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**Implementing the *Winters* Doctrine of Indian Reserved
Water Rights: Producing Indian Water and Economic
Development Without Injuring Non-Indian Water
Users?©**

by

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IMPLEMENTING THE *WINTERS* DOCTRINE OF INDIAN RESERVED WATER RIGHTS: PRODUCING INDIAN WATER AND ECONOMIC DEVELOPMENT WITHOUT INJURING NON-INDIAN WATER USERS?©

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INTRODUCTION

Indians claim large water rights in the western states, where the arid climate makes water essential for economic development and for the survival of communities in areas with sparse and undependable rainfall. For the most part, these Indian claims to use water have not actually been exercised. While non-Indians irrigate about 46-million acres in the United States,¹ Indians irrigate only around 500,000 to 600,000 acres.² Yet in legal doctrine, Indians

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1. U.S. WATER NEWS, June 1989, at 15.

2. We have been unable to develop any figure for Indian lands under irrigation which we can confidently rely upon.

In 1978, Assistant Secretary of the Interior Forrest Gerard estimated there were 370,000 acres of Indian owned lands under irrigation. "National Indian Water Policy Review," Jan. 23, 1978.

Professor McCool quotes reports of the Commissioner of Indian Affairs for the proposition that 160,000 acres were under irrigation in 1908, perhaps about double that amount in the 1930s, and that about 550,000 acres were irrigated within the 15 largest Indian irrigation projects as of 1975. DANIEL MCCOOL, *COMMAND OF THE WATERS*, 126-27, 141 (1987). The National Irrigation Committee estimated in 1988 that the 73 existing BIA Indian Irrigation projects provide services to 1,155,133 acres of tribal, allotted and fee lands. NATIONAL IRRIGATION COMM., *REPORT ON THE STATUS OF INDIAN IRRIGATION PROJECTS ADMINISTERED BY BIA 35* (May 1988). Many, perhaps most, lands within "Indian" irrigation projects, however, are owned in fee by non-Indians.

We believe the Interior Department's 1978 estimate was generally correct. We also believe that irrigated Indian agriculture has expanded by at least 100,000 acres (possibly somewhat more) since the late 1970s, principally in Arizona. See Part II A1. Thus, we tentatively conclude that between 500,000 and 600,000 acres of Indian owned lands are

generally have superior water rights.

This legal doctrine strikes widespread fear into the hearts of non-Indian water users. They are concerned that if the unexercised but legally senior Indian water rights are actually put to use in water-short areas, non-Indian irrigation use would suffer a gallon-for-gallon, acre-for-acre reduction. The result could be obvious disruption for existing non-Indian economies and capital investments. Another fear about Indian water rights is that their size is unknown. Thus, state and private irrigators have felt insecure in planning future water uses because they are unaware how much water would be available, if Indian rights were fully exercised.

On the other hand, there is also general agreement that on Indian reservations in western states the clear disparity between Indian and non-Indian actual water use which greatly favors non-Indians is surely one cause of widespread poverty.³ This factor argues strongly in favor of increased Indian water use by enforcement of legally superior Indian water rights.

As we will discuss in more detail in Part II, in recent years many western states have begun litigation to quantify unexercised Indian water rights. Adjudication as to water rights use has been brought affecting most tribes in Arizona, New Mexico, Montana, and Nevada, and many tribes in Washington and Oregon. One case, affecting the only Indian reservation in Wyoming, has proceeded to final judgment adjudicating the Indian rights after twelve years of trials and appeals.⁴ A few other cases were tried and are now on appeal in the state courts.⁵

Other states such as Colorado, Idaho, and Nevada have finalized negotiated water rights settlements with some or all tribes within their boundaries.⁶ Utah has negotiated a water settlement which remains to be ratified by Congress. Two of the states that have begun litigation—Arizona and Montana—have also reached settlements with some tribes within their borders.⁷

In Part I, this article will review the basic doctrines of state and federally-reserved water rights which give rise to the concern that legally superior Indian water rights may supersede and cut off existing non-Indian water uses.

under irrigation today.

3. See *infra* Part II.

4. See *infra* note 56 and accompanying text.

5. See *infra* note 51 and accompanying text.

6. See *infra* notes 120-127 and accompanying text.

7. *Id.*

Next, in Part II, it will examine the outcome of current litigation and finalized settlements. This article concludes that this litigation, and particularly Congressionally approved settlements, in fact encourage Indian water resource and other economic development *without* usually cutting off existing non-Indian water uses. This is so because Congress has significantly funded Indian water settlements in recent years—constructing new projects, conserving water, facilitating water transfers and storage, and providing general economic development funds for tribes.⁸

I. THE LEGAL DOCTRINE

We will first briefly contrast the rules of state water law to the principles and purposes of the federal reserved rights doctrine.

A. *The State Law Doctrine of Prior Appropriation*

Most western states have an arid climate where water is in short supply. These states apply the doctrine of “prior appropriation” to determine rights of water usage arising under state law.⁹ Under this doctrine, a person acquires an enforceable right to use water only upon actually diverting the water from its natural sources and applying it to a beneficial use.¹⁰

This water use is assigned a legal “priority date”—the date actual diversion commences.¹¹ Under the “first in time, first in right” concept, this right has a priority over subsequent water rights holders.¹² In years of short supply, a senior appropriator is entitled to his full diversion requirement before a junior user gets any water.¹³ However, unlike most property rights, a water right under the doctrine of prior appropriation will exist only until the water appropriated is continuously put to an actual beneficial use; the right can be lost by abandonment.

8. *See infra* Part II.

9. In most eastern states, rights to the use of water are generally determined by what is termed the “riparian doctrine.” This doctrine permits a landowner whose property abuts a body of water to make a reasonable use of the water so long as the landowner does not interfere with other riparian users. DAVID GETCHES, *WATER LAW IN A NUTSHELL*, 14 (2d ed. 1990).

10. *Id.* at 99.

11. *Id.* at 101.

