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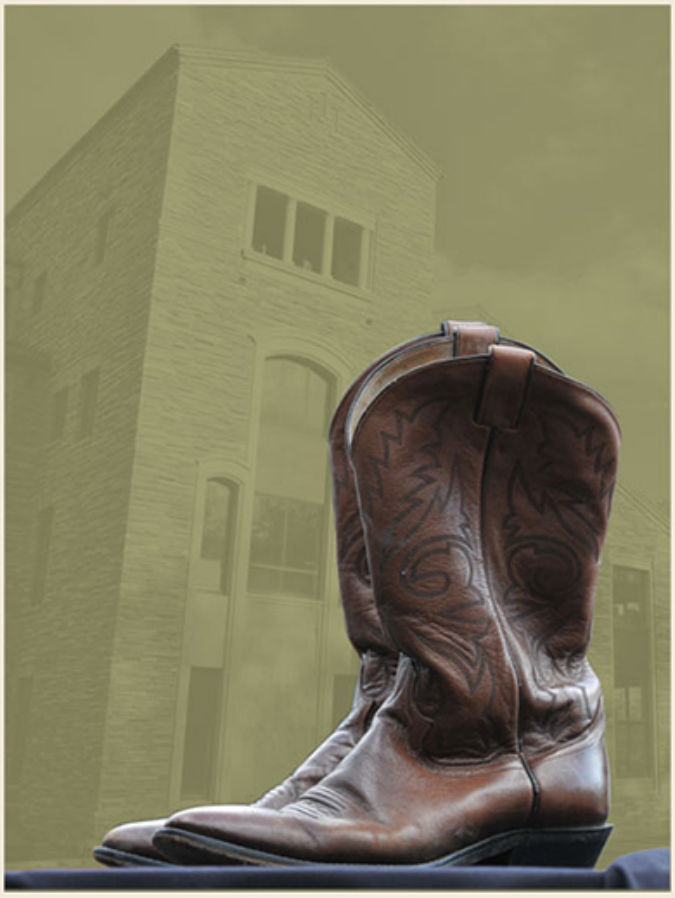
David H. Getches
University of Colorado Law School



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MANAGEMENT AND MARKETING OF INDIAN WATER: FROM CONFLICT TO PRAGMATISM*

DAVID H. GETCHES**

Water remains the most vitally important resource of nearly all Indian tribes. It is the touchstone of Native American cultures, linking today's and tomorrow's Indians with their early fellow tribesmen who drank, fished, and drew irrigation water from the same waterways.[1] The might and mystery of rivers—from the Big Horn to the Colorado, from the Columbia to the Rio Grande—drew the ancients. Some waters, like the Taos Indians' Blue Lake, were sacred.[2] Others, like the Colorado River at Rainbow Bridge, framed holy places.[3] Reverence and understanding for the life-giving propensities of water inspired an ethos, often reflected in ceremonies and tabus, of protecting

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** Professor of Law, University of Colorado School of Law. The author gratefully acknowledges the research assistance of University of Colorado law students William Brooks, Roe Bubar, and Elizabeth Thomas, and thanks Jane W. Gardner, Esq., Assistant Regional Counsel, United States Environmental Protection Agency, for her review of a draft of the paper.

1. One commentator has asserted: "Seize and take from the Indian people, by whatever means, their life-sustaining Winters doctrine rights to water and you take from them the bases for their continued existence as a separate and distinct people." Veeder, *Indian Water Rights in the Upper Missouri River Basin*, 48 N.D.L. REV. 617, 618 (1972). Frank Tenorio, Governor, San Felipe Pueblo, stated:

> There has been a lot said about the sacredness of our land which is our body, and the values of our culture which is our soul. But water is the blood of our tribes and if its life-giving flow is stopped, or it is polluted, all else will die and the many thousands of years of our communal existence will come to an end.

AMERICAN INDIAN RESOURCES INSTITUTE, TRIBAL WATER MANAGEMENT HANDBOOK, BUILDING HOMELANDS ON 19TH CENTURY PROMISES (1987).

2. *See* Pub. L. No. 91-550, 84 Stat. 1437 (1970) (returning sacred Blue Lake area to Taos Pueblo).

3. *See* Badoni v. Higginson, 638 F.2d 172 (10th Cir. 1980), *cert. denied*, 452 U.S. 954 (1981) (rejecting claims of Navajo Indians that the filling of Lake Powell and Park Service access policies would interfere with religious practices centering around Rainbow Bridge).

water quality and preventing overexploitation of water-dependent resources.[4] When tribes were confined to reservations, water became vital to their survival there. Some were no longer able to roam and hunt over vast areas, others were restricted in their traditional fishing opportunities. They had to make the most of reservations where much of the land was barren and dry, and where water for fishing or crop irrigation was scarce. It is clear that for centuries Indians have had their essential needs sustained by the waters available to them. And it is also clear that the future of Indian reservations as permanent homelands depends on water. Indian economic survival today depends on having enough water for irrigation, industry, and domestic use; on having water clean enough to sustain fisheries and spiritual needs; and, indeed, on having the ability to sell water to non-Indians for off-reservation uses.

The vital importance of water to Indian people has frequently brought them into conflict with non-Indian neighbors. As the non-Indians sought to develop communities in the arid West, they were led to the same water sources that Indians claimed. Though water was also scarce for non-Indians, they were able to create virtual monopolies on some streams because they had access to the capital necessary to develop water. While conflicts over rights to Indian water have cost millions of dollars, stymied development, and fomented bitterness, Indians have almost invariably prevailed by having courts validate their rights.[5]

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4. In United States v. Washington, 384 F. Supp. 312 (W.D. Wash. 1974), *aff'd*, 520 F.2d 676 (9th Cir. 1975), *cert. denied*, 423 U.S. 1086 (1976), the court found that "the taking of fish for ceremonial and subsistence purposes has a special treaty significance distinct from and superior to the taking of fish for commercial purposes . . . ." *Id.* at 343. The decision noted that the "first-salmon" ceremony was

> essentially a religious rite to ensure the continued return of salmon. The symbolic acts, attitudes of respect and reverence, and concern for the salmon reflected a ritualistic conception of the interdependence and relatedness of all living things which was a dominant feature of native Indian world views. Religious attitudes and rites insured that salmon were never wantonly wasted and that water pollution was not permitted during the salmon season.

Id. at 351. In United States v. Winans, 198 U.S. 371, 381 (1905), the Supreme Court recognized that fish were "not much less necessary to the existence of the Indians than the atmosphere they breathed." *See also* Wilkinson & Conner, *The Law of the Pacific Salmon Fishery: Conservation and Allocation of a Transboundary Common Property Resource*, 32 U. KAN. L. REV. 17, 26 n.40 (1983); Note, *The Environmental Right to Habitat Protection: A Sohappy Solution*, 61 WASH. L. REV. 731, 741-42 (1986).

5. *See* Winters v. United States, 207 U.S. 564 (1908) (the reserved rights of the United States extend to Indian reservations); Arizona v. California, 373 U.S. 546 (1963) (creation of an Indian reservation implies that the United States and the tribe reserved rights to sufficient water to fulfill reservation purposes; quantity of water reserved to meet present and future needs of reservations established for agricultural uses determined by extent of practicably irrigable acreage); and Pyramid Lake Paiute Tribe of Indians v. Morton, 354 F. Supp. 252 (1973) (United States must protect the tribe's water rights, and the operation of competing reclamation project by the federal government was not consistent with its fiduciary duty owed to the tribe). Not all courts have recognized Indians as having the full quantity of

The ultimate water problem facing most Indian tribes is not whether they have water rights, but whether water will be available when they are ready to use it. Part of the problem is that non-Indian uses have commenced and are regulated under state laws designed to secure and protect those uses in the future. Equities favoring non-Indians may be difficult to disturb later. Declining water quality also threatens to limit the future uses and value of water. This article will look at how tribes can address both of these problems. Wise regulation of water allocation and water quality can expand and enhance the benefits that a tribe enjoys from its resources.

With scores of complicated, expensive and inconclusive lawsuits to prove and quantify Indian reserved water rights raging throughout the West, federal, state and tribal officials and policy makers are beginning to focus their attention on the management and marketing of Indian water.[6] It is timely and appropriate to supplant some of the legal combat over the existence and quantification of Indian water rights with practical questions of how best to use the water secured by those rights. Indians and non-Indians alike are realizing that hard-fought quantifications of Indian water rights produce only partial, often theoretical answers, prolonging the uncertainties that disserve both groups.[7] Furthermore, the West is generally turning to better management of water resources and market transactions as answers to water supply problems.[8]

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rights they have claimed. Nevada v. United States, 463 U.S. 110 (1983) (United States cannot claim water rights additional to the reservation's previously decreed rights).

6. *See* J. Thorson, *Resolving Conflicts Through Intergovernmental Agreements: The Pros and Cons of Negotiated Settlements*, in INDIAN WATER 1985, at 31 (C. Miklas & S. Shupe eds. 1986). At least 50 Indian reserved water rights suits are pending. Most have been in progress for several years. Those that have reached judgment leave many issues unsettled. *See infra* notes 24-28 and accompanying text. The trend toward dealing with practical concerns is discussed in Shupe, *Water in Indian Country: From Paper Rights to a Managed Resource*, 57 U. COLO. L. REV. 561 (1981). *See also* J. Folk-Williams, *State and Indian Governments: Are New Relationships Regarding Water Possible?* in INDIAN WATER 1985 (C. Miklas & S. Shupe eds. 1986).

7. *See* Shupe, *supra* note 6, at 562-69; Clyde, *Special Considerations Involving Indian Rights*, 8 NAT. RESOURCES LAW. 237 (1975).

The Public Land Law Review Commission said that "the uncertainty generated by the [reserved rights] doctrine is an impediment to sound planning for future water resources development." PUBLIC LAND LAW REVIEW COMM'N, ONE THIRD OF THE NATION'S LAND 144 (1970).

8. WATER EFFICIENCY TASK FORCE, REPORT TO THE WESTERN GOVERNORS' ASS'N, WESTERN WATER: TUNING THE SYSTEM (1986) (finding that states should establish water use efficiency as a goal of water policy and encourage and implement comprehensive water transfer, conservation and salvage programs); STATE OF CALIFORNIA, FINAL REPORT, GOVERNOR'S COMM'N TO REVIEW CALIFORNIA WATER RIGHTS LAW 71-72 (1978) (recommending measures to increase efficiency of water use). *See also* Tarlock, *The Changing Meaning of Water Conservation in the West*, 66 NEB. L. REV. 145 (1987); Wilkinson, *Western Water Law in Transition*, 56 U. COLO. L. REV. 317 (1985); Shupe, *Waste in Western Water Law: A Blueprint for Change*, 61 OR. L. REV. 483 (1982); WATER AND AGRICULTURE IN THE WESTERN UNITED STATES: CONSERVATION, REALLOCATION AND MARKETS (G. Weatherford

Massive federal statutes creating pollution control schemes have acknowledged tribes as sovereigns, offering them the opportunity to take over implementation of complex statutes on their reservations. These laws challenge tribes to develop the technology and staffing needed to administer and enforce elaborate water quality regulation and improvement programs. Tribal governments must decide whether to take responsibility for such programs and, if they do, whether to implement them entirely through tribal agencies or in conjunction with state and federal governments. The decision implicates policy issues and practical questions of cost and technical capability.

Finally, some tribes are considering marketing as a means for realizing the economic benefits of their water. Indians have long despaired of sufficient capital to put their apparently formidable water rights to use. Even when courts or settlement agreements announce the quantities to which they are entitled, Indians remain unable to use their water. It is often impractical or undesirable to expand existing water uses or institute new uses. Agriculture has been the predominant use of water on most Indian reservations,[9] yet expanding production of agricultural commodities is a losing proposition most places in the country. Many industrial uses of water require a heavy commitment of capital that simply is unavailable. Some new uses may result in degradation of water sources by pollution that could offend important existing uses such as fishing and domestic consumption. These effects could be unacceptable to Indians. One answer to these problems is for tribes to sell or lease rights to use water to others within or outside their reservations. While there are limited markets for Indian water today, the ability to sell or lease it can spur water and economic development planning between Indian and non-Indian governments.

Non-Indian water users face problems similar to those of Indian tribes. Traditional uses such as agriculture are no longer economically justified.[10] Federal funds are not available to develop new water sources because the once-great willingness and ability of the federal

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ed. 1982); Kramer & Turner, *Prevention of Waste or Unreasonable Use of Water: The California Experience*, 1 AGRIC. L.J. 519 (1980).

