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JUSTIN NYBERG*

The Promise of Indian Water Leasing: An Examination of One Tribe's Success at Brokering Its Surplus Water Rights

ABSTRACT

After reaching water rights settlements, a number of Native American tribes find themselves with rights to more water than their reservations or pueblo communities presently need. As climate change exacerbates drought conditions in the western United States and demand for water increases, some tribes have leased these surplus water rights to public and private, non-Indian, users. Theoretically, this could be a boon for tribes, although the extent of the economic impact of water leasing is difficult to assess without an examination of each individual water lease. This paper attempts to illustrate the economic impact of Indian water rights leasing anecdotally, by examining the leasing efforts of one particularly successful tribe, the Jicarilla Apache Nation in northern New Mexico.

I. INTRODUCTION

As climate change reduces surface water availability in the West and cities continue to grow, the need for reliable sources of water grows more acute.¹ At the same time many Native American tribes have unresolved claims to reserved water rights, which are typically senior rights for very large amounts of water.² As these “paper” water rights become quantified through settlement agreements with states and the federal government, tribes that find themselves with surplus water rights have an opportunity to lease them to cities and other off-reservation interests, providing a stable source of revenue to these tribal governments while filling the unmet water needs of off-reservation parties. While theoretically this could prove to be a windfall for tribes, so far there has been little examination of the actual economic impact that

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1. See generally U.S. DEP’T OF THE INTERIOR, BUREAU OF RECLAMATION, SECURE WATER ACT SECTION 9503(c) – RECLAMATION CLIMATE CHANGE AND WATER 2011 (2011), available at <http://www.usbr.gov/climate/SECURE/docs/SECUREWaterReport.pdf>.

2. See COHEN’S HANDBOOK OF FEDERAL INDIAN LAW § 19.03[3], at 1215–16 (Nell Jessup Newton et al. eds., 2012) [hereinafter COHEN’S HANDBOOK].

water rights leasing has had on tribes. This article attempts to illustrate the economic impact of Indian water leasing anecdotally, by analyzing the effect that water leasing has had on one tribe: the Jicarilla Apache Nation in northern New Mexico. The Jicarilla Apache settled their reserved water rights claims in 1992, receiving a recognized right to 40,000 acre-feet of water per year from the San Juan River.³ Congress authorized the tribe to lease the water to off-reservation users.⁴ Over the next 20 years, the Nation entered into a series of 10 leases, supplying water to off-reservation parties for a range of uses, including electrical generation, municipal supply for two cities, residential development, ski area snowmaking, and stream inflow for an endangered fish.⁵ The leases generate \$3.5–\$4 million annually for the Nation⁶—a significant revenue stream for a reservation with less than 3,500 residents.⁷ The Jicarilla Apache experience provides one model for how tribes with settled water rights can leverage them for economic gain, while supplying the needs of quickly growing Western cities and protecting the tribe's own long-term interests in water.

Part I of this article outlines the unique nature of Indian water rights and the two main processes to quantify reserved water rights: ad-

3. Jicarilla Apache Tribal Water Rights Settlement Act, Pub. L. No. 102-441, § 6(a), 106 Stat. 2237 (1992).

4. *Id.* § 7(a) ("When water made available under the Settlement Contract approved by section 5 of this Act is not being used by the Tribe, the Tribe may subcontract with third parties, subject to the approval of the Secretary in accordance with this section, to supply water for beneficial use outside of the reservation . . .").

5. See Figure 1. These include WATER SUPPLY AGREEMENT BETWEEN THE JICARILLA APACHE TRIBE AND PUBLIC SERVICE COMPANY OF NEW MEXICO (2000) (on file with author); WATER SUPPLY AGREEMENT BETWEEN THE CITY OF SANTA FE AND THE JICARILLA APACHE NATION (2004) [hereinafter AGREEMENT BETWEEN SANTA FE AND NATION] (on file with author); WATER SUPPLY AGREEMENT BETWEEN THE JICARILLA APACHE NATION AND SAN JUAN BASIN WATERHAULERS THE ASSOCIATION (2006) (on file with author); WATER SUPPLY AGREEMENT BETWEEN THE JICARILLA APACHE NATION AND SAN JUAN REFINING COMPANY (2006) (on file with author); WATER SUPPLY AGREEMENT BETWEEN THE JICARILLA APACHE NATION AND THE ELKS LODGE No. 1747 (2006) (on file with author); WATER SUPPLY AGREEMENT (2007) (on file with author); WATER SUPPLY AGREEMENT BETWEEN THE CITY OF GALLUP AND THE JICARILLA APACHE NATION (2011) [hereinafter AGREEMENT BETWEEN GALLUP AND NATION] (on file with author); CONTRACT BETWEEN THE UNITED STATES OF AMERICA DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION AND JICARILLA APACHE NATION TO LEASE THE USE OF SAN JUAN-CHAMA PROJECT WATER (2012) [hereinafter CONTRACT BETWEEN UNITED STATES AND NATION] (on file with author); WATER SUPPLY AGREEMENT BETWEEN THE JICARILLA APACHE NATION AND THE CLUB AT LAS CAMPANAS, INC. (2013) [hereinafter AGREEMENT BETWEEN NATION AND CLUB] (on file with author); and WATER SUPPLY AGREEMENT BETWEEN THE JICARILLA APACHE NATION AND SIPAPU RECREATIONAL DEVELOPMENT II, LLC (2013) (on file with author).