12. *Id.*

13. *Id.*

B. Federal Reserved Rights

1. *Winters v. United States*¹⁴

The legal doctrine developed concerning federal reserved water rights contrasts with state laws of prior appropriation in almost all of the above respects. In the landmark case of *Winters v. United States*,¹⁵ the United States brought suit on behalf of the tribes of the Fort Belknap Indian Reservation, located on the Milk River in Montana.¹⁶ In *Winters*, the United States sued to restrain diversion of water by non-Indians from the Milk River upstream from the reservation because water reaching the reservation was insufficient to meet Indian needs for development of the reservation's agricultural lands and related uses.¹⁷

An agreement ratified by Congress in 1888 established the Fort Belknap Reservation "as and for a permanent home and abiding place of the [tribes]."¹⁸ In the agreement, the tribes ceded the territory they did not reserve. Non-Indians acquired ceded land upstream from the reservation, irrigated the land, and obtained state water rights.¹⁹ At the time of trial, the Indians were also diverting water for irrigation, most of which they began using after the appropriative rights of non-Indians vested under state law.²⁰

The Court in *Winters* rejected arguments made by non-Indian irrigators that the Indians had no reserved right because the ceded lands would be useless if the Indians had also reserved the water for the reservation lands they retained:

We realize that there is a conflict of implications, but that which makes for retention of the waters is of greater force than that which makes for their cession. The Indians had command of the lands and the waters,—command of all their beneficial use, whether kept for hunting, "and grazing roving herds of stock," or turned to agriculture and the arts of civilization. Did they give up all this? Did they reduce the area of their occupation and give up the waters which made it valuable or adequate?²¹

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

15. *Id.*

16. *Id.* at 565

17. *Id.* at 566-67.

18. *Id.* at 565.

19. *Id.* at 576-70.

20. See Master's Report *Arizona v. California* (Dec. 5, 1960) [hereinafter Master's Report].

21. 207 U.S. at 576.

These rhetorical questions were answered in the negative by the Court which held that the Indians did not give up their water.²² The supposition that the tribes had given up most of their land and kept their reservations without the water to develop "agriculture and the arts of civilization" was simply not credible to the Court.²³

The Supreme Court held that although the non-Indian diversions were "first in time," rights to the use of water had been impliedly reserved for the benefit of the Indians by the agreement and ratifying statute establishing the reservations.²⁴ The "priority date" of the Indians' reserved right commenced the date the reservation was established (even though no water had then been put to actual use). The Court affirmed an injunction against the non-Indian irrigators, all of whom had commenced diversions after establishment of the reservation and, therefore, had junior priority dates.²⁵

The Court placed no limit upon the amount of water the tribes were entitled to in the future. The Indians had reserved the waters which made their reservation "valuable or adequate." A present interference was enjoined and future interferences could also be enjoined. Thus, the Court's decree was open ended.

2. *Arizona v. California*²⁶

The United States Supreme Court's 1963 decision in *Arizona v. California*,²⁷ brought into sharp focus the importance of tribal reserved water rights in the allocation and utilization of the nation's water resources. *Arizona* changed the open-ended uncertainty of *Winters* and other prior court decrees concerning Indian reserved rights²⁸ and established a standard for

22. *Id.*

23. *Id.* at 577.

24. *Id.*

25. *Id.* at 577-78.

26. 373 U.S. 546 (1963). Decree entered, 376 U.S. 340 (1964), decree amended, 383 U.S. 268 (1966), supplemental decree entered, 439 U.S. 419 (1979), supplemental opinion, 460 U.S. 605 (1983) ("Arizona II"), second supplemental decree entered, 466 U.S. 144 (1984). Unless otherwise stated, references to *Arizona* or *Arizona v. California* are to the 1963 decision affirming the Master's Report.

27. *Id.*

28. For example, in *Conrad Inv. Co. v. United States*, 161 F. 829 (9th Cir. 1908), the Ninth Circuit enjoined an upstream non-Indian user. In discussing the quantity of water reserved for the Indians, the court said:

What amount of water will be required for these purposes may not be determined with absolute accuracy at this time; but the policy of the government to reserve whatever water . . . may be reasonably necessary, not only for present uses, but

quantifying Indian reserved rights where the primary purpose of the reservation was agricultural.²⁹

In 1952, Arizona filed suit in the original jurisdiction of the United States Supreme Court to determine its share of water from the Colorado River.³⁰ Without such a determination, Arizona could not obtain federal assistance in building the long-coveted Central Arizona Project.³¹ The United States intervened, asserting, among other things, reserved water rights for Indian reservations located in the lower Colorado River Basin.³² The case was referred to a Special Master, who held lengthy hearings on the issues presented.³³

For the first time, the resolution of an issue of national significance required the permanent quantification of agricultural and associated rights reserved for future use by Indian tribes.³⁴ The Master concluded that an award based on current Indian population or needs would require open ended decrees to account for changing circumstances.³⁵ The Master observed that this would put all junior water rights forever in jeopardy and severely hamper financing of irrigation projects, because current populations and needs could change.³⁶

The Master also found that tying water rights to the future development of the reserved lands was actually more in accord with the standards of water

for future requirements, is clearly within the terms of the treaties as construed by the Supreme Court in the *Winters* case.

Id. at 832. The court's decree was specifically "subject to modification, should the conditions on the reservation at any time require such modification." *Id.* at 835.

In *United States v. Walker River Irrigation Dist.*, 104 F.2d 334 (9th Cir. 1939), the Ninth Circuit limited the Walker River Paiute Tribe's reserved right to an amount of water based on their past irrigation needs, and assumed that the tribe's future needs would be satisfied by that amount. But in *United States v. Ahtanum Irrigation Dist.*, 236 F.2d 321 (9th Cir. 1956), *cert. denied*, 352 U.S. 988 (1957), the Ninth Circuit discussed *Walker River*, but followed *Conrad*, holding that: "[T]he paramount right of the Indians to the waters of Ahtanum Creek was not limited to the use of the Indians at any given date but this right extended to the ultimate needs of the Indians as those needs and requirements should grow" *Id.* at 327.

29. *Arizona*, 373 U.S. at 546.

30. *Id.* at 550-51.

31. *Arizona v. California*, 460 U.S. 605, 621 (1983).

32. *Arizona*, 373 U.S. at 600.

33. *Id.* at 551.

34. Master's Report, *supra* note 20.

35. *Id.* at 263-64.

36. *Id.* at 264.

management throughout the West and with the status of reserved rights “as property rights.”³⁷

The Master determined the future needs of each Reservation by deciding which reservation lands were practicably irrigable, and entered a quantified water right for five reservations on the mainstem of the Colorado River in his proposed decree.³⁸

The Supreme Court, after extensive briefing on the issues, specifically affirmed the Master’s reasoning and decree:

[The Master] found that the water was intended to satisfy the future as well as the present needs of the Indian Reservations and ruled that enough water was reserved to irrigate all the practicably irrigable acreage on the reservations. . . . How many Indians there will be and what their future needs will be there can only be guessed. We have concluded, as did the Master, that the only feasible and fair way by which reserved water for the reservations can be measured is irrigable acreage. The various acreages of irrigable land which the Master found to be on different reservations we find to be reasonable.³⁹

The five tribes in *Arizona* were decreed 905,496 acre-feet for 135,636 practically irrigable acres,⁴⁰ even though in the early 1960s these tribes were actually irrigating less than 36,000 acres.⁴¹

Winters and *Arizona* illustrate that: (1) the quantity of tribes’ permissible water use is determined by the purposes of the reservation, not actual historic use, and (2) their priority is early—in these cases as of the date the reservation is created⁴²—and thus almost always prior to earlier actual non-Indian uses of water under state law. The practicably irrigable acreage standard in *Arizona v. California* is an expression of the first of these two principles, applied to reservations whose primary purpose is agricultural. It measures the quantity of the reserved water right based on the assumption that the future needs of the Indians will be to irrigate all irrigable reservation lands. Therefore, an Indian reservation established in 1888, as in *Winters*, has legally

37. See *United States v. Powers*, 305 U.S. 527 (1939). “[T]he decree establishes a property right which the United States may utilize or dispose of for the benefit of the Indians as the relevant law may allow.” Master’s Report, *supra* note 20, at 266.

