

South Dakota	90 percent,
Wyoming	10 percent.

The amount of water available to Wyoming is approximately 20,000 acre-ft per year,<sup>75</sup> not a major factor in the water for energy picture. What is of interest, however, is a comment made by the President of the United States in signing the legislation under which Congress approved the Compact.<sup>76</sup> Article XIV(c) contains the following language:

The United States...will recognize any established use, for domestic and irrigation purposes, of the apportioned waters which may be impaired by the exercise of Federal jurisdiction in, over, and to such waters; provided that such use is being exercised beneficially, is valid under the laws of the appropriate state and in conformity with this compact at the time of the impairment thereof, and was validly initiated under state law prior to the initiation or authorization of the Federal program or project which causes such impairment.

The Congressional act contained the same language through which the federal government was bowing toward existing state water rights vis-a-vis future federal projects. This clearly upset the Chief Executive:<sup>77</sup>

In signing the Belle Fourche River Basin Compact Bill, I find it necessary to call attention...to the restrictions imposed upon the use of water by the United States. The procedure prescribed by the bill for the exercise of the powers of the Federal Government would not be entirely satisfactory in all circumstances, but the prospects in fact for the exercise of such powers in the Belle Fourche basin are not great. For streams where conditions are otherwise and there appears to be a possible need for Federal comprehensive multiple-purpose development or where opportunities for important electric power projects are present, I believe...(this)...Compact should not serve as a precedent. In such cases the compact and the legislation should more adequately reflect a recognition of the responsibilities and prerogatives of the Federal Government.

This statement strongly illustrates the latent federal water interest and power waiting in the wings. This tension and its ramifications were discussed in another section, but it is clear that these interstate compacts exercise little real constraint on federal water rights. Simply stated, the President is saying that interstate compacts should merely divide up--as between the signatory states--that water remaining after federal and Indian water interests are satisfied. Furthermore, the division will be subject to future federal and Indian water needs.

Interestingly enough, the Yellowstone River Compact of 1950 is stripped of the language which troubled the President. Significantly, U.S. "sovereignty" and "jurisdiction" over the subject waters are interjected into the Compact. Thus:<sup>78</sup>

Nothing in this Compact shall be deemed to impair or affect the sovereignty or jurisdiction of the United States of America in or over the area of waters affected by such Compact..., (or) any rights or powers

of the United States of America...in and to the use of the waters of the Yellowstone River Basin....

By way of emphasis, in the legislation approving the Compact, Congress reserved the right to amend the Compact, presumably unilaterally, or to repeal it entirely.<sup>7B</sup> In this regard, the U.S. Supreme Court has acknowledged that the Congress is not bound by its approval of an interstate compact.\*

Notwithstanding this profound weakness of the instrument, the features of the Yellowstone River Compact are as follows:

- Existing rights are confirmed as of January 1, 1950.
- Unappropriated waters of interstate Yellowstone tributaries are apportioned†

<u>Tributary</u>	<u>Wyoming (%)</u>	<u>Montana (%)</u>
Clarks Fork	60	40
Bighorn	80	20
Tongue	40	60
Powder	42	58

- Each of the Compact states (Wyoming, Montana, North Dakota) may divert and impound water in another state for its own use.
- Tributaries arising entirely in one state are wholly allocable by that state.
- Diversion of water out of the Yellowstone subbasin is prohibited unless approved by all three signatory states.

---

\*That is, Congress can legislate in a manner inconsistent with its prior approval of a compact (Reference 80).

†There are no interstate tributaries running into North Dakota; hence, no tributary water allocation is made to North Dakota.

Energy development in the arid Powder River Basin coal fields, lying north and south of Gillette, Wyoming, will require large amounts of water. Much thought and planning have gone into interbasin transfers of water to the Powder River Basin. As noted above, for the Yellowstone subbasin, this is prohibited unless all three states approve of the transfer.<sup>81</sup>

If consent should not be forthcoming, there is another alternative. Because neither the Colorado River Compact, nor the Upper Colorado River Basin Compact restrict interbasin transfers, Wyoming can divert water from its Upper Colorado River Basin share.\* This interbasin transfer would bring water from the Green River Basin, a headwater tributary of the Colorado River eastward across the state to the Powder River Basin.