6. Telephone Interview with Herb Becker, Attorney, Jicarilla Nation (Mar. 7, 2013).

7. See TILLER'S GUIDE TO INDIAN COUNTRY: ECONOMIC PROFILES OF AMERICAN INDIAN RESERVATIONS 727 (Veronica E. Velarde Tiller, ed., 2005) [hereinafter TILLER'S GUIDE]

judication and settlement. Part II outlines the concept of tribal marketing, the restrictions on it, and the conceptual extent of the economic opportunities for tribes that choose to lease their water rights. Within this context, Part III analyzes the Jicarilla Apache Nation's experience leasing water, the financial impact the leases have had on the tribe, and the manner in which the terms of the tribe's leases protect the tribe's long-term interests in its water rights.

II. BACKGROUND ON INDIAN WATER RIGHTS

Generally, water rights are transferable and marketable.⁸ Outside of the context of tribal water rights, a water rights holder can freely sell the rights or lease them to another party for a given period of time, retaining a right of reversion when the lease ends.⁹ Such water transfers have generally been seen as positive in western states because they allow for the best and highest use of the water—transferring a limited resource from areas of excess supply to areas of high demand at prices regulated by the market.¹⁰

Indian water rights are different, largely because they arise in a different manner from common law and statutory water rights under prior appropriation. Indian water rights arise through Congressional reservation,¹¹ rather than by the “first in time, first in right” and demonstrated use principals of prior appropriation. For tribes on reservation lands, *Winters v. U.S.* held that even though Congress did not explicitly set aside water rights when it created most reservations, it did so implicitly.¹² The Court reasoned that since Congress intended for the tribes to have a settled agrarian society, Congress must have also intended to provide them with sufficient water rights to accomplish that purpose.¹³ These largely theoretical water rights are known as reserved rights or *Winters* rights. While *Winters* established that tribes have reserved water rights according to the designated purpose of tribal reservations, *Arizona v. California* provided the basis for quantifying them.¹⁴ The Court held that Congress implicitly set aside enough water to farm all “practically

8. See A. DAN TARLOCK ET AL., *WATER RESOURCE MANAGEMENT: A CASEBOOK IN LAW AND PUBLIC POLICY* 230 (6th ed. 2009) (excerpting Lawrence J. MacDonnell, *Transferring Water Uses in the West*, 43 OKLA. L. REV. 119 (1990)).

9. See *id.*

10. See *id.* at 232.

11. *Winters v. United States*, 207 U.S. 564, 576–77 (1908).

12. See *id.*; COHEN'S HANDBOOK, *supra* note 2, § 19.03[4], at 1217.

13. COHEN'S HANDBOOK, *supra* note 2, § 19.03[4], at 1217.

14. *Arizona v. California*, 373 U.S. 546, 600–601 (1963), *disavowed on different grounds by California v. United States*, 438 U.S. 645 (1978).

irrigable acreage” on the reservations.¹⁵ For tribes with a great deal of theoretically irrigable acreage, the *Arizona* holding implicated a staggering amount of water. The Navajo Nation, for example, was thought to have a right to between two million¹⁶ and 15 million acre-feet of water, which equals about the entire flow of the Colorado River.¹⁷ And because the priority dates of these reserved rights were based on the date Congress created each reservation, these Indian water rights were often senior to all other users in the system.¹⁸ The Court’s recognition of Indian reserved water rights consequently threatened powerful, entrenched non-Indian water interests in Western states, which meant these interests were poised to resist Indian attempts to quantify and exercise their water rights.