38. Master’s Report, *supra* note 20.

39. *Arizona v. California*, 373 U.S. 546, 600-01 (1963).

40. *Arizona v. California*, 376 U.S. 340, 344-45 (1964).

41. *Id.*

42. The right may be earlier where the reservation was created in a tribe’s aboriginal land area.

superior water rights even to non-Indians who have been irrigating continuously since 1890. This is true even if the Indians have never exercised their rights, and non-Indians have been using the water. Unlike appropriative water rights, reserved rights do not depend on actual past or present use of water.

The reserved rights doctrine can be analyzed as a vested property right with proprietary components—early priority date, preservation despite non-use, and a measure as being sufficient to satisfy future beneficial needs of the Indians. So conceived, Indian water rights are the most valuable property of Indian tribes. Because of the scarcity of water in western states and the dependence of Indian economic development upon water, the vested property right to the use of water sufficient for beneficial economic development of Indian reservations is probably essential to Indian future economic development and well-being.

Alternatively, these concepts can also be seen as the extension of preemptive federal law (embodied in the treaties or agreements establishing the reservations) to insulate tribes from those state water law principles of prior appropriation which could thwart the future economic self-sufficiency of tribes and, in some cases would render their arid lands “useless” or “practically valueless”.⁴³ The state law doctrine of prior appropriation favors putting water immediately to use, and gives advantage to the investment of capital and labor to do so quickly.⁴⁴ Federal law establishing the reservations, on the other hand, recognized that when reservations were set aside, the impoverished and unacculturated Indians would likely lack the capital and technological capacity to use all the water that could benefit their lands. It would ultimately be necessary to provide them with economic well-being. In this respect, federal law supplants state law principles of the prior appropriation doctrine by recognizing a right that is not based on appropriation. A federal right to use the water in the future is guaranteed to the tribes, even though the water is not put to an immediate use. In this way the federal purpose of Indian economic self-sufficiency can be fulfilled in the future, and tribal government and society can be preserved.

43. As the Supreme Court has observed, often Indian reservation “lands were arid and, without irrigation, were practically valueless” and when reservations were created, waters were reserved “without which their lands would have been useless.” *Winters v. United States*, 207 U.S. 564, 576 (1908); *Arizona v. California*, 373 U.S. at 600 (construing *Winters*).

44. See *supra* notes 9-13 and accompanying text.

II. JUDICIAL AND LEGISLATIVE QUANTIFICATION OF INDIAN RESERVED WATER RIGHTS

Following *Arizona v. California*, several western states have adopted the policy of seeking definite quantification of Indian reserved water rights within their boundaries, thus avoiding the open-ended nature of unexercised Indian claims. Relying on a 1952 federal statute known as the McCarran Amendment,⁴⁵ states sought to have this federal law question adjudicated in their state court systems. The McCarran Amendment authorized state courts to determine water rights of the United States in "general stream adjudications," which are proceedings to adjudicate all water rights in a particular river system.⁴⁶ The question of whether Indian tribal water rights were covered by the amendment and could, therefore, ultimately be determined in state courts was hotly litigated for over a decade.⁴⁷

Indian tribes, generally supported by the United States, bitterly resisted determination of their water rights in state courts.⁴⁸ Tribes pointed out that nothing in the language or legislative history of the McCarran Amendment authorized or considered adjudication of Indian rights, and the Amendment did not waive Indian sovereign immunity.⁴⁹ They complained that state courts were often hostile to Indians' special rights.⁵⁰

Although the Supreme Court acknowledged that "[e]ach of these arguments has a good deal of force," the Court decided that concurrent federal proceedings to determine Indian rights "are likely to be duplicative and wasteful, generating 'additional litigation through permitting inconsistent dispositions of property.'"⁵¹ The Court held in these cases that federal courts should ordinarily defer to state proceedings to determine Indian water rights.⁵² The Court emphasized, however, that state courts "have a solemn obligation to follow federal law and respect 'the powerful federal interest in safeguarding [Indian water] rights from state encroachment.'"⁵³

General stream adjudications permitted under the McCarran Amendment

45. 43 U.S.C. § 666 (1988).

46. *Id.*

47. *Arizona v. San Carlos Apache Tribe*, 463 U.S. 545, 566 (1983).

48. *Id.*

49. *Id.* at 566.

50. *Id.*

51. *Id.*, 567 (1983). See also *Colorado River Water Conservation Dist. v. United States*, 424 U.S. 800 (1976).

52. *San Carlos Apache*, 463 U.S. at 570.

53. *Id.* at 571.

are extremely costly and protracted. Since all water users on a given stream system must be joined as parties, hundreds or even thousands of parties are commonly involved. Each party is adverse to every other party.⁵⁴ The rights of each party must be proven: the priority date, quantity of use, place of use and purpose of use. Trials take many years and millions of dollars in costs, expert witness' fees, and attorney's fees.⁵⁵

One state court adjudication has now proceeded to final judgment. In 1977, Wyoming initiated a general stream adjudication of the Big Horn River system, which includes the only Indian Reservation in that state—the Wind River Reservation.⁵⁶ The Wyoming courts found that the Wind River Reservation had the same principal agricultural purpose as the Montana reservation involved in *Winters* and the desert southwest reservations in *Arizona v. California*.⁵⁷ The Wyoming Supreme Court applied the irrigable acreage standard of *Arizona v. California* and determined that there were slightly over 100,000 practicably irrigable acres of Indian land on the reservation.⁵⁸ An annual water right of approximately 500,000 acres feet was awarded to the United States in trust for the two tribes on the Wind River Reservation.⁵⁹ An equally-divided United States Supreme Court affirmed the decision without opinion.⁶⁰

Only about half the lands which the Wyoming courts determined to be practicably irrigable had an actual history of irrigation.⁶¹ The Wind River and its tributaries are generally fully appropriated under state law. The decree, when implemented, could curtail irrigation on thousands of acres owned by non-Indians in water-short years, unless storage projects are built, because the Reservation was established prior to any of those uses and is therefore legally senior to them.