9. Collins, *The Future Course of the* Winters *Doctrine*, 56 U. COLO. L. REV. 481 (1985). Collins states that while the largest share of Indian water rights are defined by irrigation, Indians will want to use that water for different purposes as irrigated agriculture declines.

10. The relative importance of agriculture in the West is decreasing. *See* Abbey, *Energy Production and Water Resources in the Colorado River Basin*, 19 NAT. RESOURCES J. 275 (1979), and Getches, *Competing Demands for the Colorado River*, 56 U. COLO. L. REV. 413, 427-31 (1985). As municipal and industrial uses expand, the farmer's opportunity cost of keeping the water for agricultural uses will increase, and make it advantageous for farmers to sell water rights for the higher valued use.

government to finance water projects has ended.[11] Project development is also inhibited by widely-shared environmental concerns and a new consciousness of the economic and social value of instream uses such as recreation and wildlife.[12] The states' diminished inclination and ability to develop new sources of water have motivated their search for better management techniques so that they can make more productive use of existing resources.[13] States and tribes alike struggle with the question of how best to carry out the mandate and purposes of federal water quality laws.

Uncertain Quantity

The United States Supreme Court held in 1908 that Indians had an implied right to waters sufficient to fulfill the purposes of reserving their lands. In *Winters v. United States*[14] the Court said that while treaties were silent on the question of water,

> it would be extreme to believe that . . . Congress destroyed the reservation [by letting others appropriate the water] and took from the Indians the consideration of their grant, leaving them a barren waste—took from them the means of continuing their old habits, yet did not leave them the power to change to new ones.[15]

The same logic led the Supreme Court, half a century later, to award the right to nearly a million acre-feet to tribes along the Colorado River.[16] It held that this was the quantity of water needed to irrigate all the "practicably irrigable acreage" on the five reservations, a standard based on a finding that the reservations had been set aside for agricultural purposes. In support of its holding that water rights were impliedly created, the Court observed that:

> it is impossible to believe that when Congress created the great Colorado River Indian Reservation and when the Executive Department of this Nation created the other reservations they were

11. *See* Wilkinson, *supra* note 8, at 325, and P. FRADKIN, A RIVER NO MORE 11-12 (1981). The federally authorized water projects that remain to be built are difficult to justify economically and practically. One deterrent is that the already authorized projects that have not been built would not directly benefit large numbers of people. For instance, the Savery-Pot Hook project in Colorado and Wyoming, that is authorized but unfunded, would irrigate only 14,650 acres, but would inundate 21,750 acres of grazing land and would cost approximately $700,000 for each ranch served.

12. *See generally* Wilkinson, *supra* note 8; R. WALSH, L. SANDERS & J. LOOMIS, WILD AND SCENIC RIVER ECONOMICS: RECREATION USE AND PRESENTATION VALUES 71-73 (1985) (concluding based on a survey that the Colorado public is willing to pay substantial amounts of money to preserve many rivers in their wild condition).

13. *See supra* note 8.

14. 207 U.S. 564 (1908).

15. *Id.* at 577.

16. Arizona v. California, 373 U.S. 546 (1963).

> unaware that most of the lands were of the desert kind—hot, scorching sands—and that water from the river would be essential to the life of the Indian people and to the animals they hunted and the crops they raised.[17]

Solicitude in the noble language of Supreme Court decisions has not slaked the thirst of Indian Country. Reservation lands remain dry, unproductive, and underdeveloped. Yet states and their citizens are hostile to a reserved rights doctrine that casts a "cloud" over state-created water rights and thus impedes investment and represses property values.[18] Non-Indians have nevertheless received some satisfaction from these clouded water rights, simply by having the means to develop them, means often provided by federal largess. Furthermore, state legal regimes have been intensively administered to put waters to their fullest use, often leaving little available to Indians for future needs.[19] Indians have watched reservation streamflows dwindle, as waters to which they hold a potent legal claim are swallowed up by their neighbors. The National Water Commission observed in 1973 that:

> Following *Winters*, . . . the United States was pursuing a policy of encouraging the settlement of the West and the creation of family-sized farms on its arid lands. In retrospect, it can be seen that this policy was pursued with little or no regard for Indian water rights and the *Winters* doctrine. With the encouragement, or at least the cooperation, of the Secretary of the Interior—the very office entrusted with the protection of all Indian rights—many large irrigation projects were constructed on streams that flowed through or bordered Indian Reservations, sometimes above and more often below the Reservations. With few exceptions the projects were planned and built by the Federal Government without any attempt to define, let alone protect, prior rights that Indian tribes might have had in the waters used for the projects. . . . In the history of the United States Government's treatment of Indian tribes, its failure to protect Indian water rights for use on the Reservations it set aside for them is one of the sorrier chapters.[20]

For over a decade many have seen the quantification of Indian

17. *Id.* at 598-99.

18. *See* Laird, Water *Rights: The* Winters *Cloud over the Rockies: Indian Water Rights and the Development of Western Energy Resources*, 7 AM. INDIAN L. REV. 155 (1979). *See generally* Ognibene, *Indian Water Rights Clouding Plans for West's Economic Development*, 44 ENVTL. REP. 1841 (1982).

19. *See* Fellhauer v. People, 167 Colo. 320, 447 P.2d 986 (1968) (there shall be "maximum utilization" of the water of the state); Collins, *Indian Allotment Water Rights*, 20 LAND & WATER L. REV. 421, 427 (1985); and Wilkinson, *supra* note 8, at 325.

20. NATIONAL WATER COMMISSION, WATER POLICIES FOR THE FUTURE — FINAL REPORT TO THE PRESIDENT AND TO THE CONGRESS OF THE UNITED STATES 474-75 (1973).

reserved rights as the best way to remove (or at least limit) clouds on non-Indian rights and to do justice to reservation Indians. Unfortunately, litigation over Indian rights has proved to be a circuitous and hazard-strewn route to those ends. It took Colorado fifteen years and four cases in the United States Supreme Court to establish that under a federal law consenting to joinder of the United States in state court water rights adjudications (the "McCarran Amendment"[21]), the proper forum for such quantifications was in Colorado state courts.[22] Not until after several United States Court of Appeals decisions and another Supreme Court decision was it clear that under the McCarran Amendment adjudication of Indian water rights is properly vested in the state courts of other states.[23] Once in the proper forum, the parties have found that the costs of these quantification cases are staggering. Legal fees and the costs of expert witnesses run into the tens of millions of dollars for a single adjudication.[24] Delays of many years precede a decision,[25] and although such a decision may be called "final," it may be only the beginning of years of conflict and further litigation or negotiation over its meaning.

The epic litigation of the Pyramid Lake Paiute Tribe's rights in Nevada, where seventy-five years of legal activity has failed to provide certainty for Indians or non-Indians, is an extreme but not isolated example.[26] Protracted litigation is rarely in the interests of litigants,

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21. 43 U.S.C. § 666 (1982).

22. Colorado River Water Conservation Dist. v. United States, 424 U.S. 800 (1976); United States v. Akin, 424 U.S. 800 (1976); United States v. District Court, 401 U.S. 527 (1971); United States v. District Court (*Eagle County*), 401 U.S. 520 (1971).

23. Arizona v. San Carlos Apache Tribe, 463 U.S. 545 (1985); Northern Cheyenne Tribe v. Adsit, 668 F.2d 1080 (9th Cir. 1982); San Carlos Apache Tribe v. Arizona, 668 F.2d 1100 (9th Cir. 1982); Jicarilla Apache Tribe v. United States, 601 F.2d 1116 (10th Cir. 1979).

24. *See, e.g.*, In re the Gen. Adjudication of All Rights to Use Water in the Big Horn River System and All Other Sources, Civil No. 4993 (Wyo. Dist. Ct. May 10, 1983), *modified*, No. 101-234 (Wyo. Dist. Ct. June 8, 1984). This general adjudication to quantify water rights for the Wind River Indian Reservation cost the State of Wyoming an estimated $7.2 million. WESTERN WATER STATES COUNCIL, STUDY PREPARED FOR THE WESTERN GOVERNORS' ASS'N, INDIAN WATER RIGHTS IN THE WEST 98 (1984). After the decision, legal costs continued to accrue as the matter was appealed and its interpretations were negotiated and litigated.

25. The United States Supreme Court's opinion in *Arizona v. California*, 373 U.S. 546 (1963), was handed down 16 years after the case was filed. In Arizona v. California, 439 U.S. 419 (1979), a supplemental decree was entered identifying additional perfected rights. In Arizona v. California, 460 U.S. 605 (1983), the United States and the tribes were seeking to have the water rights apportioned in the 1963 case increased to account for: (1) irrigable lands within the reservations' boundaries which had not been claimed in the earlier case; and (2) irrigable lands that were subsequently determined to lie within the reservations. The Court held that the prior determination of Indian water rights precludes relitigation of irrigable acreage based on miscalculations and problems in federal representation of the tribes, but that expanded quantities based on later boundaries could be decided, as this was in accordance with the earlier decree.

26. In 1913, the United States, representing both the Pyramid Lake Indian Reservation and the planned Newlands Reclamation Project, brought suit to adjudicate water rights to the Truckee River.

but it may sometimes serve the interests of one of them. The Escondido Mutual Water District litigation, involving several Mission In-

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United States v. Orr Water Ditch Co., Equity No. 3 (D. Nev., filed 1913). Thirty-one years later, the United States District Court of Nevada entered a final decree, pursuant to a settlement agreement. United States v. Orr Water Ditch Co., (*Orr Ditch*) Equity No. A-3, Final Decree 87 (D. Nev. 1944).

Because of its concern for a lack of water to maintain the level of Pyramid Lake, the heart of its reservation, the tribe in 1970 sought to intervene in a quiet title action for water rights in the Carson River that originated in 1925. The motion was denied by the court, holding that the tribe had no interest in the Carson River, although the Truckee and Carson Rivers were jointly operated and the tribe had water rights in the Truckee River. United States v. Alpine Land and Reservoir Co., 431 F.2d 763 (9th Cir. 1970), *cert. denied*, 401 U.S. 909 (1971).

For many years the tribe complained to federal officials that Pyramid Lake's level was falling steadily due to non-Indian water use from the Truckee River, the lake's only tributary. Finally, the United States filed a petition in the Supreme Court in 1972 invoking the Court's original jurisdiction to determine the respective rights of California, Nevada and the United States in the Truckee River. The United States sought rights to sufficient water to fulfill the purposes of the Pyramid Lake Reservation "including the maintenance and preservation of Pyramid Lake and the maintenance of the lower . . . Truckee as a natural spawning ground for fish and other purposes beneficial to and satisfying the needs" of the tribe (United States v. Nevada, No. 59 Orig., Oct. Term (1972), complaint at 14). The Court declined jurisdiction, saying the dispute was within the jurisdiction of the district court. 412 U.S. 534 (1972). In the same year, the tribe brought an action challenging the Secretary of the Interior's actions in allowing Pyramid Lake's level to fall more than seventy feet, endangering the fishery on which they depended for their livelihoods. The tribe argued that the Secretary's regulations allowed delivery of more water to the Truckee-Carson Irrigation District than required by applicable decrees and statutes and thereby diverted water that would otherwise flow to Pyramid Lake. The tribe argued that the regulation was inconsistent with the Secretary's trust obligation to the tribe and was arbitrary, capricious and an abuse of discretion. The court held that all water not under decree or contract to the irrigation district must be allowed to flow into the lake. It then ordered adoption of a modified version of proposed regulations submitted by the tribe. Pyramid Lake Paiute Tribe of Indians v. Morton, 354 F. Supp. 252 (D.D.C. 1973).

The court awarded the tribe attorney's fees and expenses of more than $106,000 (Pyramid Lake Paiute Tribe v. Morton, 360 F. Supp. 669 (D.D.C. 1973)) but the appellate court reversed (Pyramid Lake Paiute Tribe v. Morton, 499 F.2d 1095 (D.C. Cir. 1974), *cert. denied*, 420 U.S. 962 (1975)). Subsequently, the irrigation district intentionally violated the regulations by diverting more water than permitted. The Secretary terminated the contract that allowed the irrigation district to operate the Newlands Reclamation Project, after which the district brought a suit against the Secretary in which the tribe intervened. The court upheld the Secretary's actions. Truckee-Carson Irrigation Dist. v. Secretary of Dept. of Interior, 742 F.2d 527 (9th Cir. 1984), *cert. denied*, 472 U.S. 1007 (1985). In a related action brought by the Carson-Truckee Water Conservancy District, to compel water sales from Stampede Reservoir on the Truckee River, the tribe intervened. The Ninth Circuit reversed in part the district court (Carson-Truckee Water Conservancy Dist. v. Watt, 537 F. Supp. 106 (D. Nev. 1982)) holding that the Secretary is not required to sell any excess water for consumptive uses after fulfilling obligations under the tribe's reserved water rights and the Endangered Species Act. Carson-Truckee Water Conservancy Dist. v. Clark, 741 F.2d 257 (9th Cir. 1984), *cert. denied*, 470 U.S. 1083 (1985). The tribe continues to participate in proceedings to enforce the Endangered Species Act as a means of securing a greater allocation of water to Pyramid Lake and its fishery.