Indian reserved water rights come with a major restriction that does not apply to prior appropriation water rights obtained under state law: they cannot be leased to off-reservation users without Congressional approval. The Nonintercourse Act prohibits the “purchase, grant, lease, or other conveyance of lands, or of any title or claim thereto from any Indian nation or tribe,” effectively prohibiting tribes from selling tribal land.¹⁹ While referring only to “lands,” this prohibition probably includes the sale or leasing of water rights.²⁰ Most scholars qualify this statement because another statute may allow tribes to lease their water rights²¹ and the Supreme Court has never ruled on the issue directly. No federal statute explicitly authorizes tribes to lease tribal water rights apart from the sale or lease of the appurtenant land,²² but the Court has suggested that tribes can lease their rights to others with Congressional authorization²³ and Congress frequently authorizes off-reservation leasing for individual tribes when those tribes settle their water rights claims.²⁴

Ancient Native American pueblo water rights have a different origin than other Indian water rights, but pueblo rights remain largely in the same state of limbo as reserved rights. Those pueblo lands set aside

15. COHEN’S HANDBOOK, *supra* note 2, § 19.03[5][b], at 1221.

16. William Douglas Back & Jeffrey S. Taylor, *Navajo Water Rights: Pulling the Plug on the Colorado River?*, 20 NAT. RESOURCES J. 71, 74 (1980).

17. TARLOCK ET AL., *supra* note 8, at 869.

18. See COHEN’S HANDBOOK, *supra* note 2, § 19.03[3], 1215–16.

19. Nonintercourse Act, 25 U.S.C. § 177 (2012).

20. COHEN’S HANDBOOK, *supra* note 2, § 19.03[7][c], at 1229.

21. See *id.* (“To the extent that water rights are ‘lands’ . . . they may be covered as well by 25 U.S.C. § 415, which authorizes the leasing of tribal ‘lands’ for certain purposes.”).

22. *Id.*

23. A. DAN TARLOCK, LAW OF WATER RIGHTS AND RESOURCES § 9:43 (2014).

24. See COHEN’S HANDBOOK, *supra* note 2, §19.03[7][c], at 1229–30.

by Congress or executive order have *Winters* rights like any other tribal reservation land,²⁵ which are quantified by the “practicably irrigable acreage” standard.²⁶ However, some pueblos trace parcels of their land back to Spanish land grants honored under the 1848 Treaty of Guadalupe Hidalgo when the U.S. acquired the New Mexico Territory.²⁷ On these lands, the pueblos hold “aboriginal water rights,”²⁸ which courts quantify based on the amount of water the pueblos used for irrigation and domestic use prior to the Treaty of Guadalupe Hidalgo and the water necessary to irrigate pueblo lands between 1846 and 1924.²⁹ Aboriginal rights are senior to the rights of any other non-Indian user in the system.³⁰ However, few pueblos know how much water they have a right to use or lease because, with the exception of the four Aamodt Pueblos and the pueblo of Taos, they have not sought adjudication of their water rights claims.³¹ Lacking a firm quantification of their rights effectively limits these pueblos’ ability to market their surplus water.

A. Adjudication and Settlement of Indian Water Rights

While *Winters*, *Arizona*, and the aboriginal rights doctrine provide conceptual frameworks for quantifying tribal water rights, the actual quantification should theoretically occur through general stream adjudication. A general stream adjudication is a court proceeding that allows all water users in a particular water system to contest the rights of all other users, leading ultimately to a final judicial determination of all parties’ rights, including Indian claims.³² These adjudications usually entail a parade of experts who testify about the extent of a tribe’s practicably irrigable acreage or historical evidence of irrigation.³³ Few tribes wish to litigate these complex claims due to the time, expense, and uncertainty

25. COHEN’S HANDBOOK, *supra* note 2, § 4.07[2][c], at 322; ROBERT T. ANDERSON ET AL., AMERICAN INDIAN LAW: CASES AND COMMENTARY 713 (2d ed. 2010) (citing *New Mexico ex rel. Martinez v. Aamodt*, 618 F. Supp. 993, 1010 (D.N.M. 1985)).

26. See discussion *infra* Part II.A.

27. WILLIAM C. CANBY, JR., AMERICAN INDIAN LAW IN A NUTSHELL 434 (5th ed. 2009).

28. COHEN’S HANDBOOK, *supra* note 2, § 4.07[2][c], at 322; ANDERSON ET AL., *supra* note 25, at 713 (citing COHEN’S HANDBOOK OF FEDERAL INDIAN LAW 331–34 (2005)).

29. COHEN’S HANDBOOK, *supra* note 2, § 4.07[2][c], at 323.

30. See *id.* § 19.03[3], at 1215–16.

31. Telephone Interview with Herb Becker, Attorney, Jicarilla Nation (May 15, 2013).

32. See Reid Peyton Chambers & John E. Echohawk, *Implementing the Winters Doctrine of Indian Reserved Water Rights: Producing Indian Water and Economic Development Without Injuring Non-Indian Water Users?*, 27 GONZ. L. REV. 447, 455–56 (1991).