In addition to the final adjudication in Wyoming and final adjudication of the rights of the five lower Colorado River tribes involved in *Arizona v. California*, statutes or compacts were enacted determining the water rights of

54. For example, the state of Wyoming reportedly spent \$14 million in attorney's fees in its general stream adjudication involving Indian and other water rights in Big Horn River during a 12-year period. *Wyoming's Water Dilemma*, DENVER POST, July 9, 1989.

55. *Id.*

56. *In re* the general adjudication of all rights to use water in the Big Horn River System, 753 P.2d 76 (Wyo. 1988).

57. *Id.* at 96.

58. *Id.* at 105.

59. *Id.* at 112.

60. *Wyoming v. United States*, 492 U.S. 406 (1989).

61. *Big Horn River System*, 753 P.2d at 106.

over a dozen tribes. These include the Southern Ute and Ute Mountain Ute Tribes (the only tribes in Colorado), the Assiniboine and Sioux Tribes of the Fort Peck Reservation in Montana, the Ak-Chin, Tohono O'odham (Papago), Salt River and Fort McDowell Tribes in Arizona, the five Mission bands along the San Luis Rey River in southern California, the Shoshone-Bannock Tribes of the Fort Hall Reservation in Idaho, and the Fallon and Pyramid Lake Paiute Tribes in Nevada.⁶² While the process of quantifying uncertain and previously open-ended Indian water rights is still ongoing, it is possible to form some tentative conclusions about the interaction between federal reserved rights and those arising under state law and the consequences of the process on Indian and non-Indian water use and Indian economic development. Three major consequences will be discussed below.

A. Increases in Indian Water Use

1. Irrigation Uses

Most, but not all, of the congressionally approved settlements have provided a means to increase Indian irrigation. A significant increase in Indian irrigated agriculture and other water uses has occurred since the quantification process began in *Arizona v. California*.⁶³ This increase is virtually certain to continue as the result of congressionally-approved settlements in the past two Congresses that have not been fully implemented.

The five lower Colorado River tribes which had their rights quantified in *Arizona v. California* have added about 60,000 acres that need irrigation in the past twenty-five years, and now use approximately 700,000 acre-feet to irrigate about 100,000 acres.⁶⁴ Several other tribes have entered into congressionally approved arrangements since *Arizona* that have significantly expanded Indian irrigated acreage under cultivation. On the Navajo Reservation, for example, Congress authorized and the Department of the Interior constructed an irrigation project serving 110,630 Indian owned acres.⁶⁵ Although the Navajo project did not arise out of contested litigation, its construction was pursuant to an agreement in which the Navajo Tribe relinquished preferential rights to substantial quantities of water from the San Juan River in New Mexico, most of which is now used by the City of Albuquerque. The project currently irrigates 60,000 acres.⁶⁶

62. See *infra* notes 67-84.

63. 373 U.S. 546 (1963).

64. See *Arizona v. California*, 460 U.S. 605, 653, n.8 (1983).

65. Navajo Indian Irrigation Project Act, Sec. 2, 76 Stat. 96 (1962) as amended.

66. Navajo Indian Irrigation Project Act, Pub. L. No. 87-483 § 2, 76 Stat. 1261 (codified as amended at 43 U.S.C. § 620-6200 (1988)). Jacobsen, *A Promise Made: The*

Two settlement acts affecting the Ak-Chin Tribe in central Arizona expanded that tribe's irrigated agriculture by over 10,000 acres.⁶⁷ The statutes were enacted to protect a "highly profitable Indian-owned [farming] enterprise" the tribe had established in 1962, as a result of which the tribe "achieved near economic self-sufficiency."⁶⁸ As a result of this farming enterprise, "[t]he quality of life of the Community and its members . . . dramatically improved. The various governmental and social services once provided to the members of the Community by the Federal government" became "funded from tribal income with little Federal funding needed."⁶⁹ However, "as a result of off-reservation pumping . . . the Community . . . had to reduce its irrigation acreage" by over 50 percent in the 1970s.⁷⁰ The 1978 and 1984 settlement acts quantified Ak-Chin's reserved rights at not less than 75,000 acre-feet to farm 16,000 irrigated acres.⁷¹ The use at Ak-Chin, after non-Indian groundwater depletions, was less than one-third of that amount.⁷² The Ak-Chin Community has virtually completed development of this additional acreage.

Several other tribes have entered into settlements that remain to be implemented. The Tohono O'odham (formerly Papago) Tribe's rights for part of its reservation were quantified in 1982 at 66,000 acre-feet annually of surface water and 10,000 acre-feet per year of groundwater pumping, in contrast to historic irrigation of only 7,000 acres.⁷³

Three statutes in 1988 quantified the reserved water rights of both tribes

Navajo Indian Irrigation Project and Water Politics in the American West, Cooperative Thesis No. 119, UNIV. OF COLO. and NAT'L CTR. FOR ATMOSPHERIC RESEARCH (1989).

67. There was one Ak-Chin Act in 1984, Act of October 19, 1984, Pub. L. No. 98-530, 98 Stat. 2698 (1986) [hereinafter the 1984 Ak-Chin Act]. This Act was preceded by an earlier, 1978 enactment, the Act of July 28, 1978, Pub. L. No. 95-328, 92 Stat. 409 (1978).

68. H.R. REP. NO. 1026, 98th Cong., 2d Sess. 5 (1984).

69. *Id.*

70. *Id.* at 6.

71. *Id.* at 6, 17.

72. H.R. REP. NO. 954, 95TH CONG., 2D SESS. 13 (1978).

73. Southern Arizona Water Rights Settlement Act Pub. L. No. 97-293, 96 Stat. 1261 (1982) [hereinafter Papago Act]; H.R. REP. NO. 422, 97th Cong., 2d Sess. 14-15, 21 (1982). The federal reserved water rights of tribes most likely apply to groundwater. See Cappaert v. United States, 426 U.S. 128 (1976). Without substantial analysis, however, the Wyoming Supreme Court held that reserved rights do not apply to groundwater. *Wyoming v. United States*, 753 P.2d 76 (Wyo. 1988), *aff'd*, 492 U.S. 406 (1989). In any event, both the Ak-Chin and Papago settlements protect groundwater uses, and the Colorado Ute, Fort Hall, and Fort Peck settlements authorize tribes to satisfy reserved water rights by use of groundwater.