In 1973, the United States brought a general stream adjudication against some 21,000 water users on the river system, asserting a reserved water right to fulfill the purposes of the Pyramid Lake Reservation. The Ninth Circuit Court of Appeals held that the claim could be brought against the Truckee-Carson Irrigation District, but not against parties whose rights were adjudicated in the 1944 *Orr Ditch* decree. United States v. Truckee-Carson Irrigation Dist., 649 F.2d 1286 (9th Cir. 1981), *amended*, 666 F.2d 351 (9th Cir. 1982).

The United States Supreme Court reversed in part, holding that all parties below were bound by the *Orr Ditch* decree, which was, at the time it was brought, believed to be a "comprehensive adjudica-

dian bands in a valley outside San Diego, California, has been going on since 1969.[27] A few years ago, the water users involved in the case admitted that it was cheaper for them to spend hundreds of thousands of dollars for attorneys' fees and litigation costs than it would be to pay to replace the water they would lose in a settlement or judgment.[28] At last, however, a settlement is being reached that will presumably be to the benefit of both Indians and non-Indians.

Parties to Indian water rights disputes are increasingly attempting to negotiate settlements.[29] Settlement negotiations, like litigation, are costly and time consuming because they usually require hiring experts and lawyers and preparing technical studies, but they can produce more flexible and beneficial solutions. Settlement packages can

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tion of water rights intended to settle once and for all" the quantity of Truckee River water each party was entitled to receive. Nevada v. United States, 463 U.S. 110, 143 (1983).

27. Rincon Band of Mission Indians v. Escondido Mutual Water Co., No. CIV. 69-217-S (S.D. Cal., filed July 25, 1969).

28. Escondido Times Advoc., Sept. 25, 1983, at A1, col. 1. By 1983, the non-Indian water users had spent $2 million on legal fees to protect their water supply, while California Indian Legal Services had expended an estimated $750,000 to fight the suit on behalf of the tribes.

29. In 1978, the Ak-Chin Indian Community agreed to forego substantial water claims against non-Indians in return for the Secretary of Interior's promise of 85,000 acre-feet of irrigation water. Pub. L. No. 95-328, 92 Stat. 409 (1978). This water was to be supplied from a federal well field project, but the wells to be used to supply the Ak-Chin Community threatened to deplete the Papago Reservation's groundwater supplies. The Department of Interior remedied the problem by renegotiating a contract with an irrigation district that would allow the district's excess water to be delivered to the Ak-Chin Community. The agreement was thus amended in 1984. Pub. L. No. 98-530, 98 Stat. 2698 (1984).

In 1982, the San Xavier Band of the Papago Tribe settled its existing and future claims against groundwater users in the Tucson area. Pub. L. No. 97-293, 96 Stat. 1274 (1982). The tribe agreed to limit its pumping to 10,000 acre-feet per year and to take 37,800 acre-feet of the Central Arizona Project water for new or improved irrigation projects. Pub. L. No. 97-293, § 307(D), 96 Stat. 1274, 1281 (1982).

In 1985, Montana ratified a water apportionment compact with the Assiniboine and Sioux Tribes of the Fort Peck Indian Reservation. Fort Peck-Montana Compact, ch. 735, 1985 Mont. Laws (codified at MONT. CODE ANN. § 85-20-201 (1987)). The compact was negotiated by a nine-member Reserved Water Rights Compact Commission created in 1979 when Montana enacted its comprehensive water adjudication statute. MONT. CODE ANN. §§ 2-15-212 and 85-2-702 (1983). To the extent the compact limits, waives or allows marketing of Indian water rights it must be approved by Congress. *See infra* notes 142-145 and 162 and accompanying text. It has also been argued that congressional approval is necessary to make this state-Indian compact binding. Tarlock, *One River, Three Sovereigns: Indian and Interstate Water Rights*, 22 LAND & WATER L. REV. 631, 665 (1987).

This year, after more than fifteen years of litigation, the Mission Indian bands of Southern California resolved their claims to the San Luis Rey River. The settlement agreement is contained in pending legislation. S. 795, 100th Cong., 1st Sess. (1987).

In 1986, the Southern Ute and Ute Mountain Ute tribes, together with the federal government, the State of Colorado, and various Colorado towns and special districts negotiated a settlement agreement. Colorado Ute Indian Water Rights Final Settlement Agreement (Dec. 10, 1986). The settlement agreement is centered on the construction of the $573 million Animas-La Plata Project that will serve Indians and non-Indians who will share its costs with the federal government. 1986 COLORADO DEP'T OF NATURAL RESOURCES REPORT 8.

incorporate provisions for water development and building delivery systems as well as addressing water management issues. Indians and non-Indians can benefit from greater certainty and from jointly used water development facilities. Settlements can give tribes actual, not just theoretical, access to their water resources, and can provide certainty and other benefits for non-Indians.

Declining Quality

Indian reservations face some of the greatest water pollution threats of any areas in the nation. A 1985 report of the Council of Energy Resource Tribes found that 1196 hazardous waste generators and disposal sites are on or near the twenty-five reservations surveyed.[30] Abandoned asbestos mines and tailings are located on the San Carlos Apache and White Mountain Apache Reservations.[31] When the asbestos market collapsed in 1984, as a result of EPA regulations curtailing asbestos emissions,[32] companies hastily deserted reservation mines and mills, leaving wastes to pollute soils and streams, including the Salt River and the San Carlos River. An illegal pesticide dump, loaded with hundreds of chemical containers, was found on the Fort Berthold Reservation.[33] At the Oneida Tribe's Wisconsin reservation at least one well was abandoned after groundwater was contaminated by a closed landfill; leachate is also moving into Duck Creek, which sustains a tribal fishery. On the same reservation, the Fort Howard Paper Company's waste disposal lagoons have created groundwater and surface water contamination by unknown toxics, probably including PCB's.[34] There are many other examples of serious water contamination problems in Indian country. The most egregious is United Nuclear Corporation's uranium mill tailings pond near Church Rock, New Mexico, which spilled an enormous quantity of radioactive tailings into the Rio Puerco, which runs through the Navajo Reservation.[35]

A survey recently completed by Americans for Indian Opportu-

30. COUNCIL OF ENERGY RESOURCE TRIBES (CERT), INVENTORY OF HAZARDOUS WASTE GENERATORS AND SITES ON SELECTED INDIAN RESERVATIONS, Appendix F (July, 1985); *Study Finds 1,200 Sites Near Indian Lands, Recommends Immediate Action at Six Locations*, 16 ENV'T. REP. (BNA) 1228 (1985).

31. CERT, *supra* note 30.

32. The standard for asbestos manufacturing requires that no visible emissions be discharged and the standard for asbestos-containing material is that spray applied to buildings and pipes be one percent asbestos, or less. 40 C.F.R. §§ 61.144 and 61.148 (1987).

33. CERT, *supra* note 30.

34. *Id.*

35. *See* 10 ENV'T REP. (BNA) 1465 (1979). The United Nuclear Corporation site is listed on EPA's National Priorities List, 40 C.F.R. § 300, App. B (1986).

nity (AIO) (under contract with the Environmental Protection Agency) found that the most serious reservation pollution problems involved water quality, solid waste disposal, hazardous waste management, and sewage disposal, all of which pose hazards to reservation water supplies. The AIO study reported that the consequences of groundwater contamination were especially grave for Indian reservations because some ninety-four percent of the reservations responding depend on groundwater for drinking water supplies. Sixty-five percent of the tribes said that groundwater is their sole source of drinking water.[36]

The water pollution threat to Indian country is disproportionately great. Indian population is about one-half of one percent of the national population,[37] and Indians own about three percent of the nation's land area. Yet tribes tend to suffer more than their share of pollution threats because there are large mineral deposits, mines and mills on Indian reservations.[38] Remote reservations are also targets for the illegal dumping of waste.[39] In addition, reservations located in the midst of great industrialized areas like Tacoma and Phoenix suffer from the waste and pollution produced by that industrialization.[40]

The consequences of serious water pollution are especially severe in the case of Indian reservations. Reservations are vestiges of much larger estates once claimed by tribes, and as such are often marginally adequate for tribal members' needs. The productive capacity of reservations will be reduced or even destroyed if they become seriously polluted. For example, Indian fisheries are vital to the cultures and economies of some tribes.[41] These interests are secured by treaty

36. UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, SURVEY OF AMERICAN INDIAN ENVIRONMENTAL PROTECTION NEEDS ON RESERVATION LANDS: 1986, at vi (1986).

37. Derived from the 1980 Bureau of Census figures.

38. *See, e.g.*, 1 AMERICAN INDIAN POLICY REVIEW COMM'N, FINAL REPORT 338-39 (1977); UNITED STATES DEP'T OF THE INTERIOR, ANNUAL REPORT OF INDIAN LANDS AND INCOME FROM SURFACE AND SUBSURFACE LEASES (1984).

39. CERT, *supra* note 30, at 24.

40. The Gila River Indian Reservation borders on Phoenix, Arizona. Part of the Puyallup Indian Reservation is surrounded by the city of Tacoma, Washington. *See* Puyallup Tribe of Indians v. Port of Tacoma, 717 F.2d 1251 (9th Cir. 1983), *cert. denied*, 465 U.S. 1049 (1984) (affirming the tribe's title to the riverbed of the Puyallup River within Tacoma based on an 1857 treaty.).

41. *See* United States v. Washington, 384 F. Supp. 312, 350 (W.D. Wash. 1974), *aff'd*, 520 F.2d 676 (9th Cir. 1975), *cert. denied*, 423 U.S. 1086 (1976) (". . . one common cultural characteristic among all these Indians was the almost universal and generally paramount dependence upon the products of an aquatic economy, especially anadromous fish, to sustain the Indian way of life. These fish were vital to the Indian diet, played an important role in their religious life, and constituted a major element of their trade and economy."). *See also* United States v. Winans, 198 U.S. 371, 381 (1905) ("The right to resort to the fishing places . . . was a part of larger rights possessed by the Indians, upon the exercise of which there was not a shadow of impediment, and which were not much less necessary to the existence of the Indians than the atmosphere they breathed.").

promises, but may be lost if water quality is not protected. Protection of a healthy environment is especially important to Indians, who have the worst health statistics of any identifiable group of Americans.[42] Furthermore, as most Indian tribes are economically depressed, they are challenged to pursue essential economic development and growth without destroying the environment on which much of their culture is based.

Tribal Water Allocation and Regulation

Indian tribes unquestionably hold powers of self-government.[43] An informed and responsible exercise of Indian governmental power is necessary to secure access to the quantity of water that will enable tribes to sustain their homelands and cultures and lead to rational use of resources shared with non-Indians. Tribal sovereignty extends beyond checking petty offenses of tribal members and resolving occasional civil conflicts.[44] Thus, tribes now protect their reservation resources through environmental and land use regulation.[45] Several tribes have begun to exert regulatory authority over their water resources. Ordinances and codes extend tribal authority over all water resources and all reservation water uses.[46] Congress has recognized tribal sovereignty over reservation water allocation and administration in the 1987 Clean Water Act reauthorization legislation.[47]

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42. *See* OUR BROTHER'S KEEPER: THE INDIAN IN WHITE AMERICA 56-58 (E. Cahn ed. 1969). *See also* U.S. DEP'T OF HEALTH & HUMAN SERVICES, INDIAN HEALTH, AGE-ADJUSTED MORTALITY RATES, AMERICAN INDIANS AND ALASKA NATIVES IN RESERVATION STATES AND SELECTED U.S. POPULATIONS BY RACE, 1980 (Number of Deaths per 100,000 Population) (1984). The statistics show a continuing pattern of improvement, but the Indian mortality rate is still higher than mortality among all citizens.