33. See generally COHEN’S HANDBOOK, *supra* note 2, § 19.03[5][b], at 1222 (“To show that land is practicably irrigable, a tribe must demonstrate that the land is capable of sustained irrigation based on arability and engineering feasibility, and that it is capable of irrigation at a reasonable cost.”).

that the process entails.³⁴ Adjudications are notoriously long and costly, often conducted in state court, and often adverse to tribal interests.³⁵ Additionally, recent decisions of the U.S. Supreme Court have been seen as hostile to both tribal sovereignty³⁶ and the practicably irrigable acreage standard,³⁷ further eroding tribes' incentive to adjudicate. Even if tribes complete the adjudication process, they may not have the capital necessary to realize any benefit from their newly quantified rights given the immense costs to build water delivery and storage infrastructure and the historic reluctance of the federal government to provide financial assistance.³⁸ Generally, tribes now see adjudication as a futile³⁹ option for converting their theoretical "paper" water rights into usable "wet" water rights.

Given the challenges with adjudication, the trend has shifted toward negotiated settlements of Indian water rights claims.⁴⁰ In these settlements, tribes, states, and federal agencies reach deals, converting the tribes' large but unquantified water rights into concrete rights that tribes can actually use.⁴¹ Like adjudications, these negotiations are long and costly, but they entail less risk for tribes, greater flexibility to accommodate the economic interests of all parties, and greater certainty in the outcome.⁴² The settlements quantify the tribe's rights and often allocate water from existing sources, such as dams or federal projects, and appropriate federal funds to pay for new delivery systems to tribal communities.⁴³ In exchange, tribes agree to waive the balance of their large, outstanding *Winters* rights and often settle other legal claims as well.⁴⁴

34. See David H. Getches, *Management and Marketing of Indian Water: From Conflict to Pragmatism*, 58 U. COLO. L. REV. 515, 521–23 (1988).

35. COHEN'S HANDBOOK, *supra* note 2, § 19.05[2], at 1247.

36. TARLOCK, *supra* note 23, at § 9:45.

37. See COHEN'S HANDBOOK, *supra* note 2, § 19.03[5][b], at 1223; Karen Crass, *Eroding the Winters Right: Non-Indian Water User's Attempt To Limit the Scope of the Indian Superior Entitlement To Western Water To Prevent Tribes from Water Brokering*, 1 U. DENV. WATER L. REV. 109, 116 (1997).

38. See *id.* at 119.

39. See Jesse Harlan Alderman, *Winters and Water Conservation: A Proposal To Halt "Water Laundering" in Tribal Negotiated Settlements in Favor of Monetary Compensation*, 31 VA. ENVTL. L.J. 1, 39 (2013).

40. See Getches, *supra* note 34, at 523.

41. See ANDERSON ET AL., *supra* note 25, at 774.

42. Getches, *supra* note 34, at 523–24.

43. ANDERSON ET AL., *supra* note 25, at 774.

44. See, e.g., CONTRACT BETWEEN THE UNITED STATES AND THE JICARILLA APACHE TRIBE § 2(a)(i)–(ii), at 3 (1992) [hereinafter CONTRACT], available at <http://www.ose.state.nm.us/LAP/NNWRS/Responses/Jicarilla%20Settlement%20Contract%201992-12-08.pdf> (demonstrating agreement by the Jicarilla to drop several legal claims against the United States).

Settlements do come with disadvantages for tribes. Tribes invariably receive far less water than they would have been entitled to under the “practicably irrigable acreage” standard,⁴⁵ and tribes that have not adjudicated the extent of their water rights may have a weaker bargaining position.⁴⁶ Still, settlements have become the primary mechanism for tribes to establish their water rights. Tribes reached at least 28 settlements between 1988 and 2013, with another one—the Aamodt settlement between several northern New Mexico pueblos—currently in its final stages.⁴⁷ As of 2009, there were at least 18 pending water rights settlements in the works, involving approximately 25 tribes or pueblos.⁴⁸

III. MARKETING TRIBAL WATER

Water marketing “is the sale or lease of water or water rights, independent of the appurtenant land.”⁴⁹ There are regional economic benefits to marketing water rights because it allows water to shift from lower value uses to higher value uses.⁵⁰ Allowing water rights holders to sell or lease their rights is cheaper, more politically practicable, and more environmentally acceptable than developing new water supplies or storage facilities.⁵¹ As demographics shift in the West, water markets allow economic forces to drive the West’s future.

Both Indians and non-Indians stand to benefit from water marketing. Water marketing allows tribes to profit from the full extent of their water rights reasonably quickly without requiring the tribe to invest in water delivery infrastructure otherwise needed to make use of their water.⁵² Given the cost and delays inherent in building such infrastructure, the consensus seems to be that leasing water rights is the most feasible way for tribes to receive a swift economic return on their water

45. See COHEN’S HANDBOOK, *supra* note 2, § 19.05[2], at 1256 (“Virtually all tribes agree to a lesser quantity of water than they would claim in litigation.”).