in Colorado,⁷⁴ five Mission bands in Southern California,⁷⁵ and the Salt River Pima-Maricopa Indian Community in Arizona.⁷⁶ In Colorado, the two tribes will receive over 100,000 additional acre-feet from federal storage projects that will be constructed.⁷⁷ The Colorado Ute Act provides that a considerable part of the Southern Ute Tribe's water will be used for municipal and industrial purposes and must be paid for by the tribe.⁷⁸ The Mission Bands will receive 16,000 acre-feet per year, in contrast to historic uses of around 2,000 acre-feet annually.⁷⁹ The Salt River Act establishes that tribe's reserved rights as 122,400 acre-feet to irrigate 27,200 acres,⁸⁰ which is approximately six times its historic use.⁸¹

Finally, in 1990, the Fort McDowell Indian Community Settlement Act⁸² quantified the reserved water rights of that tribe in a manner that permits expanding irrigated agriculture on the reservation from 730 to 4000 acres and for the tribe to develop 18,350 acres for urban and other uses within the reservation.⁸³ The Fort McDowell settlement measures the tribes' reserved water rights partly by irrigable acreage and partly by other needs and purposes of the reservation.⁸⁴

When the federal projects contemplated by the Papago, San Luis Rey, Salt River and Fort McDowell settlement acts are built, Indian irrigated agriculture will likely increase by over 60,000 acres.⁸⁵ The Arizona tribes, for example, will receive an increased supply of water from the Central Arizona Project and other federal and non-federal sources.⁸⁶ The Colorado

74. Colorado Ute Indian Water Rights Settlement Act Pub. L. No. 100-585, 102 Stat. 2973 (1988) [hereinafter Colorado Ute Act].

75. San Luis Rey Indian Water Rights Settlement Act, Pub. L. No. 100-675, 102 Stat. 4000 (1988) [hereinafter San Luis Rey Act].

76. Salt River Pima-Maricopa Indian Community Water Rights Settlement Act Pub. L. No. 100-512, 102 Stat. 2549 (1988) [hereinafter Salt River Act].

77. H.R. REP. NO. 932, 100th Cong., 2d Sess. 34, 38, 42-43 (1988). These projects serve a total of about 67,000 new acres with irrigation, most of it non-Indian owned. S. REP. NO. 555, 100th Cong., 2d Sess. 6 (1988). The Southern Ute Tribe plans to use over 25,000 acre feet for a coal power plant.

78. *Id.*

79. H.R. REP. NO. 780, 100th Cong., 2d Sess. 30, 48 (1988).

80. H.R. REP. NO. 868, 100th Cong., 2d Sess. 8, 11, 18-19 (1988).

81. *Id.* at 9, 13.

82. Fort McDowell Indian Community Settlement Act of 1990, PUB. L. NO. 100-628 § 401; 104 State. 4469, 4480 (1990).

83. S. REP. NO. 479, 101st Cong., 2d Sess. 7 (1990).

84. *Id.*

85. *See supra* notes 73-84.

86. *See supra* notes 73-84.

tribes will receive water from construction of the multi-million dollar Animas-LaPlata project, paid for by both the United States and the State of Colorado, which will also protect existing non-Indian users and supply water to new non-Indian uses.⁸⁷ Some of the tribes (notably Southern Ute and Fort McDowell) will receive substantial water allocations for non-agricultural purposes in these settlements.⁸⁸

2. Nonirrigation Uses

Indian irrigation is not the exclusive purpose of Indians' reserved water rights, and many settlement acts also provide water to tribes for municipal development, industrial use, or the protection of fish and wildlife. Indians have been allowed to change the nature of their decreed water rights, from irrigation to some other purpose.⁸⁹ In addition, irrigation is not the exclusive measure of reserved rights, where a reservation requires other uses of water to fulfill its purposes and function as a homeland for a tribe.⁹⁰

Some of the water settlements enacted by Congress have not directly expanded Indian irrigation at all, but have fulfilled some of the other purposes discussed above. An example is a 1990 statute settling water disputes which have raged for several decades concerning use of the Truckee River system.⁹¹ These controversies involved two Indian tribes, the Pyramid Lake Paiute Tribe and the Fallon Paiute Shoshone Tribe, and are described briefly below to facilitate an understanding of the consequences of the settlement.⁹² While little if any expanded Indian irrigation will occur under this settlement, major amounts of water are provided to protect endangered fish species, a critical purpose of the Pyramid Lake Reservation.⁹³

The Truckee River originates in Lake Tahoe, California, and terminates in Pyramid Lake, Nevada, after flowing through the towns of Reno and Sparks. The Pyramid Lake Indian Reservation encircles the river's terminus, Pyramid Lake.⁹⁴ Pyramid Lake in turn is the home for two endangered

87. *See supra* notes 73-84.

88. *See supra* notes 73-84.

89. Master's Report, *supra* note 20, at 265-66; U.S. DEP'T OF THE INTERIOR, OPINIONS OF THE SOLICITOR OF THE DEP'T OF THE INTERIOR RELATING TO INDIAN AFFAIRS 1917-1974 2 (Feb. 1, 1964 at 1930).

90. *E.g.*, FELIX S. COHEN'S HANDBOOK OF FEDERAL INDIAN LAW 588-90 (1982 ed.).

91. S. REP. NO. 479, 101st Cong., 2d Sess. 4 (1990).

92. S. REP. NO. 155, 101st Cong., 2d Sess. 11 (1990).

93. *Id.*

94. *Id.*

species of fish, the cui-ui and the cutthroat trout.⁹⁵ The reservation was established around the lake chiefly because the Paiute Indians relied on the lake's fish for their subsistence.⁹⁶ Both species became endangered largely because upstream diversions of the Truckee River reduced the level of the lake and increased its salinity.⁹⁷ The tribe has litigated for years to protect the lake's water supply from these upstream diversions.⁹⁸

The major upstream diversion of the Truckee River is a federal reclamation project—the Newlands Project—which serves between 55,000 and 60,000 acres of lands south of the Truckee, some of which are in the Carson River watershed.⁹⁹ Allotments were made in the nineteenth century to members of the Fallon Paiute Shoshone Tribe to cover over 30,000 acres which are now within this project.¹⁰⁰ When the Newlands Project was originally planned, the United States persuaded the Indians to exchange those 160-acre allotments for smaller 10-acre parcels which the United States promised would receive water from the Newlands Project when it was completed.¹⁰¹ This promise, however, was broken—the allotments proved not to be irrigable and project water was not delivered to them.¹⁰² In 1978, Congress enacted a measure to add land to the Fallon Reservation and bring 1800 acres of it into cultivation, but this also was not accomplished.¹⁰³

Congress resolved these problems in a manner that would provide increased water to Pyramid Lake to enhance its fishery and pay substantial sums to both tribes.¹⁰⁴ But unlike most other settlements, there was little provision for expanded Indian irrigation in the Nevada Act.¹⁰⁵ In essence, the Fallon Tribes were paid to forego substantially increased uses of water promised to them by the prior Congresses, for the Fallon Tribes' future irrigation is limited to acquisition of existing water rights "to assure that there is no expansion of water use in an already strained watershed."¹⁰⁶ Although the Nevada Act does not provide a mechanism for substantially increasing Indian irrigation, it does mandate major storage of upstream Truckee River

95. *Id.*

96. *Id.*

97. *Id.*

98. *Id.*

99. *Id.* at 10-11.