43. F. COHEN, HANDBOOK OF FEDERAL INDIAN LAW 232-37 (1982 ed.) [hereinafter cited as COHEN].

44. *Id.* at 246-57 (tribes have all the power of a sovereign, including the power to determine the form of the tribal government, the power to legislate, and the power to administer justice).

45. *See, e.g.*, Nance v. EPA, 645 F.2d 701 (9th Cir. 1981) (upholding the United States Environmental Protection Agency's approval of the Northern Cheyenne tribe's request for redesignating its reservation from Class II to Class I under the Clean Air Act); Cardin v. De La Cruz, 671 F.2d 363 (9th Cir. 1982), *cert. denied*, 459 U.S. 967 (1982) (upholding health regulation of a grocery store on non-Indian land); and Knight v. Shoshone and Arapahoe Indian Tribes, 670 F.2d 900, 903 (9th Cir. 1982) (upholding a tribal zoning ordinance affecting fee lands owned by non-Indians located within the reservation. The court held that the "interest of the Tribes in protecting their homeland from exploitation justifies the zoning code.").

46. *See* Shupe *supra* note 6, at 581-88. Tribes that have enacted water codes include the Umatilla Tribe in Oregon, Confederated Tribes of the Colville Indian Reservation in Washington, the Spokane Tribe in Washington, the Standing Rock Sioux Tribe in North and South Dakota, the Flathead Indian Reservation in Montana, several Mission Indian Bands in California, the Gila River Tribes in Arizona, and the Yakima Indian Nation in Washington.

47. Water Quality Act of 1987, Pub. L. No. 100-4, 101 Stat. 7, 77 (to be codified at 33 U.S.C. § 1377(e)). The "Wallop Amendment" which was designed to protect state sovereignty over the alloca-

The wisdom of a tribe's seeking to control water use on the reservation is beyond cavil. But assertions of tribal control bring tribes squarely into conflict with states that claim authority over non-Indians with water rights inside reservation boundaries,[48] and perhaps even over Indians who hold rights pursuant to state law.[49] Ultimately the determination of which governmental entity is entitled to set and enforce water use policies on Indian reservations will be more important than the agonized decision of which court has authority to quantify a tribe's reserved rights.[50] The cultural vitality of tribes is tied to the application of tribal values to guide the use of reservation resources.[51]

Current Department of Interior policy unfortunately frustrates the application and enforcement of tribal water codes. Many tribes, particularly those organized under the 1934 Indian Reorganization Act (IRA),[52] must submit their ordinances and codes to the Secretary of Interior for approval.[53] As tribes began to enact codes in the mid-1970s, many western states brought pressure on the Department of Interior to disapprove codes submitted for approval.[54] In reaction, Secretary of Interior Rogers C.B. Morton imposed a moratorium on all such approvals.[55] With one exception,[56] no tribal water codes have been approved in over ten years. The ostensible reason for the moratorium was to permit Interior's consideration of rules that would provide guidelines for approval. Proposed rules were published in 1977,[57]

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tion of water resources from conflicts with the Clean Water Act was amended to include protection and respect for tribal water allocation authority.

48. *See* United States v. Anderson, 736 F.2d 1358 (9th Cir. 1984), and Colville Confederated Tribes v. Walton, 647 F.2d 42 (9th Cir. 1981), *cert. denied*, 454 U.S. 1092 (1981) (both cases are discussed in text *infra* notes 66-69).

49. *See* COHEN, *supra* note 43, at 582-83. While generally state laws do not govern the use of water by Indians on Indian lands, where water rights that have vested under state law are acquired by Indians, it can be argued that a state has an interest substantial enough to justify its exercise of regulatory jurisdiction over Indians using water on the reservation pursuant to state water rights. *See* United States v. Anderson, 736 F.2d 1358 (9th Cir. 1984).

50. *See* Pelcyger, *Indian Water Rights: Some Emerging Frontiers*, 21 ROCKY MTN. MIN. L. INST. 743, 773-74 (1975).

51. *See generally* Pelcyger, *The* Winters *Doctrine and the Greening of the Reservations*, 4 J. CONTEMP. L. 19 (1977).

52. 25 U.S.C. §§ 461-79 (1982 & Supp. III 1985).

53. *Id.* at § 476.

54. GETCHES & WILKINSON, FEDERAL INDIAN LAW 715 (1986).

55. Memorandum from the Sec'y of the Interior, Rogers C.B. Morton, to the Comm'r of Indian Affairs (Jan. 15, 1975).

56. The United States acquiesced to a provision in the Fort Peck/Montana Compact which recognized tribal authority to enforce a water code. MONT. CODE ANN. § 85-20-201(V)(B) (1987); *see infra* notes 75-76. That code would only apply to the use of reservation water by tribal members, and all non-Indian successors in interest to any Indian allottee, who use the water within the reservation. MONT. CODE ANN. §§ 85-20-207(V)(B) and 85-20-201(III)(A), (B) (1987).

57. Indian Reservation Use of Water, 42 Fed. Reg. 14,885 (1977).

and revised in 1981.[58] Final rules have never been issued, however. This may create a serious impediment to water code promulgation by IRA tribes that have requirements for Secretarial approval of tribal laws in their governing documents.[59]

Tribes not under the IRA, such as the Navajo Nation, ordinarily may enact and enforce codes without Secretarial approval.[60] Indeed, when the Navajo Nation submitted their code in 1974 to determine whether it required approval, they received a reply saying that it did not.[61] Some tribes, like the Umatilla in Oregon, essentially ignoring the moratorium, aggressively administer and enforce their tribal water codes.[62] Others have not been so bold and have failed to develop codes. Thus, Department of Interior policy impedes many tribes' efforts to have a meaningful role in managing the development of their water.

The most controversial aspect of tribal water codes is the question of whether they apply to non-Indians using water within a reservation on land held in fee title. There is no question that Indians within the reservation are subject to tribal regulation.[63] The question is more complicated, however, when a non-Indian is involved. The general rule is that non-Indians may be regulated within an Indian reservation when they are on land belonging to the tribe or held by the United States in trust for a tribe.[64] On the other hand, non-Indians on land owned by nonmembers may be regulated only if they have entered into consensual relationships with the tribe, such as through contracts and leases, or if a court finds that their conduct "threatens or has some direct effect on the political integrity, the economic security, or the

58. Regulation of Reserved Waters on Indian Reservations, 46 Fed. Reg. 944 (1981).

59. *See* COHEN, *supra* note 43, at 149; Comment, *Tribal Self-Government and the Indian Reorganization Act of 1934*, 70 MICH. L. REV. 955, 968-69, 976-77 (1972).

60. *See* Kerr-McGee Corp. v. Navajo Tribe of Indians, 471 U.S. 195 (1985) (tax ordinance enacted without Secretarial approval was enforceable as against non-Indian entity).

61. Letter from Area Director, Bureau of Indian Affairs, to Chairman, Navajo Tribal Council, dated January 27, 1986. Although the letter plainly stated that: "There is no Tribal governing document which requires Secretarial approval" of the resolution, it recited the fact that a moratorium on Indian water code approvals was in effect. The letter then equivocated, adding that Secretarial approval would be required to the extent the tribe asserted jurisdiction over Indian trust lands outside the reservation.

62. INTERIM WATER CODE, Confederated Tribes of the Umatilla Reservation (1981).

63. *See* COHEN, *supra* notes 43-44.

64. *See* COHEN, *supra* note 43, at 255. *See also* Morris v. Hitchcock, 194 U.S. 384 (1904) (upholding a tribal tax on cattle owned by non-Indians that were grazing on tribal lands); Washington v. Confederated Tribes, 447 U.S. 134 (1980) (validating the imposition of tribal taxes on cigarettes purchased by non-Indians on the reservation. The Court held that "the power to tax transactions occurring on trust lands and significantly involving a tribe . . . is a fundamental attribute of sovereignty which the tribes retain. . . ." *Id.* at 152.)

health or welfare of the tribe."[65]

Applying established principles, the Ninth Circuit Court of Appeals held that a tribe may impose its water regulations, to the exclusion of state law, on a non-Indian owner of an allotment within the Colville Reservation in Washington.[66] The stream involved in that case was entirely within the Colville Reservation. A few years later, the Ninth Circuit decided a case that involved a stream that arose off the Spokane Reservation and flowed for only a short distance along its eastern boundary before discharging into the Spokane River outside the reservation. The Ninth Circuit ruled that regulation of non-Indian use of waters from that stream, in excess of the tribe's own needs, was not within the tribe's inherent sovereignty. Consequently, the state had authority to regulate the non-Indian use of "excess" or "surplus" waters on nontribal land.[67] Surplus waters are apparently quantities in excess of those needed to fulfill the purposes of the reservation consistent with the *Winters* doctrine.[68] The court specifically found that "the political and economic welfare of the Tribe will not suffer adverse impact from the state-regulated use of surplus waters by nonmembers on non-Indian lands."[69]

The courts have moved toward what is essentially a balancing test—balancing the interests of the tribe in regulating the water resource within the reservation to the exclusion of the state against the state's interest in regulating the resource to the exclusion of the tribe.[70] Obviously, tribal interests are severely narrowed when: the water is used by non-Indians; the place of use is non-Indian land; the stream originates and ends outside the reservation and only touches it for part of its course; and the waters being regulated are determined to be in

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65. Montana v. United States, 450 U.S. 544, 566 (1981).

66. Colville Confederated Tribes v. Walton, 647 F.2d 42 (9th Cir. 1981). Allotments are individually owned parcels conveyed to Indians initially in trust, but with the right to take or convey title in fee on certain conditions. *See* COHEN, *supra* note 43, at 131-36, 618-24.

67. United States v. Anderson, 736 F.2d 1358 (9th Cir. 1984).

68. *See supra* notes 14-17. Surplus water as described by the Ninth Circuit is water that is available beyond adjudicated tribal water rights. The adjudication "quantifies and preserves tribal water rights," and thus subjecting other waters to the state's "jurisdiction will not infringe on the tribal right to self-government. . . ." *Anderson*, 736 F.2d at 1365-66.

69. *Anderson*, 736 F.2d at 1365.

70. *See id.* at 1365-66 ("[T]he balance of interest weighs most heavily in favor of the state. . . . [T]he state's interest depends, in large part, on the extent to which water ways . . . transcend the exterior boundaries of Indian country. . . . Washington's interest in developing a comprehensive water program for the allocation of surplus waters weighs heavily in favor of permitting it to extend its regulatory authority to the excess waters, if any, of the Chamokane Basin.") and White Mountain Apache Tribe v. Bracker, 448 U.S. 136, 145 ("This inquiry is not dependent on mechanical or absolute conceptions of state or tribal sovereignty, but has called for a particularized inquiry into the nature of the state, federal, and tribal interests at stake. . . ."). *See generally* Note, *Indian Water Rights: The Continuing Jurisdictional Nightmare*, 25 NAT. RESOURCES J. 841 (1985).

excess of tribal needs. It may be reasonable to determine the relative degree of each government's authority by weighing their respective interests, but practical problems occur when each government has strong interests that are in conflict.

A waterway is best regulated by a single entity with jurisdiction over all users,[71] although it is rarely contained within the boundaries of a single government. Multiple jurisdiction results in unnecessary duplication, expense, and lack of coordination. At worst, it can lead to heated conflict and inefficient, wasteful use of the resource. One jurisdiction may allow water to be allocated for a use that the other jurisdiction does not allow. For instance, if tribal law disallows use of water in a slurry pipeline as not a "beneficial use" but state law includes it among permissible beneficial uses, a non-Indian water user on non-Indian land within an Indian reservation might receive a state permit to divert large quantities of water within an Indian reservation for a slurry pipeline. Another policy conflict may arise if a tribe coordinates and limits consumptive uses to promote instream flows in order to maintain a fishery on the reservation, but state law does not consider instream flows to be a beneficial use of water. Tribes and states can resolve these conflicts by basing their regulations on consultation and cooperative agreement. Their ability to do so may be frustrated, however, when they differ in their fundamental goals for water management.

Tribes and states are beginning to sow the seeds of cooperation. For instance the Oregon Commission on Indian Services convened meetings on water policy that were attended by representatives of tribes and state agencies.[72] The Montana Reserved Water Rights Commission provides another example of cooperative management efforts.[73] Its efforts to negotiate resolutions of Indian reserved rights claims could form the basis for a dialogue leading to better management by both governments. The Assiniboine and Sioux Tribes of the Fort Peck Reservation have settled their water rights claims with the State of Montana.[74] The settlement provides for tribal administration of water rights under a tribal water code. The code was adopted and approved[75] by the Secretary of the Interior notwithstanding a decade-

71. *See generally* J. MATHER, WATER RESOURCES: DISTRIBUTION, USE, AND MANAGEMENT 23-26, 317-326 (1984). *See also* Pelcyger, *supra* note 50, at 770.