46. COHEN’S HANDBOOK, *supra* note 2, § 19.05[2], at 1256.

47. For a partial list, see TARLOCK ET AL., *supra* note 8, at 925–27 (listing distinct settlements between 1978–2009). Since then, the Taos Pueblo in New Mexico reached a settlement, and the Aamodt settlement, involving four New Mexico pueblos, entered its final stages. For an updated list of all settlements, see NAWRS, UNM LOBOVAULT, <http://repository.unm.edu/handle/1928/21727> (last visited Apr. 13, 2013).

48. COHEN’S HANDBOOK, *supra* note 2, § 19.05[2], at 1257 (citing Robert T. Anderson, *Indian Water Rights, Practical Reasoning, and Negotiated Settlements*, 98 CALIF. L. REV. 1133, 1154 (2010)).

49. JUDITH V. ROYSTER & MICHAEL C. BLUMM, *NATIVE AMERICAN NATURAL RESOURCES LAW: CASES AND MATERIALS* 452 (2d ed. 2008).

50. BONNIE G. COLBY ET AL., *NEGOTIATING TRIBAL WATER RIGHTS: FULFILLING PROMISES IN THE ARID WEST* 83 (2005).

51. *Id.*

52. See COHEN’S HANDBOOK, *supra* note 2, § 19.03[7][c], at 1228.

entitlement.⁵³ There are distinct advantages for non-tribal interests as well.⁵⁴ Tribal water marketing allows non-Indians to access secure, stable water supplies for off-reservation economic development,⁵⁵ which makes settlements more attractive to all parties.⁵⁶ For example, cities facing a disruption of their water supply can pose enormous political obstacles for Indian settlements, but the prospect of the city leasing newly-settled tribal water rights aligns the interests of both tribes and cities.⁵⁷

However, tribal water leasing has drawn some criticism.⁵⁸ Some argue that allowing tribes to lease water off-reservation is inconsistent with the foundational concept of *Winters* rights: namely that *Winters* rights are appurtenant to the reservation⁵⁹ and envisioned and quantified for agricultural use,⁶⁰ not general economic development.⁶¹ During the heat of the debate in the 1980s and 1990s,⁶² Professor David Getches argued that this criticism was inconsistent with the Court's ruling in *Arizona v. California*, which held that tribes could use their quantified water rights for *any* beneficial purpose, even if those rights were originally envisioned to serve agricultural needs.⁶³ Tribes were originally given reserved water rights for irrigation not merely so tribes could farm, Getches argued, but also so tribes could have a sustainable economic

53. See *id.* (citing Lee Herold Storey, Comment, *Leasing Indian Water Off the Reservation: A Use Consistent with the Reservation's Purpose*, 76 CALIF. L. REV. 179, 217 (1988)); Crass, *supra* note 37, at 121 n.70; see also Getches, *supra* note 34, at 544 ("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.").

54. See COHEN'S HANDBOOK, *supra* note 2, § 19.03[7][c], at 1228; Crass, *supra* note 37, at 120–21.

55. See Crass, *supra* note 37, at 120–21; BONNIE G. COLBY ET AL., *supra* note 50, at 86.

56. See BONNIE G. COLBY ET AL., *supra* note 50, at 86.

57. See *id.* at 47–48 (demonstrating statements of a deputy city manager in Phoenix on the 99-year and 100-year lease options, and political powers of thirsty cities—"I don't think that bills would get through Congress if the cities did not support them"); Alderman, *supra* note 39, at 39 ("Non-Indian politicians and appropriators often become the most vociferous supporters of negotiated settlements when they piggyback on new diversion projects authorized by the agreements, or at least gain a new source of wet water from tribal marketing.").

58. For a good summary of the arguments against Indian water markets, see MARC REISNER & SARAH BATES, *OVERTAPPED OASIS: REFORM OR REVOLUTION FOR WESTERN WATER* 95–98 (1990).

59. TARLOCK, *supra* note 23, at § 9:43 ("Opponents of transfer argue that the logic of *Winters* requires the reserved rights be appurtenant to the reservation.").

60. See COHEN'S HANDBOOK, *supra* note 2, § 19.03[7][c], at 1229.

61. See Getches, *supra* note 34, at 542.

62. See REISNER & BATES, *supra* note 58, at 91.

63. Getches, *supra* note 34, 543 (citing *Arizona v. California*, 439 U.S. 419, 422 (1979)).

base.⁶⁴ This goal is served just as well by allowing tribes to lease water to off-reservation users.⁶⁵ Furthermore, Congress's intent at the time it created the reservations becomes irrelevant when Congress expressly authorizes tribal water rights leasing in settlements today. As Getches put it, "if Congress approves specific transactions[,] any issue of its intent becomes moot."⁶⁶

Many early critics of tribal water leasing feared that such leasing would upset the status quo, reducing the amount of water available to other water rights holders, raising the price of water,⁶⁷ or disrupting previously "settled" interstate allocations.⁶⁸ Leasing tribal water rights certainly comes at the disadvantage of those off-reservation users who previously used the water unconstrained by theoretical senior tribal rights.⁶⁹ Where such interested parties have political influence, they may continue to pose an obstacle for tribes to freely market their water.