100. *Id.* at 11.

101. *Id.* at 17-18.

102. *Id.* at 18.

103. *Id.*

104. S. REP. NO. 555, 101st Cong., 2d Sess. 18 (1990).

105. *See infra* note 125.

106. S. REP. NO. 555, 101st Cong., 2d Sess. 3 (1990).

water to benefit Pyramid Lake's fishery¹⁰⁷ and requires water conservation within the Newlands Project in a manner that will reduce the Project's demands on the Truckee River.¹⁰⁸

Another settlement act that does not directly increase Indian irrigation is the Fort Hall Indian Water Rights Settlement Act of 1990,¹⁰⁹ which quantifies the water rights of the reservation as 581,031 acre-feet per year, both from surface water (enumerated by stream) and from groundwater.¹¹⁰ While no new federal projects are provided to increase irrigation, the tribes do receive rights to stored water behind existing federal dams, and substantial federal funding.¹¹¹

Likewise, the Assiniboine and Sioux Tribes of the Fort Peck Reservation in Montana have entered into a Compact with the State of Montana quantifying the tribes' water rights at 1,050,472 acre-feet, surface and ground water. This allocation would be sufficient to irrigate 291,798 acres of land.¹¹² The Compact has not been submitted to Congress for ratification.¹¹³ No federal funding is proposed to expand irrigation or for any other purpose. The Compact has been approved by both the tribes and the state legislature,¹¹⁴ and will be incorporated into the court decrees of existing water adjudications. A significant aspect of both the Fort Hall and Fort Peck settlements is that they provide for some of the tribal water rights to be committed to preserving instream flows for fish and wildlife habitat, as well as for irrigation.¹¹⁵

B. *Direct Federal and State Payments to Tribes*

1. Dollar Payments

Congress has provided increasingly large amounts of funds to tribes as

107. The Secretary of the Interior is directed to acquire water rights for the Lake's fishery "[t]hrough a variety of means, including purchase, lease, exchange (and) public and private donation," *Id.* at 25.

108. *Id.* at 22-23, 25, 26-30. The Secretary of the Interior is required strictly to enforce existing operating criteria governing water diversions and use by the Newlands Project without change over the next seven years, during which litigation may be pursued to recover past diversions made by the Project since 1973 that exceeded these criteria. *Id.* at 15-16, 33.

109. Pub. L. 101-602, 104 Stat. 3059 (1990) [hereinafter Fort Hall Act].

110. H. REP. NO. 831, 101st Cong., 2d Sess. 3 (1990).

111. See *infra* notes 116-140 and accompanying text.

112. Less than 20,000 acres of Indian lands are currently irrigated on the Reservation.

113. S. 1602, 102d Cong., 1st Sess (1991).

114. Senate Bill No. 467, Chapter 735, Laws of Montana 1985.

115. *Id.*

part of most water settlement acts. The amount Congress has provided is over and above the construction costs of federal storage and water delivery projects. Two examples are the Central Arizona and Animas-LaPlata projects which are being used to satisfy tribal water claims.¹¹⁶ The 1982 Papago Act provided \$11 million (half federal, half state) to be used for a water delivery system and a \$15 million permanent trust fund, with the interest to be spent by the tribe on "subjugation of land, development of water resources, and the construction, operation, maintenance and replacement of related facilities on the Papago Reservation".¹¹⁷ The 1984 Ak-Chin Act provided \$18,400,000 in payments to that tribe for economic development, flood protection, and acquisition of groundwater.¹¹⁸ Meanwhile the United States was developing the permanent water supply and water delivery system.¹¹⁹ The Salt River Act provided a \$47,470,000 trust fund for those tribes.¹²⁰ Congress established a \$30 million tribal development fund as part of the San Luis Rey Act for economic development projects, such as a water delivery system for agriculture.¹²¹ The Colorado Ute Act established a \$49,500,000 fund for tribal water resource development.¹²²

The three water settlement acts passed in 1990¹²³ continued the practice of providing substantial federal funding for tribes. The Fort McDowell Act establishes a \$25 million economic development fund (\$2 million of which is contributed by the State of Arizona) and for a \$13 million no-interest long-term loan to the tribe under the Small Reclamation Projects Act to expand its existing irrigation facilities.¹²⁴ The Nevada Act establishes tribal economic development funds of \$50 million and \$43 million,¹²⁵ and the Pyramid Lake Tribe also received a \$25 million fishery management fund.¹²⁶ The Fort Hall Act provides federal funding of \$10 million for an economic development fund, \$5 million for a land acquisition fund, and \$7 million for

116. See *infra* notes 117-122 and accompanying text.

117. Papago Act, Pub. L. No. 97-293, §§ 309, 313(b), 96 Stat. 1261 (1982).

118. 1984 Ak-Chin Act, Pub. L. No. 95-328, 92 Stat. 409 (1978).

119. *Id.*

120. Salt River Act, Pub. L. No. 100-512, § 9, 102 Stat. 2549 (1988). The fund will be used to rehabilitate and improve the tribes' existing irrigation system and design and construct additional water use facilities.

121. San Luis Rey Act, Pub. L. No. 100-675, §§ 105, 107, 102 Stat. 4000 (1988).

122. Colorado Act, Pub. L. No. 100-585, § 7, 102 Stat. 2973 (1988).

123. See *infra* notes 124-127 and accompanying text.

124. S. REP. NO. 479, 101st Cong., 2d Sess. 16-17 (1990).

125. Fallon Private Shoshone Indian Tribes Water Rights Act of 1990, Pub. L. No. 101-618, § 102, 104 Stat. 3284 (1990).

126. *Id.* at 3315.

a reservation water-management system.¹²⁷ While these amounts will not likely be sufficient in themselves to greatly expand irrigation on the Fort Hall Reservation, the tribes receive the benefit of existing federal storage projects in the event that natural flows are insufficient to irrigate their lands.¹²⁸

2. Water Marketing Authority

Without special federal legislation, tribes clearly have the right to lease water rights together with reservation lands.¹²⁹ However, the question as to whether the ownership of federal reserved water rights includes a power to market unused rights to non-Indians for use outside the reservation has not been judicially determined. A right to market water to selected non-Indians by agreeing to forego the exercise of a portion of their reserved water rights could be extremely valuable for tribes in water-short areas. The exercise of that authority likely requires congressional approval,¹³⁰ and Congress has considered marketing authority in several settlements.