72. *See* Shupe, *supra* note 6, at 590.

73. MONT. CODE ANN. § 2-15-212 (1987). The commission is to "make the negotiation of water rights claimed by the federal government or Indian tribes . . . its highest priority." MONT. CODE ANN. § 85-2-701(2) (1987).

74. *Supra* note 29.

75. FORT PECK TRIBAL WATER CODE, Resolution No. 993-BG-5 (May 15, 1986), as amended by

long moratorium on such approvals.[76]

Tribal water codes must reflect native culture and values if they are to work for reservation people. A code that is identical to state water law may not be sensitive to tribal customs and needs. For instance, a traditional fishing tribe would have serious problems with a tribal water administration program that gives preference to agricultural uses. Yet a code that reflects such sensitivity may produce conflicts. When the Confederated Salish and Kootenai Tribes have sought to protect instream flows on the Flathead Indian Reservation in Montana, causing occasional diminution of the quantities of water that could be delivered to non-Indians from an Indian irrigation system on the reservation, litigation followed. The tribes succeeded in an action to require the Bureau of Indian Affairs to maintain instream flows and reservoir levels needed to protect their fisheries.[77] When the BIA adopted a similar plan for protecting fisheries the following year, the reservation irrigation district, which served predominantly non-Indians, challenged the plan. The district argued that it was entitled to a just and equal distribution of water.[78] The Court of Appeals ruled that the Indians' right to waters for a fishery are prior to any irrigation rights and only after fishery waters are protected can any right to a fair and equal distribution of water be asserted.[79]

If tribes are to be responsible water managers they must carry out their laws competently and professionally. Several tribes are rising to this challenge. The Navajo Nation's Division of Water Resources has assumed responsibility for water planning, development, permitting and regulation. It employs 244 people and operates on an annual

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Resolution Nos. 1152-86-9, 1553-86-9, and 1554-86-9 (Sept. 22, 1986), approved by Assistant Secretary of the Interior, Ross O. Swimmer, Oct. 6, 1986.

76. The Secretary of the Interior authorized departmental approval of the code as an exception to the moratorium discussed *supra* at notes 53-59. Secretary Donald Hodel approved an exception to the moratorium on April 8, 1985, by accepting the recommendation of Solicitor Frank Richardson and Deputy Under Secretary William Horn that was contained in a memorandum to Secretary Hodel dated April 2, 1985.

77. Confederated Salish and Kootenai Tribes v. Flathead Irrigation and Power Project, 616 F. Supp. 1292 (D. Mont. 1985). The court issued a temporary restraining order to protect tribal fisheries. Before a hearing on the preliminary injunction was held, the tribes and the project (administered by BIA) reached a stipulation establishing minimum flows for various streams and minimum pool levels for particular reservoirs. The case was dismissed, as it had effectively become moot.

78. 25 U.S.C. § 381 (1982) provides:

> In cases where the use of water for irrigation is necessary to render the lands within any Indian reservation available for agricultural purposes, the Secretary of the Interior is authorized to prescribe such rules and regulations as he may deem necessary to secure a just and equal distribution thereof among the Indians residing upon any such reservation.

No regulations have been promulgated pursuant to the section.

79. Joint Bd. of Control of Flathead, Mission and Jocko Irrigation Dist. v. United States, 832 F.2d 1127 (9th Cir. 1987).

budget of $7 million.[80] Besides its regulatory functions, the agency assists water users in achieving better water management through improved irrigation system operation, soil conservation programs, well development, and group product marketing services.

Recognizing the need for greater skill and training by tribal water managers, the American Indian Resources Institute (a project of the American Indian Lawyer Training Program) has begun a special training program for tribal leaders and water managers.[81] The program includes several weeks of intensive training in water management, engineering, administration, regulation, and law. Leading water management professionals are employed as trainers.

Tribal Water Pollution Control

A few tribes have adopted comprehensive reservation pollution control legislation. The Colville Tribe has enacted several water pollution control ordinances,[82] but most tribes deal with pollution problems in a cursory way, if at all. For instance, the Umatilla code recites "to minimize pollution" as one policy goal;[83] but the only operative section makes persons responsible for "placement, spilling or introduction of any" pollutant into waters of the reservation liable for damages and civil penalties.[84] There are no details on how this is to be carried out. The otherwise detailed Navajo Water Code merely mentions protecting water quality as one of its purposes.[85] Guidelines are to be promulgated by the tribal administrative agency, "to ensure adequate quality" as well as quantity of water and are to be reflected in water use permits.[86] There is also a vague provision making it an offense to undertake an unauthorized act "affecting" waters on the reservation.[87]

Tribes have new opportunities for participation in solving pollution problems under recent amendments to federal water pollution

80. GETCHES & WILKINSON, *supra* note 54, at 715 n.3.

81. Since the establishment of AIRI, it has held summer courses on Tribal Water Management in Albuquerque, New Mexico, August 6-15, 1986, and July 13-August 14, 1987.

82. COLVILLE WATER CODE, Colville Confederated Tribes, Colville Indian Reservation (1974). The Colville Tribe adopted the Colville Administrative Procedure Act, Resolution No. 1985-20, Title 30, COLVILLE TRIBAL CODE (Jan. 18, 1985), to guide implementation and review of administrative actions under its pollution laws: On-Site Wastewater Treatment and Disposal Act (Title 30), Colville Mining Water Quality Protection Act (Title 31), Colville Forest Practices Water Quality Act (Title 32) and Colville Water Quality Standards Act (Title 33).

83. INTERIM WATER CODE, Confederated Tribes of the Umatilla Reservation § I (1981).

84. *Id.* at § IX.

85. NAVAJO NATION WATER CODE § 22-11-1502(11) (Supp. 1984-85) (minimizing water quality degradation is listed as one of many policy guidelines for making the most effective use of available water resources).

86. *Id.* at § 22-11-1703.

87. *Id.* at § 22-11-2302.

control and clean-up laws. Indian tribes were given expanded opportunities to participate in the benefits and the implementation of several federal laws; they can receive grants and can assume management of pollution control within their borders in the same manner as states.

Clean Water Act. Congress passed the Clean Water Act in 1972.[88] It relies primarily on state-administered permitting programs under a "National Pollutant Discharge Elimination System" (NPDES). Permits are required for every discharge of a pollutant into waters of the United States from "point sources" such as pipes, canals, and other discrete sources that discharge pollutants.[89] Congress authorized the Environmental Protection Agency (EPA) to approve state permit programs, but if a state does not assume this responsibility or does not carry it out consistent with the law, EPA will operate the program.[90] NPDES permits are based on federally set standards for maximum discharges of various pollutants and maintenance of state-set water quality standards for the streams receiving discharges.[91]

In addition to the NPDES program, the Act provides financial and technical assistance to aid states in developing their own regulatory approaches.[92] Municipalities—a term that is defined by the Act to include tribes[93]—are eligible for grants for the construction of publicly owned sewage treatment facilities.[94]

The 1987 Act reauthorizing the Clean Water Act[95] treats tribes the same as states for all of the Act's significant regulatory programs.[96] This means that tribes may assume full responsibility on In-

88. 33 U.S.C. §§ 1251-1376 (1982 & Supp. III 1985).

89. 33 U.S.C. § 1342 (1982).

90. 33 U.S.C. § 1342(b)(C) (1982).

91. 33 U.S.C. § 1342(a) (1982).

92. 33 U.S.C. § 1254(3)(b) (1982).

93. "Municipalities" are defined as including Indian tribes or authorized Indian tribal organizations. 33 U.S.C. § 1362(4) (1982).

94. 33 U.S.C. § 1281(g)(1) (1982).

95. Water Quality Act of 1987, Pub. L. No. 100-4, 101 Stat. 7 (1987).

96. *Id.* at 77 (to be codified at 33 U.S.C. § 1377(e)) (authorizing the Administrator of EPA to treat Indian tribes as states for purposes of Title II grants for construction of treatment works (§ 205) and for §§ 104, 106, 303, 305, 308, 309, 314, 319, 401 and 404 of the Act "to the degree necessary to carry out the objectives of this section."). Implementation and enforcement responsibilities may only be delegated to a tribe if:

> (1) the Indian tribe has a governing body carrying out substantial governmental duties and powers; (2) the functions to be exercised by the Indian tribe pertain to the management and protection of water resources which are held by an Indian tribe, held by the United States in trust for Indians, held by a member of an Indian tribe if such property interest is subject to a trust restriction on alienation, or otherwise within the borders of an Indian reservation; and (3) the Indian tribe is reasonably expected to be capable, in the Administrator's judgment, of carrying out the functions to be exercised in a manner consistent with the terms and purposes of this Act and of all applicable regulations.

Id.

dian reservations for permitting programs under the Act, including the power to set water quality standards for reservation streams. Federal financial assistance is also available to help tribes develop their own programs.[97]

Safe Drinking Water Act.[98] Programs established under the Act protect aquifers that are likely to be used for drinking water supplies, and EPA sets maximum contaminant levels for public water systems.[99] The Sole Source Aquifer Protection Program provides that when an aquifer is the sole source of a drinking water supply and is so designated by EPA, no federal assistance may be provided for any project that EPA determines may contaminate the aquifer.[100] The Underground Injection Control (UIC) program[101] sets standards for the design and operation of injection wells for the disposal of wastes. The Wellhead Protection Program[102] provides for adoption of methods to protect areas surrounding wells that supply public water systems from contaminants. States are eligible to assume primary responsibility for the conduct of the Wellhead Protection and the UIC programs.[103] Amendments adopted in June, 1986, enable the EPA administrator to delegate enforcement authority to Indian tribes, treating them as states for most purposes under the Act.[104] If EPA does not designate a tribal government to run a Safe Drinking Water Act program on an Indian reservation, it may operate the program itself.[105]

Federal Insecticide, Fungicide and Rodenticide Act (FIFRA).[106] This Act regulates the handling, storage, sale and application of pesticides. Since its enactment in 1978, both states and tribes have been eligible for delegation of full enforcement authority, making it the first federal environmental statute to allow such delegation.[107] So far, EPA has approved delegation of authority to only one tribe (Fort Berthold) under FIFRA. The tribe's FIFRA regulations were approved over strong state objections.[108] The Cheyenne River Sioux Tribe[109] and

97. *Id.* (states and tribes can also receive grants for pollution control programs under 33 U.S.C. § 1256).

98. 42 U.S.C. §§ 300f to 300j-11 (1982 & Supp. 1987).

99. Maximum contaminant levels are set pursuant to 42 U.S.C. § 300g-1 (1982).

100. 42 U.S.C. § 300h-6 (1982).

101. 42 U.S.C. § 300h (1982).

102. 42 U.S.C. § 300h-7 (1982).

103. 42 U.S.C. §§ 300h-7 and 300h-1 (1982).

104. 42 U.S.C. § 300j-11 (1982).

105. *See* Phillips Petroleum Co. v. EPA, 803 F.2d 545 (10th Cir. 1986).

106. 7 U.S.C. §§ 136-136y (1982 & Supp. III 1985).

107. 7 U.S.C. § 136u (1982).

108. *See* Intent to Approve Fort Berthold Indian Reservation Plan for Certification of Applicators of Restricted Use Pesticides, 50 Fed. Reg. 31,011 (1985); Supplemental Notice of Intent to Approve Tribal Fort Berthold Pesticide Plan and Cooperative Enforcement Agreement, 51 Fed. Reg.

Rosebud Sioux Tribe[110] are pursuing primacy for enforcement of tribal regulation of pesticide storage, disposal and containers.

Resources Conservation and Recovery Act (RCRA).[111] This Act was designed to protect groundwater from the menaces of waste disposal with programs regulating solid and hazardous wastes. The Solid Waste Disposal program sets criteria and operating standards for solid waste facilities to prevent environmental damage from leachates.[112] Tribes are defined as "municipalities" eligible for financial assistance for facilities planning, feasibility studies, experts, surveys, legal assistance, technology assistance, and resource conservation. Funds are available for analyzing the legal, institutional and economic impediments to developing systems for the conservation of energy and materials.[113] The Hazardous Wastes Management program creates a tracking system for hazardous wastes from the time they are generated, throughout their transportation and use, to their ultimate disposal.[114]

The EPA can delegate responsibilities under RCRA's Hazardous Waste program to states that propose programs substantially equivalent to the federal program,[115] but the Act says nothing about tribes. The agency approved the State of Washington's plan for assuming RCRA responsibilities throughout the state "except as to Indian lands." The Ninth Circuit Court of Appeals upheld EPA's limited approval for the action,[116] stressing that the state had little jurisdiction on the reservation and none whatsoever over Indians. Further, the court found that EPA's policy of respecting Indian sover-

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22,860 (1986). The tribe's Pesticide Plan and Cooperative Enforcement Agreement was finally approved on October 2, 1986.