Some environmentalists further argue that leasing tribal water rights will disadvantage lower economic value uses that have important social or environmental impacts such as local agriculture or in-stream flows.⁷⁰ Instead, critics claim, tribes will sell the water to the highest bidders—such as large cities and developers—thereby encouraging reckless urban growth.⁷¹ This argument simply critiques the larger market-based approach to water rights transfers that has long been accepted in the West and is not unique to Indian water rights transfers. Others have criticized water marketing as "yet another device for parting Indians from their resources."⁷² However, this argument ignores the fact that Indian water leases are voluntary and market driven, can be crafted for short terms, and can be structured with "opt-out" clauses whereby either party can terminate the contract if necessary.⁷³ Water leases are fundamentally unlike leases for extractive industries, such as mining, or the alienation of tribal lands to non-members. Surface water is renewable on infinite annual cycles. Thus, when tribes exercise their reversionary interest in

64. See *id.* at 543.

65. See Storey, *supra* note 53, at 183–84.

66. Getches, *supra* note 34, at 543.

67. COHEN'S HANDBOOK, *supra* note 2, § 19.03[7][c], at 1229.

68. Crass, *supra* note 37, at 124.

69. COHEN'S HANDBOOK, *supra* note 2, § 19.03[7][c], at 1228–29 (citing David H. Getches, *Management and Marketing of Indian Water: From Conflict to Pragmatism*, 58 U COLO. L. REV. 515, 545 (1988)).

70. Alderman, *supra* note 39, at 40.

71. See *id.* at 41 ("Most of the wet water from these settlements is, or will be, sold to advance reckless urban growth, expand heavily polluting industries, or enable more wasteful irrigation.").

72. Getches, *supra* note 34, at 542.

73. See, e.g., WATER SUPPLY AGREEMENT, *supra* note 5, at 20.

the water right, they return to the same position from which they started but with interim economic gain. As long as the lease is not unreasonably long, tribes simply get paid to not use water that they would not or could not use anyway.

For these reasons, most scholars and policymakers seem to agree that allowing tribes to lease surplus water is good policy.⁷⁴ The federal government, and U.S. Department of the Interior specifically, support tribal water leasing to promote a more efficient use of the West's water.⁷⁵ Several national commissions recommend allowing Indians to lease water off-reservation on fully appropriated streams as a matter of fairness.⁷⁶

A. Authorization and restrictions on leasing

There are two main obstacles for tribes to lease their surplus water: quantification and authorization. First, a tribe's water rights must be quantified and firmly settled because lessees do not want to lease rights that might later be challenged by a third party. Secondly, Congress must grant a tribe authority to lease the rights.⁷⁷ There is not a general federal law that authorizes tribes to sell or lease their water rights without selling or leasing the land to which the water rights are appurtenant.⁷⁸ Scholars have called for Congress to lift this restriction entirely, just as Congress has done for almost every other natural resource.⁷⁹

As it is, Congress grants authorization in a piecemeal fashion as individual tribes settle their claims. When it approves tribal water rights settlements, Congress almost always authorizes the particular tribe to

74. Most of the criticism I could find dates from the early 1980s. See, e.g., Jack D. Palma II, *Considerations and Conclusions Concerning the Transferability of Indian Water Rights*, 20 NAT. RESOURCES J. 91, 94–96 (1980); Belinda K. Orem, *Paleface, Redskin, and the Great White Chiefs in Washington: Drawing the Battle Lines Over Western Water Rights*, 17 SAN DIEGO L. REV. 449, 468–69 (1980). See also Jesse Harlan Alderman, *supra* note 39, at 40.

75. Crass, *supra* note 37, 121.

76. See, e.g., NAT'L WATER COMM'N, WATER POLICIES FOR THE FUTURE: FINAL REPORT TO THE PRESIDENT AND TO THE CONGRESS OF THE UNITED STATES BY THE NATIONAL WATER COMMISSION 481 (1973), available at <http://www.gpo.gov/fdsys/pkg/CZIC-hd1694-a57-1973/html/CZIC-hd1694-a57-1973.htm> (Recommendation No. 14-5); W. WATER POLICY REVIEW ADVISORY COMM'N, WATER IN THE WEST: CHALLENGE FOR THE NEXT CENTURY, at 3-46, 3-47 (1998). The one question, on which there remains substantial disagreement, is whether tribes should be allowed to lease water out of state. See Chris Seldin, Comment, *Interstate Marketing of Indian Water Rights: The Impact of the Commerce Clause*, 87 CALIF. L. REV. 1545, 1545–47 (1999).