The 1982 Papago Act authorized that tribe to market water in a specific geographic area outside its reservation—the Tucson Active Management Area and the rest of the Upper Santa Cruz Basin.¹³¹ A marketing provision is also contained in the Colorado Ute Act:

[A] tribe may voluntarily elect to sell, exchange, lease, use or otherwise dispose of a portion of a water right confirmed in the Agreement, and consent decree off its reservation. If either the Southern Ute Indian Tribe or the Ute Mountain Ute Indian Tribe so selects, and as a condition precedent to such sale, exchange, lease, use, or otherwise disposition, that portion of the Tribe's water right shall be changed to a Colorado State water right, but be such a State water right only during the use of that right off the reservation, and shall be fully subject to State laws, federal laws, interstate compacts and international treaties.¹³²

127. H. REP. NO. 831, 101st Cong., 2d Sess. 11 (1990).

128. For example, in the event surface flows of the Blackfoot River are insufficient to satisfy the tribes' diversion rights in any year, the tribes can call upon supplemental water stored in Blackfoot Reservoir (348,000 acre-feet) and Grays Lake (100,000 acre-feet). *Id.* at 5.

129. *Skeem v. United States*, 273 F.93 (9th Cir. 1921); 25 U.S.C. § 415(a) (1988).

130. 25 U.S.C. § 177 (1988). *But see United States v. Ahtanum Irrigation Dist.*, 236 F.2d 321 (9th Cir. 1956), *cert denied*, 353 U.S. 988 (1957). In *Wyoming v. United States*, 753 P.2d 76 (Wyo. 1988), *aff'd by equally divided Court*, 492 U.S. 406, 106 L.Ed 2d 342 (1989), the Wyoming Supreme Court held that the tribes had no inherent authority as part of the *Winters* doctrine to market water off their reservation.

131. Papago Act, Pub. L. No. 97-293, § 301(c)(1), 96 Stat. 1261 (1982).

132. Colorado Ute Act, Pub. L. No. 100-585, § 5(c), 102 Stat. 2973 (1988).

Pursuant to this Act, either Ute Tribe may lease or sell water off its reservation or out of state, but only under conditions generally applicable to state water rights.¹³³ Thus, the right to lease is limited by state and federal law, interstate compact or international treaties that pertain to the appropriation, use, development, storage, regulation, allocation, conservation, exportation or quality of the Colorado River or its tributaries. The exact parameters of these various laws is not specified or completely clear, and may be the subject of future litigation. However, once a lease of water use has come to an end under the Colorado Act, the right reverts to the tribe and resumes its character as a federally reserved right.¹³⁴

Congress also has specifically authorized both the Salt River and Fort McDowell Tribes to lease water they are entitled to receive from the Central Arizona Project to certain cities and towns for a period of ninety-nine years.¹³⁵ This was authorized by Congress in large part to protect existing water uses in Arizona.¹³⁶ The Fort Peck tribes have the right under their compact with Montana to market water outside the reservation from the Missouri River, which forms the reservation's southern boundary, and from Fort Peck Reservoir, a major federal storage project upstream from the reservation.¹³⁷ The tribes must observe certain conditions in marketing: chiefly, they must offer the state an opportunity to share in any marketing venture as a substantially equal partner with the tribes, comply with some of the standards in Montana's current laws concerning water marketing, and observe any valid state law restricting out-of-state sales of water.¹³⁸ Congress has not yet ratified this provision.

Under the Fort Hall Act, the tribes can rent water to non-Indian users from two federal storage projects in the Snake River system: Palisades Reservoir (for delivery to non-Indians anywhere within the Snake River Basin above Milner Dam) and American Falls Reservoir (for delivery anywhere in Idaho).¹³⁹

Conferring water marketing authority establishes a financial advantage for tribes without a direct impact on the federal budget. This mechanism thus

133. *Id.*

134. *See supra* note 132.

135. Salt River Act, Pub. L. No. 100-512, § 8(d), 102 Stat. 2549 (1988); Fort Hall Act, Pub. L. No. 101-602, 104 Stat. 3059 (1990).

136. *Id.*

137. *See supra* notes 112-115 and accompanying text.

138. Senate Bill No. 467, Chap. 735, Laws of Montana 1985.

139. Alternatively, the tribes may allocate water stored in American Falls or Palisades Reservoirs to instream flows. H. Rep. No. 831, 101st Cong., 2d Sess. 3 (1990).

appears attractive in a time of budget deficits and reconciliations. However, specific marketing proposals—including the one in the Colorado Ute Act—have on occasion provoked controversy in Congress,¹⁴⁰ and no general statute to authorize all tribes to engage in marketing unexercised reserved water rights has been proposed in Congress. States apparently resist tribal marketing because it threatens to disrupt formal or informal interstate allocations of water, and because a tribe—by leasing unused water to a legally junior user—might upset the existing order of priorities under state law systems. Also, where tribes are not now exercising water rights, states and non-Indian water users use that water without any payment and wish to continue doing so.

*C. Impacts of Adjudications and Settlement Acts
on Existing Non-Indian Water Uses*

The “gallon-for-gallon” reduction feared by many if Indian water rights are exercised has usually not occurred where Indian reserved water rights were quantified and developed following court decrees or congressionally ratified settlements.

The use of water by the five tribes following *Arizona v. California* did not directly impact valid existing uses, although it could in theory at least require curtailment of diversions by the Metropolitan Water District that exceeded California’s decreed rights in that case. The Navajo Irrigation Project and Indian uses expanded by other congressionally authorized settlements—such as the Ak-Chin Act,¹⁴¹ Papago Act,¹⁴² Fort McDowell Act,¹⁴³ and Salt River Act¹⁴⁴—receive water developed by new federal storage projects, transfers and exchanges of water.¹⁴⁵ San Luis Rey water will probably be supplied by water conservation.¹⁴⁶

The Colorado Ute Act was agreed to and actively supported by five non-

140. For example, the original off-reservation marketing provisions proposed in the San Luis Rey Act were substantially constricted. Compare S. REP. NO. 745, 100th Cong., 1st Sess. (1988) with San Luis Rey Act, Pub. L. No. 100-675, § 106(c), 102 Stat. 4000 (1988).

141. See *supra* note 67.

142. See *supra* note 73.

143. See *supra* note 82.

144. See *supra* note 76.

145. Water to satisfy the Ak-Chin, Papago, Fort McDowell, and Salt River Tribe quantifications comes in part from the Central Arizona Project, and in part from private non-Indians sales and exchanges of water rights. *E.g.*, H.R. REP. NO. 868, 100th Cong., 2d Sess. 14-15 (1988).