The concerns raised during the initial 30-day comment period were primarily over jurisdictional and enforcement issues relating to the pesticide plan, not over the technical adequacy of the tribe's certification plan. The main concern was that EPA intended to grant jurisdiction over non-Indians to the tribes and take it away from North Dakota. Another concern was that while non-Indians are a majority of the reservation population, they have no voice, vote or representation in tribal government. The state was concerned that the tribes would implement the plan in a discriminatory manner and that the program would financially damage pesticide dealers based on the reservation because certified applicators would buy the restricted pesticides elsewhere to avoid detection by the tribes. 51 Fed. Reg. 22,861 (1986).

109. Telephone interview with Jane W. Gardner, Assistant Regional Counsel, U.S. Environmental Protection Agency, Region VIII (Sept. 14, 1987). 7 U.S.C. § 136u(a) (1982) allows EPA to enter into cooperative agreements with tribes for enforcement authority.

110. *Id.*

111. 42 U.S.C. §§ 6901-6991(i) (1983 & Supp. 1987).

112. 42 U.S.C. §§ 6941-6949 (1982 & Supp. III 1985).

113. 42 U.S.C. § 6948(a) (1982 & Supp. III 1985).

114. 42 U.S.C. §§ 6921-6939 (1982 & Supp. III 1985).

115. 42 U.S.C. § 6926(b) (Supp. III 1985).

116. Washington Dep't of Ecology v. EPA, 752 F.2d 1465 (9th Cir. 1985).

eignty and encouraging self-government was reasonable and reflected the "federal commitment to tribal self-regulation in environmental matters."[117] EPA thus retained authority over hazardous waste management on Washington Indian reservations.

RCRA does not specifically instruct EPA on the treatment of Indian tribes as states, but it is likely that if EPA delegated its own authority to the tribe it would be sustained. The reasoning in *Nance v. Environmental Protection Agency* would support such a conclusion.[118] In *Nance* the Ninth Circuit Court of Appeals held that no specific statutory authority is needed for a delegation of authority to an Indian tribe if the delegation concerns subject matter that is within the tribe's retained sovereignty. In that case, the court upheld EPA approval of the Northern Cheyenne Tribe's request to redesignate its reservation from a Class II to a Class I area under the Clean Air Act[119] pursuant to EPA regulations allowing such redesignation upon tribal request.[120] The court recognized that a tribe has a realm of sovereignty in which it can operate without the aid of any federal statutory authority. Because pollution control and virtually every activity called for under federal water quality statutes are within a tribe's self-governing authority,[121] delegations of authority to carry out those statutes should be upheld.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).[122] This legislation, sometimes known as the Superfund Act, focuses on cleaning up imminent hazards rather than preventing pollution. Under the most familiar provisions of the Act, over 900 especially egregious dump sites have been identified for cleanup.[123] Four of these sites are on or near Indian reservations.[124]

CERCLA provides for finding liability against "potentially responsible parties" for hazardous waste disposal damage.[125] This term

117. *Id.* at 1471.

118. 645 F.2d 701 (9th Cir. 1981).

119. *Id.* at 717.

120. These classifications under the Clean Air Act, 42 U.S.C. §§ 7470-7491 (1982), determine the amount of deterioration of air quality which will be permitted in a certain area. In Class I areas, which include national parks and wilderness areas, very little deterioration is permitted.

121. *See* cases cited *supra* note 45. *See generally* Will, *Indian Lands Environment — Who Should Protect It*, 18 NAT. RESOURCES J. 465 (1978); *see also* Comment, *The Applicability of the Federal Pollution Acts to Indian Reservations: A Case for Tribal Self-Government*, 48 U. COLO. L. REV. 63 (1976).

122. 42 U.S.C. §§ 9601-9657 (1982 & Supp. III 1985).

123. National Priorities List (by Rank), 40 C.F.R. § 300, App. B (1986) (this appendix lists all the sites on the national priority list).

124. *Id.*, Navajo Reservation, Church Rock, New Mexico; Puyallup Reservation, Commencement Bay, Washington; Hoopa Valley Reservation, Celtor Chemical Works, California; Tar Creek, on lands of several tribes in northeastern Oklahoma.

125. 42 U.S.C.A. § 9607(a) (West 1983 & Supp. 1987).

includes almost anyone with a past or present connection with the site, including former owners, dumpers, operators, transporters, and others. The Superfund Amendment and Reauthorization Act (SARA),[126] enacted in October, 1986, includes tribes, along with states and the United States, as governments eligible to recover damages for loss or damage to natural resources.[127] SARA allows tribes to join states and others in cooperative agreements to conduct "responses," which are the clean-up activities necessary when a substance has been released into the environment. The cooperating parties in a response effort can recover the clean-up costs they bear from the responsible parties.[128] Another provision of SARA requires the study of hazardous waste sites on all Indian reservations.[129] The survey could result in recommending site-specific clean-up programs that could proceed with tribal participation.

Tribes may now decide to assume "primacy"—the primary responsibility for setting standards, administering and enforcing requirements—under several federal pollution laws as described above. This could be an important means for tribes to exercise their inherent sovereignty over reservation affairs in a way that could have substantial benefits for tribal members. On the other hand, tribes must exercise care to prevent assuming responsibilities that are too burdensome. The federal statutes are enormously complex and therefore their implementation demands costly technical, administrative and legal expertise.

Under the Clean Water Act, the Safe Drinking Water Act and CERCLA, the EPA Administrator must determine that tribes meet certain standards before they will be granted primacy. The Administrator must find them capable of carrying out the requirements of the Acts.[130] Tribes proposing to take over these new programs could have

126. P.L. No. 99-499, 42 U.S.C.A. §§ 9601-9675 (West Supp. 1987).

127. 1986 U.S. CODE CONG. & ADMIN. NEWS (100 Stat.) 1705.

128. 42 U.S.C.A. § 9604(d) (West Supp. 1987) (if the President determines that the tribe has the capability to carry out enforcement actions, he may enter into a cooperative agreement or contract with the tribe).

129. 42 U.S.C.A. § 9626(c) (West Supp. 1987). The results of the survey were to be submitted in conjunction with the fiscal year 1988 budget, but due to time constraints EPA submitted the 1985 study conducted on only twenty-five tribes described *supra* notes 30-34 and accompanying text. EPA is considering doing an additional study to comply with the SARA mandate.

130. 33 U.S.C.A. § 1377(e) (West Supp. 1987) provides that an Indian tribe may be treated as a state for purposes of the Clean Water Act only if:

> (1) the Indian tribe has a governing body carrying out substantial governmental duties and powers;
>
> (2) the functions to be exercised by the Indian tribe pertain to the management and protection of water resources which are held by an Indian tribe, held by the United States in trust for Indians, held by a member of an Indian tribe if such property interest is subject to a trust restriction on alienation, or otherwise within the borders of an Indian reservation; and

difficulty demonstrating their capability to assume responsibilities too weighty for many states. It is essential that tribes have financial and technical assistance in planning for the assumption of primacy and in building mechanisms to perform their responsibilities competently. It is also important that the EPA Administrator not require major practical experience by tribes before full or partial enforcement responsibility is delegated to them. If such a requirement were imposed, few tribes would qualify and the apparent congressional intent of recognizing and using tribal governments to implement federal pollution laws on reservations would go unfulfilled.

Some of the federal statutes provide funding for tribes to assess the types of controls and clean-up programs needed before they decide to take responsibility for specific federal statutory programs. The Turtle Mountain Indian Reservation in North Dakota conducted an EPA funded project to study tribal environmental management, evaluate tribal pollution problems, and develop and implement plans for tribal pollution programs.[131] A pilot project at the Menominee Reservation in Wisconsin is developing programs for solid waste, hazardous waste, surface and groundwater protection.[132]

A tribe may find that administration of federal statutes will not

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(3) the Indian tribe is reasonably expected to be capable, in the Administrator's judgment, of carrying out the functions to be exercised in a manner consistent with the terms and purposes of this chapter and of all applicable regulations.

See supra note 96, for the programs under which Indian tribes may be treated as states under the Clean Water Act.

42 U.S.C.A. § 300j-11(b)(1) (West Supp. 1987) provides that an Indian tribe will be treated as a state for purposes of the Safe Drinking Water Act only if:

(A) the Indian Tribe is recognized by the Secretary of the Interior and has a governing body carrying out substantial governmental duties and powers;
(B) the functions to be exercised by the Indian Tribe are within the area of the Tribal Government's jurisdiction; and
(C) the Indian Tribe is reasonably expected to be capable, in the Administrator's judgment, of carrying out the functions to be exercised in a manner consistent with the terms and purposes of this subchapter and of all applicable regulations.

Tribes may be delegated primary enforcement responsibility for public water systems and UIC programs and the federal government may provide grants and contract assistance to tribes that meet the above criteria.

42 U.S.C.A. § 9626 (West Supp. 1987) provides that the "governing body of an Indian tribe shall be afforded substantially the same treatment as a State with respect to the provisions [of CERCLA]" regarding notification of releases, consultation on remedial actions, access to information, health authorities and roles and responsibilities under the national contingency plan and submittals of priorities for remedial action (excluding the provision regarding nominating at least one facility per state on the National Priorities List). 42 U.S.C. § 9601(36) defines Indian tribe as any "band, nation or other organized group or community. . . ."

131. Telephone interview with Jane W. Gardner, Assistant Regional Counsel, U.S. Environmental Protection Agency, Region VIII (Sept. 14, 1987).

132. *See* Lewis, *An Indian Policy at EPA*, 12 EPA J. 23, 24 (Jan/Feb. 1986) (the Menominee Tribe plans to draft water quality standards covering surface and groundwater).

answer its particular pollution problems. It may not be cost effective for a tribe to use an elaborate federal program to deal with on-reservation problems that are relatively limited. In other cases, only selected portions of federal programs may be useful to a tribe. Tribes need not assume full responsibility for federal pollution statutes in order to participate in administration and enforcement of those laws. Tribes may take responsibility for parts of programs and specific functions under partial delegations from EPA. A tribe that is delegated authority may in turn contract for various functions to be performed by state and local agencies. If the tribe does not wish to be delegated authority, it can leave the program under federal jurisdiction but contract to perform some of the EPA's responsibilities.

Tribes can improve pollution control, like water allocation control, through cooperative arrangements with other governments. They can impose more effective controls without the costs of duplication by allocating responsibilities under mutual agreements. The Menominee Tribe's pilot project provides a model of such cooperation. The tribe is drafting regulations and ordinances under a memorandum of agreement with EPA and the state of Wisconsin. Under this program the tribe assumes partial responsibility, while the state and EPA share other responsibilities. The tribe retains control of the policy-making and reservation enforcement components while the other governments handle off-reservation enforcement and technical aspects of the program.[133] Tribal, state and local planning efforts are particularly well-suited to cooperative efforts.[134]

In some cases, several tribes might form a consortium to share the burden of administering water pollution control laws. This works best when several tribes have similar problems in a given watershed or geographic area. Consortiums have also been formed by tribes for other resource management purposes. For instance, five small Indian bands in Southern California formed the San Luis Rey Water Authority to pursue their interests in implementing the settlement of a major water rights lawsuit. The tribes delegated to the Authority their powers to allocate and manage water resources.[135] The Authority has not yet

133. Popkin, *Indians Act for a Cleaner Environment*, 13 EPA J. 28, 29 (Apr. 1987).

134. Lewis, *supra* note 132, at 26. For instance, the Colville Confederated Tribes, which are developing a Comprehensive Water Quality Management Plan under Section 208 of the Clean Water Act, signed a Cooperative Agreement with the State of Washington.