77. See Nonintercourse Act, 25 U.S.C. § 177 (2012).

78. Judith V. Royster, *Indian Water and the Federal Trust: Some Proposals for Federal Action*, 46 NAT. RESOURCES J. 375, 396 (2006).

79. See *id.* at 396–97.

market its water to off-reservation users,⁸⁰ often with a requirement that the Secretary of Interior approve each individual lease. Only in two cases have the terms of the settlement prevented the tribes from leasing or marketing their water—the 1987 and 1988 settlements of the Seminole Tribe and the Mission Bands of California.⁸¹ Other settlements have allowed tribal water marketing through means other than explicit Congressional authorization. Two settlements declared that the Nonintercourse Act does not apply to the particular water at issue in those cases. This, in effect, freed those tribes to lease their rights without approval by the Secretary.⁸² In at least one case, Congress required the tribe to submit a water code for Secretarial approval, after which it was free to market its water without further authorizations. Regardless of the form, today it is standard for tribal water rights settlements to come with some sort of Congressional authorization for tribes to market their water.

However, settlements often restrict the ways in which tribes can lease their water.⁸³ Many settlements expressly prohibit tribes from selling rights outright, limit the length of water leases to 100 years or less,⁸⁴ require the Secretary of Interior to approve each individual lease,⁸⁵ or prevent the tribes from leasing the water out of state.⁸⁶ There are many other types of restrictions,⁸⁷ all dependent on the unique circumstances surrounding each tribe's negotiations. Most of these limitations are concessions to secure the approval of state and congressional partners, yet these long-term restrictions reduce the economic opportunities tribes can receive from their leases. Professor Daniel McCool has said that when tribes look back years from now, "they'll say, 'The albatross around our neck is the inability to freely market water to whomever we want, whenever we want.'"⁸⁸

80. See *id.* at 395; see also TARLOCK ET AL., *supra* note 8, at 925–27 (listing distinct settlements between 1978 and 2009).

81. TARLOCK ET AL., *supra* note 8, at 925.

82. Royster, *supra* note 78, at 396–97.

83. See TARLOCK ET AL., *supra* note 8, at 924.

84. COHEN'S HANDBOOK, *supra* note 2, § 19.05[2], at 1252–53.

85. See *id.* § 19.05[2], at 1253.

86. *Id.* at 1252 n.70. The 2009 settlement with the Navajo Nation, for example, allows the tribe to lease water off-reservation, but only to users within New Mexico. Omnibus Public Land Management Act of 2009, Pub. L. No. 111-11, § 10701(d)(1)(A), 123 Stat. 991, 1399.

87. See COHEN'S HANDBOOK, *supra* note 2, § 19.05[2], at 1252–54.

88. Daniel Kraker, *The New Water Czars*, HIGH COUNTRY NEWS, Mar. 15, 2004, <http://www.hcn.org/issues/270/14616>.

B. Extent of Economic Opportunity for Tribes

The potential economic impact from leasing water rights differs for each tribe. First, before a tribe can evaluate its potential economic gain from leasing water rights, the tribe must settle its water rights so it can determine the quantity of its surplus water. Second, a tribe must find a market for its water. The price per acre-foot can vary wildly, depending on the regional demand and the structure of the individual lease. Among the factors that affect the market price of water rights are security and flexibility.⁸⁹ Variables also include user demand and competition, social valuations of water, imperfections in the market system, other externalities and impacts on a third-party user, and the method of appraisal⁹⁰—such as whether the price of the water is set by market rate, replacement value, or derivative value.⁹¹

What seems beyond dispute is that the price of water only stands to go up as climate change decreases the surface water available in the West, groundwater use increases, and populations continue to grow. For example, between 2010 and 2039, the water storage in the Colorado River Basin is expected to drop 36 percent from pre-1995 levels, snowpack will drop by 24 percent, and runoff will drop by 14 percent.⁹² This ought to serve as an incentive for tribes to settle their rights sooner rather than later, since increased demand will likely only increase state resistance to tribal claims to reserved water rights⁹³ and increase the negotiating power of those tribes who have already settled their rights.

Because the economic potential of tribal water leasing is so case specific, the best way to evaluate it is to examine how individual tribes have benefited from leasing. The Ak-Chin community in Arizona was the first tribe to settle its water rights in 1978,⁹⁴ leasing 10,000 acre-feet annually to the developer of Anthem, a planned community north of Phoenix, for 100 years at \$1,200 an acre-foot. In the Salt River Pima-Mari-copa Indian Community settlement of 1988, Congress authorized that community to lease 13,300 acre-feet per year to residential cities in the Phoenix area for 99 years in exchange for a lump-sum payment of \$16

89. BONNIE COLBY SALIBA & DAVID B. BUSH, *WATER MARKETS IN THEORY AND PRACTICE: MARKET TRANSFERS, WATER VALUES, AND PUBLIC POLICY* 48 (1987).