146. H.R. REP. NO. 780, 100th Cong., 2d Sess. 11 (1988).

Indian water conservancy districts in the area of the reservations.¹⁴⁷ The Act provides for construction of new federal projects which will "leav[e] intact the historical uses already in place on these streams,"¹⁴⁸ and which provide irrigation water to over 67,000 new acres, most of which are in non-Indian ownership.¹⁴⁹

Under the Fort Hall Act, the tribes agreed to observe a federal court decree in 1907 on Bannock Creek that sets priorities in such a way as to protect non-Indian users, and to comply with federal and state court decrees on Portneuf Creek, where its rights to use water are limited to less than 2,000 acre-feet.¹⁵⁰ The non-Indian existing uses on the Blackfoot River are also protected, and in times of shortage, the tribe has a call on storage in that basin.¹⁵¹ Provisions of the act also protect non-Indian uses of the Snake River water in the Fort Hall Irrigation Project and existing non-Indian groundwater diversions in the Bannock Creek basin, and limit the tribes' use of water stored in Palisades and American Falls Reservoir to situations in which "no other water users are injured."¹⁵²

The Nevada Act¹⁵³ specifically protects water rights under existing decrees, although it requires stricter administration and enforcement of those decrees.¹⁵⁴ The Fort Peck Compact protects existing non-Indian uses of surface and groundwater.¹⁵⁵

Therefore, non-Indians are not being adversely impacted by most increased Indian water use because the Indian use usually occurs through new storage or as the result of improved water management—conservation, allocation of existing storage, transfers, and exchanges of water. Moreover, actual increases in Indian irrigation occur gradually, because very large capital investments—usually by federal appropriations (which non-Indians water users are able to influence)—must be undertaken. In the meantime,

147. S. REP. NO. 555, 100th Cong., 2d Sess. 4-5 (1988). State and local officials also commonly support these settlements as a means of augmenting or protecting non-Indian water supplies. *E.g.*, S. REP. NO. 460, 95th Cong., 2d Sess., 5 (1978).

148. *Id.* at 17.

149. *Id.* at 6.

150. H. REP. NO. 831, 101st Cong., 2d Sess. 6 (1990).

151. *Id.* at 5.

152. *Id.* at 7.

153. *See supra* note 125.

154. S. REP. NO. 555, 101st Cong., 2d Sess. 23-29 (1990).

155. *See supra* note 145.

until Indian uses develop, the legally junior use by non-Indians can continue.¹⁵⁶

One situation where non-Indian uses have been threatened is in Wyoming. For the first year after the quantification decree became final in that case, the state paid the tribes several million dollars to forego exercise of their increased water rights.¹⁵⁷ Thereafter, the state trial court confirmed the tribes' authority under the decree to dedicate irrigation water to in-stream fishery flows to the extent that return flows are not decreased below those which would occur if the tribes' planned future irrigation took place.¹⁵⁸ This dedication of water rights to instream flows could require a significant curtailing of existing uses by non-Indians on those streams.

III. CONCLUSION

The actual resolution of Indian reserved water right disputes reflected in most final judgments and statutory settlements to date does not appear in exact accord with what one would expect from legal doctrine. To be sure, Indian use of water for agricultural and other purposes is being expanded—probably by as much as 20 to 30 percent over historic uses in Indian country—as quantification proceeds. But although existing non-Indian users may be held to stricter conservation requirements, as in the Newlands Project on the Truckee River in Nevada, these uses are generally protected and even expanded by new storage, water conservation, exchanges and marketing mechanisms.¹⁵⁹ Indeed, most expanded Indian water use that has occurred has been produced by these same mechanisms.

This expansion of Indian water use and the increasing federal monetary contributions to tribes involved in settlements evince a congressional commitment to Indian economic self-sufficiency that appears broader than simply aiding the exercise of reserved water rights.¹⁶⁰ Federal monetary contributions to tribes in water settlements have been both for water

156. For example, the five tribes along the Colorado River are not yet using their full-entitlement under the decree. *Arizona v. California*, 460 U.S. 605, 653-55 (1983) (Brennan, J., dissenting).

157. *In re* the general adjudication of all rights to use water in the Big Horn River System, 753 P.2d 76 (Wyo. 1988).

158. *Id.*

159. *See supra* notes 124-127.

160. Most funding for water and other Indian settlements in recent years has been opposed by the Executive branch, but only one Indian settlement act has been vetoed, the Papago Act. CONG. Q. 104 (June 12, 1982). The act was restructured to meet President Reagan's objections, enacted, and signed.

development and for more general economic advancement.¹⁶¹ Water settlements which, though varied in their individual approaches, have apparently been seen by Congress during the 1980s not as ends in themselves but as means to advance the more basic goal of enabling tribes to develop economically toward self-sufficiency.

Resolution of Indian water rights controversies appear to differ in important respects from the transfer of Indian lands to non-Indian ownership that took place in the late nineteenth and early twentieth century.¹⁶² Indian landholdings (excluding Alaska) declined from 138 million to 48 million acres between the 1880s and 1930s. During that period, Indian land and other resources were converted into money. Because Indians were left with too little land and other resources, and usually paid less than fair market value for the lands that were taken, generations of Indian poverty resulted.¹⁶³

In the past three decades, water adjudications and settlements have begun to quantify Indian rights to use water that are uncertain but potentially threaten existing non-Indian uses. If history were simply repeated—Indians would be left with too little water to develop stable economies and paid unfairly for rights they agree, or are forced, not to exercise. The historic result of widespread Indian poverty would almost surely continue.

However, that has not been the apparent outcome of Indian water adjudications and settlements so far, which is evidence that the sorry lesson of the historic interaction between Indians and the rest of American society during the 1880-1930 period has at last been learned. Actual Indian water use has increased substantially as water rights have been quantified, rather than being diminished or held constant to protect non-Indian economies.¹⁶⁴ Further increases are virtually assured. Major monetary payments and other benefits (such as use of federal storage) have also been provided to tribes—some to facilitate expanded water use, and some for more general economic development.¹⁶⁵ In this manner, Indian reserved water rights are being converted from abstract doctrine that seems to threaten existing non-Indian water use to practical results that further Indian economic development and self-sufficiency, generally without impairing non-Indian economies. It

161. See *supra* note 120.

162. See FELIX S. COHEN, FELIX S. COHEN'S HANDBOOK OF FEDERAL INDIAN LAW 144-51 (1982).

163. As the Supreme Court observed: "[i]t can be said without overstatement that when the Indians were put on these reservations they were not considered to be located in the most desirable area of the Nation." *Arizona v. California*, 373 U.S. 546, 598 (1963).

164. See *supra* Part II.A.

165. See *supra* Part II.B.

is not yet clear, however, that the water and other benefits provided to Indians will actually produce economic self-sufficiency and allow tribes to escape poverty, but the potential is there.