#### D. State Systems for Water Allocation in the West

##### 1. General Systems

Because of the generally arid conditions in the West, a special legal doctrine evolved, which allowed water to be physically moved away from the source of the water (river, lake) to a place where it could be put to use. This represented a departure from the riparian law of the water-rich eastern United States inherited from water-rich England--the riparian doctrine gives equal rights to the waters of a river or stream to all whose lands border on the river or stream. Each user is entitled to a "reasonable" amount, but under no circumstance may the water be used

---

\*The Wyoming share is 14 percent. Typically, then 14 percent of 6.2 million acre-ft gives Wyoming 861,000 acre-ft for allocating within the state. Of this amount "...the feasibility of exporting 100,000 to 200,000 acre-ft is now under consideration." Note: As used here, "Export" refers to the interbasin transfer of this amount of water from the Upper Colorado Basin to the Powder River Basin (Reference 7.3, p. 40).

outside of the basin of the waterway. The riparian doctrine provides that the water right exists whether or not it is exercised, and the right is not forfeited by nonuse.

The appropriation doctrine of the West appears in the early California case of Irwin v. Phillips,<sup>B2</sup> in which two gold miners were squabbling over the right to use the waters of a stream. The court's decision "announcing" the doctrine was based on the need to protect the rights of those...

...who by prior appropriation have taken the waters from their natural beds, and by costly artificial works have conducted them for miles over mountains and ravines, to supply the most important interests of the mineral region... (Where, as here)... two rights stand upon an equal footing, when they conflict they must be decided by the fact of priority....

The doctrine's major features are as follows:

- A right to the use of water is created by a diversion of the water from a stream for a beneficial use.
- The first to so acquire the right shall have a priority in law: "first in time is first in right." (In the event of a shortage, the last to divert and make use of the stream is the first to have his water supply shut off.)
- Water can be used at any location without regard to the distance of the use from the stream.

With some embellishments over time, such as the feature of relating back,\* this approach stood as the water law of the West. No government

---

\*The priority of a right is established by commencing work on an appropriation. If the work is continued with due diligence, then upon completion, the priority of the completed right relates back to the time the work was commenced.

approval was required to establish the water right. Subsequent statutes merely confirmed the court developed doctrine.\*

## 2. The Need for Certainty of Water Rights

Although it fully embraced the doctrine of prior appropriation, Wyoming legislatively instituted a permit system to improve the record keeping of water rights, thereby injecting more certainty into the status of the water rights of the individual. Thus, anyone desiring to appropriate water in Wyoming must first make application to the state engineer--diversion of water without a permit from the state engineer is a punishable offense.<sup>83</sup> The engineer must approve the application if he finds that the proposed use is a beneficial use, that the proposed use will not impair the value of existing rights, and that the proposed use is not otherwise detrimental to the public welfare.<sup>84</sup>

Wyoming went to the permit system in 1890--Montana in 1974. Montana was responding to increasing demand for a system that would provide conclusive determination of existing rights.<sup>85</sup> A 1972 Montana constitutional amendment<sup>86</sup> prodded the legislature into action. The new law's declaration of policy and purpose is instructive:<sup>87</sup>

The legislature declares that this system of centralized records recognizing and establishing all water rights is essential for the documentation, protection, and preservation and future beneficial use and development of Montana's water....

---

\*For example, the Colorado constitution provides that..."(t)he right to divert the unappropriated waters of any natural stream to beneficial uses shall never be denied. Priority of appropriation shall give the better right..." (Article XVI, Section 6. See also Wyoming Laws 1869, Chapter 8 and Chapter 22).



The law requires "...each person claiming an existing right...to file a declaration..."<sup>88</sup> The court then adjudicates the status of existing decrees. Based on its final decree, individual certificates of water rights are issued, with copies filed at the county clerk's office.<sup>89</sup>

Because Colorado continues not to be a permit-system state, record-keeping shortcomings have created problems. A random search of court decrees was less than a satisfactory way for would-be appropriators to discover existing senior rights to a given stream. To remedy this, the Colorado legislature in 1969 called for

...a tabulation in order of seniority of all decreed water rights and conditional water rights...Such tabulation shall describe each water right and conditional water right by some appropriate means and shall set forth the priority and amount thereof as established by court decrees.<sup>90</sup>

The tabulation was to be published, corrected, and published in final form by October 1971; however, special legislative action moved this deadline to October 1972. The legislation said that in November 1974 (and every two years thereafter) the latest tabulation must be presented by the state engineer to the water judge for public hearings:

A copy of (the court's) judgment and decree shall be filed with the state engineer (for placement in his records to show) the determinations therein made as to priority, location, and use of...water rights and conditional water rights....<sup>91</sup>

It should be emphasized that the above procedure does not alter one's right under the Colorado constitution to appropriate water. This is accomplished by diverting the water and putting it to beneficial use.<sup>92</sup> However, the tabulation and adjudication procedure does affect the priority of one's appropriative rights. Thus, failure to come forward at the time of the tabulation and adjudication could result in a senior

right (relatively speaking) slipping to the most junior right of all. The right still exists, but in time of water shortage it will be the first one cut off.