135. Each of the bands enacted identical ordinances providing for extensive cooperation in completing and implementing a settlement of their water rights claims that have been vigorously pursued in litigation since 1969. The most immediate purpose was to create a vehicle for financing projects and getting the technical assistance to carry out the settlement terms, which are intended to lead to economic development. *See infra* notes 166-167 and accompanying text. The ordinance of each band, among other things, "[g]rants and delegates to the Authority the power to control, manage, deliver and

begun to exercise these powers, but may eventually assume full control over water management for all the bands. Other examples of tribal resource management consortiums include the Northwest Indian Fisheries Commission[136] and the Columbia River Intertribal Fish Commission;[137] both are cooperative fisheries management programs that deal with a resource common to several reservations in a scientifically responsible manner. They provide fishing opportunities that satisfy commercial, subsistence and ceremonial needs. The member tribes pool enforcement, judicial, and technical expertise and mechanisms. The tribes act through a single entity rather than multiple entities, facilitating interaction and cooperation with the states.

A 1984 Environmental Protection Agency policy requires the agency to work with tribes on a "government-to-government" basis, furnish tribes with information and assistance in program development, and incorporate tribal needs and concerns into EPA activities. The policy also commits EPA to work with tribal governments in achieving compliance with environmental statutes.[138] The promise

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allocate the water resources of the five bands" that are allocated to the Authority by the settlement, and by further tribal resolutions or ordinances. *E.g.*, Pauma Band of Mission Indians Ordinance adopted September 23, 1984, p. 17. *See also* S. 795, 100th Cong., 1st Sess. § 7 (1987), approving powers of the Authority.

136. *See* PACIFIC NORTHWEST RIVER BASINS COMMISSION, AGENCIES, ORGANIZATIONS, AND INTERESTS AFFECTING COLUMBIA RIVER ANADROMOUS FISH (1980). Courts have begun to cite and rely upon data developed by the Commission. *E.g.*, United States v. Washington, 645 F.2d 749, 752 (9th Cir. 1981); United States v. Washington, 641 F.2d 1368, 1370 n.2 (9th Cir. 1981). *Cf.* United States v. Washington, 506 F. Supp. 187, 194 n.25 (W.D. Wash. 1980).

137. *See* Wilkinson & Conner, *supra* note 4, at 98 n.437. The Ninth Circuit recognized the Commission's position on fish harvests in United States v. Sohappy, 770 F.2d 816, 824 (9th Cir. 1985).

138. *See* OFFICE OF THE ADMINISTRATOR, UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, EPA POLICY FOR THE ADMINISTRATION OF ENVIRONMENTAL PROGRAMS ON INDIAN RESERVATIONS (1984) [hereinafter cited as *EPA Indian Policy*]. The nine points of the *EPA Indian Policy* are:

> 1. The Assistant Administrator for External Affairs will serve as lead agency clearinghouse and coordinator for all Indian policy matters.
> 2. The Indian Work Group (IWG) will assist and support the Assistant Administrator for External Affairs in developing and recommending detailed guidance as needed on Indian policy and implementation matters. Assistant Administrators, Regional Administrators and the General Counsel should designate appropriate representatives to the Indian Work Group and provide them with adequate time and resources needed to carry out the IWG's responsibilities under the direction of the Assistant Administrator for External Affairs.
> 3. Assistant and Regional Administrators should undertake activity outreach and liaison with the tribes, providing adequate information to allow them to work with us in an informed way.
> 4. Assistant and Regional Administrators should allocate resources to meet tribal needs, within the constraints imposed by competing priorities and by our legal system.
> 5. Assistant and Regional Administrators, with legal support provided by the General Counsel, should assist tribal governments in program development as they have done for the states.
> 6. Assistant Administrators, Regional Administrators and the General Counsel should take active steps to allow tribes to provide informed input into EPA's decision-making and program management activities which affect reservation environments.

held out by the EPA policy has not been fully realized because of limitations on funding. Tribes cannot assess environmental protection needs without financial assistance. Furthermore, the provision in the policy that refers to tribes achieving compliance with environmental statutes could be read by some officials as mandating enforcement activities against tribes. However, it would be inconsistent with the spirit of the policy to use it to impose burdens on tribes without affording them the benefit of assistance.

Besides problems of funding and technical assistance, tribes considering taking responsibility for federal pollution control programs should consider their possible exposure to liability for their actions as a regulator. A federal court in South Dakota has held that the Ogallala Sioux tribe, which regulates waste disposal on the reservation, is subject to citizen suit provisions of the Resources Conservation and Recovery Act in a claim for damage to a drinking water supply from a solid waste dump on the Pine Ridge Indian Reservation.[139]

Tribal Water Marketing

Market transactions provide a means for reallocating water throughout the West so that it will be put to the most valuable uses. As agriculture declines in importance and cities continue to grow, water rights transfers from one use to the other could be mutually beneficial.[140] Transactions responding to market forces are said to improve the efficiency of water use.[141]

If the movement of non-Indian water from one use to another (based on market forces) promotes efficiency and wise use, it may be beneficial for Indian water to be traded as well. Non-Indian purchasers will have a greater opportunity to expand businesses and commu-

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7. Assistant and Regional Administrators should, to the maximum feasible extent, incorporate tribal concerns, needs and preferences into EPA's policy decisions and program management activities affecting reservations.

8. Assistant Administrators, Regional Administrators and the General Counsel should work cooperatively with the tribal governments to achieve compliance with environmental statutes and regulations on Indian reservations, consistent with the principle of Indian self-government.

9. Assistant Administrators, Regional Administrators and the General Counsel should begin to factor Indian policy goals into their long-range planning and program management activities, including budget, operating guidance, management accountability systems and performance standards.

139. Blue Legs v. EPA, No. 85-5097 (D.S.D. Sept. 3, 1987) (tribes are "regulated entities" under RCRA and therefore are subject to the citizen suit provisions of RCRA, 42 U.S.C. § 6972(a)(1)(A) and (B) (Supp. III 1985)).

140. *See* Tarlock, *supra* note 8, at 145, 168-173; WATER EFFICIENCY TASK FORCE, *supra* note 8.

141. *E.g.*, Wahl & Osterhoudt, *Voluntary Transfers of Water in the West*, in NATIONAL WATER SUMMARY 1985—HYDROLOGIC EVENTS AND SURFACE-WATER RESOURCES 113 (United States Geological Survey Water-Supply Paper 2300, 1986); Gould, *Conversion of Agricultural Water Rights to Industrial Use*, 27B ROCKY MTN. MIN. L. INST. 1791 (1982).

nities if Indian water is made available to them in market transactions. Tribes may find that the economic benefits of water sales are far greater than the benefits of using the same water for their own purposes.

Many state laws restrict market transfers of water, and the effects of many trades on third parties limit their efficacy.[142] The issue is even more complicated with Indian water rights. At one extreme, the marketing of Indian water is seen as entirely contrary to the notion of reserved rights—a doctrine that was created to enable reservation development.[143] Others suspect marketing as yet another device for parting Indians from their resources.

Tribes must have congressional permission to market their water because Indians can transfer interests in reservation real property only if Congress consents.[144] Congress has given blanket authorization to the leasing of Indian land, subject to the approval of the Secretary of the Interior.[145] The Ninth Circuit long ago ruled that lessees of Indian lands can make use of Indian water rights on those leased lands; more recently, the same court held that when an allotment is transferred to a non-Indian the conveyance can carry with it a share of the tribe's reserved water right.[146] Although the courts have not spoken specifically as to transferability of Indian water apart from a lease of land, the right to use water is an interest in real property and the validity of a transfer of that right, even temporarily, would seem subject to congressional approval.

The National Water Commission recommended enactment of general legislation authorizing Indians to lease their water rights.[147] The Commission saw this as a way of dealing with the uncertainties plaguing both Indians who want to preserve their *Winters* rights for the future and non-Indians who want to secure a dependable water supply. Congress has not acted to implement the recommendation.

Some commentators argue that Indian water should not be alien-

142. Gould, *supra* note 141, at 1820-46. *See also* Martz & Raley, *Administering Colorado's Water: A Critique of the Present Approach*, in TRADITION, INNOVATION AND CONFLICT 52-57 (L. MacDonnell ed. 1986).

143. *See* Palma, *Considerations and Conclusions Concerning the Transferability of Indian Water Rights*, 20 NAT. RESOURCES J. 90 (1980).

144. 25 U.S.C. § 177 (1982); New Mexico v. Aamodt, 537 F.2d 1102, 1110 (10th Cir. 1976), *cert. denied*, 429 U.S. 1121 (1977); United States v. Ahtanum Irrigation Dist., 236 F.2d 321, 334 (9th Cir. 1956), *cert. denied*, 352 U.S. 998 (1957); *see also* COHEN, *supra* note 43, at 593.

145. 25 U.S.C. § 415 (1983).

146. Skeem v. United States, 273 F. 93 (9th Cir. 1921), and Colville Confederated Tribes v. Walton, 647 F.2d 42 (9th Cir. 1981).

147. *See* U.S. NATIONAL WATER COMM'N, WATER POLICIES FOR THE FUTURE—FINAL REPORT TO THE PRESIDENT AND TO THE CONGRESS 480-81 (1973).

able for off-reservation uses, that reserved water rights were created to fulfill the purposes of Indian reservations and hence must be used there.[148] This interpretation is inconsistent with precedent recognizing a tribe's right to make full and flexible use of reserved rights once they are quantified. The Supreme Court in *Arizona v. California*[149] found that agriculture was the specific purpose of the five Colorado River mainstream tribes. But the Court later ruled that quantified water rights based on the agricultural needs for all "practicably irrigable acreage" could be used for any beneficial purpose.[150] The overall purpose of virtually all Indian reservations is to provide a permanent homeland where a tribe can be economically self-sufficient and govern itself.[151] Consequently, it is reasonable to allow a tribe's water rights to be put to the highest economic use that the tribe may choose, whether on or off the reservation. Indian treaties are replete with language indicating that reservations were created to "civilize" the Indians.[152] Surely non-Indian society would judge entry into the free market and utilization of tribal resources, including land, minerals, timber and water, as capital assets, to be among the most "civilized" activities a tribe could undertake. Thus, reservation purposes conceivably could be fulfilled by selling or leasing water to others for use off the reservation. Whether such transactions were specifically contemplated by Congress when it reserved lands is not the issue. Congress's intent relates to quantification, not use. In any event, if Congress approves specific transactions any issue of its intent becomes moot.

There are policy considerations that a tribe may want to weigh before it authorizes the use of its water outside the reservation. Will the tribe be able to reclaim and begin using its water at the end of a lease? What happens to the tribal community and way of life while water is being exported? Will off-reservation water use render the reservation relatively useless, lead to the disintegration of reservation life and the assimilation of Indians into the larger society?

Tribes may decide that transfer of water to non-reservation uses is beneficial, especially on reservations where agricultural enterprise is unrewarding. Agriculture was culturally strange to some Indians and

148. *See supra* note 143.

149. 373 U.S. 546 (1963).

150. Arizona v. California, 439 U.S. 419, 422 (1979).

151. *See* COHEN, *supra* note 43, at 68-70.

152. Quick Bear v. Leupp, 210 U.S. 50, 64 n. 1 (1908) (1868 treaty between the United States and Sioux Indians, Indians ceded lands and other rights for the United States' agreement to "insure the civilization of the Indians entering this treaty. . . ."); National Indian Youth Council v. Bruce, 485 F.2d 97, 98 n.1 (10th Cir. 1973) (Navajo Treaty of 1868 provides: "[i]n order to insure the civilization of the Indians entering into this treaty. . . ."). The *Winters* court spoke of encouraging "habits of industry" and "advancing the civilization and improvement of the Indians." 207 U.S. at 567.

has not been lucrative for many. Hardy, clever hunters of the Great Plains were confined to reservations where they were given small parcels of land often inadequate for farming.[153] Extensive leasing of these small allotments to non-Indians resulted in large non-Indian farming enterprises.[154] Today, on many reservations, most of the farming is done by non-Indians. Nationally, non-Indians produce sixty-nine percent of farm income on Indian land and use seventy-eight percent of the irrigated acreage on reservations.[155] The community stake in continuing on-reservation agricultural water use on these reservations is limited.

For many tribes, keeping water in the stream until it passes off the reservation may be the highest use from the perspective of tribal culture. Traditional fishing and hunting pursuits can be sustained, along with modern enterprises built on tourism. In some cases a tribe may be more satisfied and "successful" selling water to a downstream municipality or industry than it would be in making heroic efforts to develop marginal agriculture or to assemble enough capital to attract industries within the reservation boundaries that could use the water and at the same time return an income to the tribe. Some industries, especially heavy polluters, may be more attractive as off-reservation water customers than as reservation lessees.