These mechanisms provide a degree of certainty and they go a long way toward reducing the number of "stale" or "paper" rights going unused. Included in the efforts of the states to eliminate such rights are abandonment provisions in the law. Thus, e.g., Montana law provides that

If an appropriator ceases to use all or part of his appropriation right, or ceases using his appropriation right according to its terms and conditions, for a period of ten (10) successive years...there shall be a prima facie presumption that the appropriator has abandoned his right in whole or for the part not used.<sup>93</sup>

Wyoming uses a figure of five years after which time the water right is forfeited.<sup>94</sup> In Colorado, failure to use the water right for a period of ten years creates a rebuttable presumption of abandonment.<sup>95</sup>

Although designed to make available water that is going unused, the forfeiture statutes have the unintended effect of encouraging waste, in that a holder of a "dusty" water right might be encouraged to use the water profligately to avoid forfeiture of the right.<sup>96</sup>

The certainty of rights, discussed above, has a positive economic effect. Knowing what water is available and what the order of priority is, a potential investor (whether in irrigation or energy production) is in a much better position to make an investment decision.

### 3. Transfer of Water Rights

Where all the water available to the state is spoken for, either by absolute decreed rights or by conditional rights\* as it is in Colorado, it becomes necessary to consider a transfer of the right from one type of use to another, e.g., from irrigation to the production of synthetic fuels. Such a transfer very likely would require a change in the place of use and a change in the point of diversion of the water.

The law in most western states allows such transfers, subject to the administrative procedures of the particular state involved. The delay and red-tape caused by some of those administrative procedures were points of criticism made by the National Water Commission in its 1973 Report.<sup>97</sup> The Commission stated that "...any person or organization having the right to use water should be entitled to transfer such right, and all statutes, judicial decisions, and administrative regulations to the contrary should be repealed."<sup>98</sup> An example of how transfer of water rights was thwarted may be seen in a Wyoming law, which made a water right appurtenant to the land benefiting from the right--"Water rights for the direct use of the natural unstored flow of any stream cannot be detached from the lands, place or purpose for which they are acquired...."<sup>99</sup>

This situation was changed, perhaps as a result of the National Water Commission's recommendation, by a 1974 Wyoming law which allows the change

provided that the quantity of water transferred--shall not exceed the amount of water historically diverted under the existing use, nor exceed the historic rate of diversion..., nor increase the historic amount consumptively used..., nor decrease the historic amount

---

\*See footnote on page 19-46

of return flow, nor in any manner injure other existing lawful appropriators.<sup>100</sup>

Notwithstanding the intentions of the new law, administrative convolutions continue. An example of the red-tape involved in a transfer of rights is provided by the Panhandle Eastern Pipe Line Company. Panhandle proposed to purchase water rights with an 1884 priority date from a ranch on the North Platte River and to convert the use from irrigation to industrial (coal gasification). The proposal also included a one-hundred-mile change in the point of diversion. The Wyoming administrative authority, the Board of Control, denied the requests on several grounds:<sup>101</sup>

- Failure to show that holders of other rights would be protected from injury.
- Unresolved discrepancies in the accounting of all the water rights involved.
- The distance involved and the time lag between the proposed point of diversion and the present point of diversion made it impossible to assess general compliance with the Supreme Court decree requirements in Nebraska v. Wyoming (1945) regarding administration of the North Platte River.

Panhandle had to resort to the Laramie County District Court, which reversed the Board's findings and sent the proposal back for reconsideration. Panhandle finally prevailed, with the Board granting a permit to divert 26,500 acre-ft of water with a stipulation that diversions were not to deprive any Wyoming water right holder of previously entitled North Platte River water. This exhausting, costly, and time-consuming process clearly has a chilling effect on the free transfer of water rights.

Montana law on transfer of water rights allows a change if it is determined "...that the proposed change will not adversely affect the rights of other persons."<sup>102</sup> In Colorado, unrestricted transfer is

allowed where no other right is injured.<sup>103</sup> The kind of injury contemplated is seen in the situation where an upstream irrigation appropriator "A" sells his water right to a synthetic fuel producer "B" who contemplates a total consumptive use of that water. Such use would in fact reduce the flow of water as seen by a downstream appropriator "C" because some of the water contained in the water right of "A" historically returned to the stream after performing the irrigation function. Thus, the best "B" can hope for is "A's" water right scaled down by the amount of return flow customarily seen by "C."

To allow time to check for injury to other appropriators, Colorado law allows for a trial period after the change. Thus, the change is allowed

subject to reconsideration by the water judge on the question of injury to the vested rights of others during any hearing...in the (subsequent) two calendar years...<sup>104</sup>

#### 4. Interbasin Transfers

The transfer of a water right to a different place of use can logically be extended to rather great distances. The institutional resistance to such moves on an interstate basis is discussed in another section, but even within a given state the issue of interbasin transfers creates strains on the system. Generally, under the principles of the appropriation doctrine, the basin of origin has no right to receive the natural flow of the basin's streams.<sup>105</sup> Thus water in one basin may be appropriated and put to beneficial use in another basin. A prime example of this is the use by the "front range" metropolitan areas of Denver and Fort Collins, Colorado, of water flowing on the "other" side of the Rocky Mountains, on what is called the "western slope." About one-half of Denver's water comes from such transmountain diversions.<sup>106</sup> The water demand of cities is typically given a statutory preference over other

uses, which means that although the priority may be later in time, the allocation system will supply these needs first.<sup>92,99</sup> In Colorado, preferred users are given the power of condemnation over other users, thus--with payment of just compensation--a growing Denver could condemn an energy company's absolutely vested water right on the western slope and transfer the water over the mountains for its municipal uses.<sup>107</sup>

#### 5. Conditional Decrees

Since many energy companies are holders of Colorado conditional decrees some discussion is necessary. As previously mentioned, the priority of a right is established by commencing work on an appropriation. The decree is conditioned upon (1) completion of the work accomplishing the diversion, and (2) application of the water to a beneficial use. When that is done, the decree becomes absolute and the priority of the completed right relates back to the time the work was commenced. To eliminate speculation in water rights, the law requires that the would-be appropriator exercise "due diligence" in his work to complete the diversion. Every second calendar year he must obtain a finding by the water referee that reasonable diligence has in fact been exercised. Otherwise the conditional decree (and its precious priority date) lapses.<sup>108</sup> This law means that those energy companies holding on to conditional decrees while their energy development plans crystalize must make some effort at actually constructing their water project. A similar squeeze is presented in the permit states of Montana and Wyoming. Montana law allows the administrative authority to establish a time limit

for commencement of the appropriation works, completion of construction and actual application of the water to the proposed beneficial use. [The authority] shall consider the cost and magnitude of the project, the engineering and physical features to be encountered, and, on

projects designed for gradual development and gradually increased use of water, the time reasonably necessary for that gradual development and increased use....<sup>109</sup>

For good cause, the time limit may be extended, but, in absence of such an extension, the permit and its priority date will be revoked if the work is not "commenced, prosecuted or completed" in the time allowed or if the water is not being applied to the contemplated beneficial use.<sup>110</sup>

Under Wyoming law, the state engineer must specify a time limit on the permit, not to exceed five years.<sup>111</sup> For good cause the time limit may be extended. Again, failure to comply may lead to revocation of the permit. This presents a dilemma for the energy company contemplating construction of a synthetic fuels plant; if the water project is completed, satisfying this statute, the permit may nevertheless be revoked if the water right thus perfected goes unused for a five-year period while construction is completed on the fuel plant. This is because of the abandonment provisions of the Wyoming water law previously discussed.<sup>94</sup>

#### 6. Public Interest in Water

In its comprehensive study of water issues, the National Water Commission dedicated part of its effort to noneconomic or social values in water. The study concluded that the appropriation doctrine does not provide for protection and preservation of scenic, aesthetic, recreational, and environmental values. The Commission called upon the states for legislative action:<sup>112</sup>

- Reserving portions of streams from development and setting them aside as "wild rivers."
- Authorizing a public agency to file for and acquire rights in unappropriated water.

- Setting minimum stream flows and lake levels.
- Establishing environmental criteria for the granting of permits to use water.
- Forbidding the alteration of watercourses without state consent.

State action has been remarkably responsive. Colorado quickly passed legislation aimed at the in-stream values issue. One of the new laws eliminates the requirement of actual diversion to effectuate a valid appropriation, so that now the only requirement is "...the application of a certain portion of the waters of the state to a beneficial use."<sup>113</sup> Companion legislation gives to the state the opportunity to take advantage of the lack of a diversion requirement. The new law broadens the definition of the term "beneficial use"\* to include appropriations by the state of minimum flows between specific points on natural streams and lakes "as are required to preserve the natural environment to a reasonable degree."<sup>114, 115</sup> Elation by environmentalists may be premature, however, for the state is not given a preferential right of appropriation. Thus, if the state wishes to appropriate water to maintain minimum flows, it must do so in the same manner as the nongovernmental water user. Recalling that Colorado's waterways are already overappropriated, it would seem that the only practical possibility of accomplishing the purposes of the legislation would be for the state to purchase the water rights of others. Whether accomplished by appropriation or by purchase, it is clear that this new water demand will cut further into any supply available for the synthetic fuels industry.