Non-Indians surely could benefit from the marketing of Indian water rights. Indian water rights in the Colorado River have been adjudicated for over twenty-five years, but a significant amount of this water remains unused. Of the five mainstream tribes, who together have rights to nearly a million acre-feet of water a year, only one has used most of its entitlement.[156] Others have only begun using their water, primarily to serve non-Indian agricultural lessees on their reservations.[157] In a few cases, tribal enterprises for recreation and tourism use the tribal apportionment to irrigate golf courses and to serve hotels and casinos.[158]

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153. *See* Getches, *Water Rights on Indian Allotments*, 26 S.D.L. REV. 405, 412-15 (1981). *See generally*, D. OTIS, THE DAWES ACT AND THE ALLOTMENT OF INDIAN LANDS (F. Prucha ed. 1973).

154. *See* AMERICAN INDIAN POLICY REVIEW COMM'N, 94TH CONG., 2D SESS., FINAL REPORT 318 (Comm. Print 1977).

155. *Id.* at 315. Recent figures show that the percentage of Indian farm land leased to non-Indians has been declining over the past twenty years. U.S. DEP'T OF INTERIOR, REPORT OF THE TASK FORCE ON INDIAN ECONOMIC DEVELOPMENT 115 (1986).

156. *See* Arizona v. California, 460 U.S. 605, 653-54 n.8 (1983) (Brennan, J., concurring in part, dissenting in part).

157. *See supra* note 154.

158. *See* Note, *Transferability Under the Papago Water Rights Settlement*, 26 ARIZ. L. REV. 421, 424 n.33 (1984) (one of the proposed uses for the Papago (Tohono O'dam) water is a large planned community on the reservation with light industry, a golf course and hotel); Rocky Mountain News,

Potential purchasers in need of water are understandably reluctant to pay tribes for their water. So long as tribes lack capital, reserved rights will go unused and the tribes' senior priority dates will have little practical effect on non-Indian uses. Purchasers will wait until they perceive a clear and present threat that the tribes will put their water to use. Although this may appear rational, relatively low cost contracts might be negotiated now to assure a purchaser a safe annual yield or backup supplies for dry years. An arrangement like an insurance policy could be negotiated. For instance, an off-reservation municipal user may be willing to pay a tribe an annual fee for its agreement not to develop water for a specified period. The agreement might provide that when the municipality needs and uses the tribe's water, additional payments will be made. This could prove much cheaper than many alternative investments to protect future water supplies.

The Metropolitan Water District of Southern California (MWD) is searching the state and its shared watersheds in earnest for new water sources.[159] But MWD has steadfastly insisted that it cannot and will not purchase the right to use water from the Colorado River tribes because it believes that to do so is inconsistent with the *Winters* doctrine and contrary to the law of the Colorado River.[160] Under the "law of the river," which is based on interstate compacts and federal statutes, water not used by an upstream party flows to a downstream party.[161] While there is nothing in the law to prohibit transactions with Indian tribes that ensure delivery of water to other users, such transactions are presently unnecessary to keep most of the Indians' water flowing to MWD without charge. The reliability of MWD's supply thus depends on the tribes remaining financially unable to develop their water. As the tribes raise the capital needed to put their

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Oct. 29, 1987, at 30, col. 2 (plans to develop a luxury resort on the Navajo Reservation that would "let the rest of America and the world see the Navajo.")

159. METROPOLITAN WATER DIST., MWD CULTIVATES INNOVATIVE WATER SUPPLY PROGRAMS WITH FARMERS, FOCUS, No. 2 (1986).

160. Schmitz, *Utes, California Clash on Water-Project Plans*, Denver Post, Aug. 23, 1987, at 6B, col. 4, 5-6. (Myron Holburt, Assistant General Manager of the Metropolitan Water District of Southern California, said "that if you transfer water between states, you're destroying the whole structure, the entire history of the law of [the] river." Holburt said that the District "has not ruled out a total prohibition" of interstate exporting of water, as a condition to supporting the Colorado-Ute Indian Settlement, including the Animas-La Plata water project. *See infra* note 168. California's opposition could defeat legislation approving the settlement.

161. Article III(e) of the Colorado River Compact provides that the "States of the Upper Division shall not withhold water, and the States of the Lower Division shall not require delivery of water, which cannot reasonably be applied to domestic and agricultural uses." COLO. REV. STAT. § 37-61-101 (1973); *see* Meyers, *The Colorado River*, 19 STAN. L. REV. 1, 16 (1966); Getches, *Competing Demands for the Colorado River*, 56 U. COLO. L. REV. 413, 419-20, 475 (1985).

water to use, MWD may become more motivated to enter into a transaction. At that point the tribes may elect not to sell. In any event, MWD, or any other purchaser who fails to deal with the tribes before such development begins, will have to pay a price that reflects the cost of any investments that have been made to develop the water.

Experience with tribal agreements to forego water development in order to allow non-Indian use is limited. A deferral agreement does not actually market water, but because it bargains away the Indians' right to use a quantity of water for a period in exchange for promises of value to the tribe, it has many attributes of a lease.[162] Many years ago the Ute Indians of the Uintah and Ouray Reservation in Utah agreed to defer use of waters to which they were entitled on over 15,000 acres of irrigable land. The agreement allowed the state and the federal governments to proceed with construction of the behemoth Central Utah Project (CUP). The Indians were to receive a substitute water supply by the year 2005 from a proposed unit of the CUP. It later became clear that the promise of future water was illusory because much of the CUP would never be constructed.[163] The Indians challenged the agreement as unlawful because they received little or no consideration. Their claims led to negotiations with the state. Those negotiations have been largely successful, although the Indians have yet to ratify the new deferral agreement.

The Papago Tribe (now the Tohono O'dam Nation) agreed to limit its reserved groundwater rights in return for a promise by the state of Arizona and the United States that the tribe would receive quantities of federal project water that it could transfer to any use. The settlement agreement, now embodied in federal law, specifically allows off-reservation leasing.[164]

Under the Fort Peck Compact with Montana, the tribes may market up to 50,000 acre-feet of water a year for off-reservation uses.[165] The main restrictions are that uses must be limited to fifty years and cannot be wasteful. Other provisions limit the proportions of groundwater and surface water supplies that can be alienated, pro-

162. Interests in Indian real property cannot be transferred without congressional approval. *See* COHEN, *supra* note 43, at 510-22; The Non-Intercourse Act, 25 U.S.C. § 177 (1982). A contract to defer use of water rights effectively "leases" rights to others and should come within the restriction on alienation discussed *supra* notes 144-146 and accompanying text. *See also* New Mexico v. Aamodt, 537 F.2d 1102, 1110 (10th Cir. 1976), *cert. denied*, 429 U.S. 1121 (1977); United States v. Ahtanum Irrigation Dist., 236 F.2d 321, 334 (9th Cir. 1956), *cert. denied*, 352 U.S. 988 (1957).

163. Ute Indian Deferral Agreement of September 20, 1965 (Bureau of Reclamation Contract No. 14-06-W-194). *See also* J. FOLK-WILLIAMS, WHAT INDIAN WATER MEANS TO THE WEST 88-90 (1982).

164. *Supra* note 29 and Pub. L. No. 97-293, § 306(c)(2), 96 Stat. 1261, 1280 (1982).

165. *Supra* note 29.

vide for notice to the state, and require compliance with state laws on pipeline construction.

The claims of the Mission Indian bands in Southern California to waters of the San Luis Rey River are being resolved under an agreement reached after many years of litigation. Under the agreement the tribes are entitled to 22,700 acre-feet a year of water from the Central Valley Water Project.[166] The northern California water could be used on the Indians' land, or all or a portion of it could be sold for off reservation use. Sales could produce up to $2 million a year for the tribes,[167] while providing seriously needed water to non-Indians in San Diego County.

Exports of water from Indian reservations may not be limited to uses in the states where the reservations lie. The value of water to the tribe is increased if there is an interstate market. The State of Colorado and the Ute Mountain Ute and Southern Ute Indian tribes have negotiated an agreement to settle the tribes' reserved water rights claims. The Indians (and the United States on their behalf) insisted that the tribes not be precluded from marketing their water. The state concurred with the Indians' request to include nothing in the agreement that specifically bars marketing, even interstate, so long as it comports with state restrictions on water export and does not run afoul of the interstate compacts to which the state is a party.[168] This provision has aroused opposition among interests in some Lower Colorado River Basin states who apparently fear that the agreement and its possible effect as a precedent may result in their having to compensate tribes for Indian water now available downstream without cost.[169]

Since the decision in *Sporhase v. Nebraska*,[170] it has been clear that state laws regulating water export must pass muster under the Commerce Clause of the United States Constitution. State legislation must not impede interstate commerce in water, which the Court held to be a commodity. Only a state's even-handed measures, demanded by shortages to protect "the health of its citizens—and not simply the health of its economy," will be allowed to restrict interstate water markets.[171] Therefore, states may not obstruct reasonable economic transactions in water. Although the Court has not specifically decided the issue, a legitimate interest in protecting state citizens probably

166. S. 795, 100th Cong., 1st Sess. § 5(a)(1) (1987); *see also supra* note 135.

167. S. REP. NO. 47, 100th Cong., 1st Sess. 79 (1987).

168. Colorado Ute Indian Water Rights Final Settlement Agreement, Art. VI, Sec. A, subsection 1.b., Dec. 10, 1986.

169. *See* Schmitz, *supra* note 160.

170. 458 U.S. 941 (1982).

171. *Id.* at 956.

does not include withholding exports of Indian water so that it will be available for future use in the state. State restrictions on Indian water export may be further limited by the Indian Commerce Clause.[172] If state regulation restrained the use of Indian reservation resources it would violate an independent barrier to state control of Indians and their property inherent in the Commerce Clause.[173]

By broadening the markets for Indian water, the value of tribal water can be increased. Furthermore, non-Indian users who, by virtue of proximity or geography, can be supplied with water by an Indian tribe, gain another option for future supply. Non-Indians may achieve greater certainty of water supplies and remove the threat of possible interruption of existing uses through negotiation of firm legal arrangements with tribes to continue or expand non-Indian use of water subject to Indian reserved rights.

CONCLUSION

Indians and non-Indians are in a common quest for enough clean water to meet their respective needs for sustenance, production, refreshment, and spiritual fulfillment. Legal institutions have been used to drive them apart in that quest.

States and tribal governments can benefit if they join in seeking optimal solutions to water rights issues through improved management and voluntary economic allocation of Indian water. Cooperative agreements for regulation and management of resources and interjurisdictional compacts can ensure wiser, fuller use of water resources and better protection of water quality. Arms-length marketing arrangements can also be mutually beneficial if they are sensitive to cultural differences and are the result of a good-faith search for common ground. Cooperation rather than combat will lead to solving practical problems with practical solutions, instead of prolonged disputes that ultimately award one party a paper victory that does not readily translate into "wet water."

Reserved rights claims are traditionally acrimonious in the West. The late Dean Frank J. Trelease wrote about the typical reactions of parties to reserved rights claims ten years ago, marveling at the im-

172. U.S. CONST. art. I, § 8, cl. 13 ("The Congress shall have Power to regulate Commerce with foreign Nations, and among the several States, and with the *Indian Tribes*" (emphasis added).).

173. *See* COHEN, *supra* note 43, at 270-279. State control of reservation resources is generally preempted by the treaties, statutes or executive orders establishing an Indian reservation. *E.g.*, White Mountain Apache Tribe v. Bracker, 448 U.S. 136 (1980) (state taxation of Indians); Williams v. Lee, 358 U.S. 217, 220 (1959) ("absent governing acts of Congress, the question has always been whether the state action infringed on the right of reservation Indians to make their own laws and be ruled by them.").

practicality of approaches then being taken by litigants. Referring to *Cappaert v. United States*, a reserved rights case,[174] he said:

> I intend to devote my waning energies to real problems like why the Cappaerts and the United States do not act like ordinary water users with a protection of diversion problem, and work out a physical and legal solution that will allow irrigation, yet preserve the water level [needed by the United States for fish habitat] and, thus, permit the Cappaerts and the pupfish each to do their thing.[175]

Litigation and negotiation resulting in quantification and resolution of various Indian water rights questions have brought tribes and states to the brink of the kinds of solutions proposed here. The next step is to breathe meaning and values into those paper rights by using and managing them wisely. Cooperation in crafting practical solutions for the mutual benefit of Indians and non-Indians can be fruitful, and can avoid many of the costs, delays and inconclusiveness of past approaches to Indian water rights issues.

174. 426 U.S. 128 (1976).

175. Trelease, *Federal Reserved Water Rights Since PLLRC*, 54 DEN. L.J. 473, 492 (1977).