---

\*"Beneficial use" has not been specifically defined until these recent statutes. Whether a use was "beneficial" was typically handled on a case by case basis, with the main thread of the decision being seen in the question, "is it reasonable and economical, all things considered?"



A 1974 Wyoming law states that

All water being the property of the state and part of the natural resources of the state shall be controlled and managed by the state for the purpose of protecting and assuring the maximum permanent beneficial use of waters within the state.<sup>116,117\*</sup>

A caveat for energy companies is provided in a later paragraph:

None of the water of the state either surface or underground may be appropriated, stored or diverted for use outside of the state or for use as a medium of transportation of mineral, chemical or other products to another state without the specific prior approval of the legislature on the advice of the state engineer.<sup>†118</sup>

The state of Montana has also responded to the recommendation of the National Water Commission that in-stream values are to be protected through state legal mechanisms. Montana law declares its purpose is

to provide for the wise utilization, development and conservation of the waters of the state for the maximum benefit of its people with the least possible degradation of the natural aquatic ecosystems...<sup>97</sup>

To implement the state program, power is given to the state "...to reserve waters for existing or future beneficial uses or to maintain

---

\*"Beneficial use" includes, but it not limited to the following: municipal, domestic, agricultural, industrial, hydroelectric power and recreational purposes, conservation of land resources and protection of the health, safety and general welfare of the state of Wyoming.

†The Act goes on to give approval (subject to the decision of the state engineer) for up to 20,000 acre-ft per year of Madison formation well water for use in a coal slurry pipeline to carry coal from Wyoming to Arkansas (Reference 118, Section 1-10.5(c)).

minimum flow, level, or quality of water...."<sup>119</sup> After defining "beneficial use" in the Wyoming manner (domestic, municipal, agricultural, etc.) the law goes on to state that "...use of water for slurry to export coal from Montana is not a beneficial use" (emphasis added). This compares interestingly with the Wyoming provision on the subject. Wyoming says yes, if legislative approval is obtained, whereas Montana says no, period.

The legislative tools with which the mineral-rich states have equipped themselves will apparently make it harder for energy companies to get the amounts of water they need for mining and synthetic fuels production, and once obtained the use of the water will likely be constrained by the water quality goals explicitly contained in the language of the new laws.

#### 7. Pricing of Water

It is said that cheap energy encouraged wastefulness, which led to energy shortages. A similar comment can be made about water. The National Water Commission has called for an abandonment of water subsidies which artificially make water appear to be cheap, and the Commission encourages a less inhibited system of water rights transfer.<sup>120</sup> Their position is that a free market for water will result in the evolution of true value reflecting the most productive economic use for the water.

Professor Charles J. Meyers, in a legal study done for the National Water Commission, made the following observation:<sup>121</sup>

...(W)hen criteria of allocation other than willingness to pay are used, it is very difficult to decide which uses (or users) of a resource will be most productive... The price system produces an unambiguous and usually quite satisfactory answer. The party in whose hands

the property will be most productive is the party who values it most highly and is willing to pay the most for it.

Others are fearful of what can happen if water goes to the highest bidder. They point to the need for increased planning to avoid the tragedy of what free market land development did to Los Angeles.<sup>122</sup> The bidding is real. At the time that farmers were paying \$20 per acre-ft for water, one energy company was prepared to pay up to \$1200 per acre-ft to secure the use of the water for energy development.<sup>123</sup> "To an energy company, even a high price of water is a minor expense, both in terms of the other costs of energy production, and in terms of the profitability of the operation."<sup>124</sup> The price elasticity of water is illustrated in a study which revealed that doubling the price of water caused an 11.4 percent increase in the price of agricultural products, while the doubling raised the cost of electric power by only 1 percent.<sup>125</sup>

Thus, a totally free market could conceivably result in a "going rate" for water affordable only by energy companies--thereby eliminating other uses, such as agricultural, recreational, and environmental.

Under the protections built into the "beneficial use" provisions previously discussed under the section entitled Public Interests in Water, the necessary first-step tools exist to determine the equivalent economic values of these other water uses, and to create a politically, if not economically, well-balanced water allocation scheme. The result is analogous to the concept of comprehensive land use planning where zoning predetermines the land use balance--parks, industrial, residential, etc. The water supply would be "zoned" to create a politically acceptable distribution, but within those constraints, free and unfettered transfer of rights would be encouraged, with the highest bidder prevailing.