90. *See id.* at 187–233 (providing a chapter on “Valuing Water Rights for Public and Private Decision Making”).

91. *See COLBY ET AL., supra* note 50, at 48.

92. STEPHEN SAUNDERS & MAUREEN MAXWELL, *LESS SNOW, LESS WATER: CLIMATE DISRUPTION IN THE WEST* 17 (2005), available at <http://rockymountainclimate.org/website%20pictures/Less%20Snow%20Less%20Water.pdf>.

93. *See discussion infra* Part IV.

94. COLBY ET AL., *supra* note 50, at 115.

million.⁹⁵ Under the Gila River Indian Community's proposed settlement in 2004, the Community would acquire the right to lease 41,000 acre-feet of water to off reservation parties, with an option to lease up to 100,000 acre-feet in the future.⁹⁶ At the time, the water manager of Phoenix, Arizona, Tom Buschatzke, said that the city planned to lease 15,000 acre-feet for around \$1,500 per acre-foot, which would net the tribe \$22.5 million per year.⁹⁷ However, the terms of most other tribal water leases remain unpublished, rendering it difficult to assess the overall economic impact water leasing has had for tribes without a comprehensive case-by-case analysis.

To provide a snapshot of what such a comprehensive, case-by-case analysis would reveal, the remainder of this article examines all of the water leases one tribe has made since settling its water claims. It focuses on the Jicarilla Apache Nation in New Mexico because the tribe has developed a long and successful record of leasing to a variety of off-reservation users.

IV. THE JICARILLA EXAMPLE

The Jicarilla Apache Nation encompasses a little less than 1,400 square miles (879,917 acres) of northern New Mexico, an area just larger than the state of Rhode Island. It was created and then expanded by a series of three Executive Orders in 1887, 1907, and 1908,⁹⁸ encompassing a mountainous area over 10,000 feet in elevation.⁹⁹ In 2009, the Nation had a population of 3,127,¹⁰⁰ with a tribal member per capita income of \$14,332, and median household income of \$42,772.¹⁰¹ Mining is the greatest source of revenue for the tribe,¹⁰² and since at least 1982, 69 percent of the reservation land was leased to mineral interests.¹⁰³ More than half of the 802 tribal members work for the government.¹⁰⁴

95. REISNER & BATES, *supra* notes 58, at 95–96; COLBY ET AL., *supra* note 50, at 136.

96. Kraker, *supra* note 88.

97. *Id.*

98. TILLER'S GUIDE, *supra* note 7, at 727.

99. *Id.*

100. ACS Demographic and Housing Estimates: 2005–2009, AMERICAN FACTFINDER http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_09_5YR_DP5YR5&prodType=table (last visited Nov. 5, 2014).

101. Selected Economic Characteristics: 2005–2009, AMERICAN FACTFINDER http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_09_5YR_DP5YR3&prodType=table (last visited Nov. 5, 2014).

102. TILLER'S GUIDE, *supra* note 7, at 729.

103. *Merrion v. Jicarilla Apache Tribe*, 455 U.S. 130, 135 (1982) (noting that the tribe had executed mineral leases encompassing 69 percent of the reservation land).

104. TILLER'S GUIDE *supra* note 7, at 727–28.

The Nation finalized its water rights settlement in 1992, becoming the first tribe in New Mexico to do so.¹⁰⁵ Under this settlement, the Nation received a right to deplete up to 25,500 acre-feet per year from the Navajo Reservoir or Navajo River supply, and 6,500 acre-feet from the San Juan-Chama Project supply.¹⁰⁶ The settlement also allowed the Nation to lease its surplus water to off-reservation parties, subject to approval by the Secretary of Interior, and subject to federal and state law, interstate compacts, and international law.¹⁰⁷ The Secretary of Interior is required to approve the leases so long as certain conditions are met—for example, the lease must comply with the National Environmental Policy Act, cannot exceed 99 years, and the Secretary must determine the lease is in the tribe's best interests.¹⁰⁸

The Jicarilla Apache Nation is exceptionally well suited to serve as a water rights broker because the reservation has access to water in two watersheds, on either side of the Continental Divide.¹⁰⁹ The Nation sits on the eastern side of the San Juan River basin,¹¹⁰ which drains into the Colorado River and the state of Arizona. In addition, the Nation purchased three off reservation ranches in the 1970s, giving the tribe direct access to the Rio Chama,¹¹¹ which flows into the Rio Grande and Willow Creek. The Rio Grande and Willow Creek in turn convey San Juan-Chama Diversion water to a storage facility at Heron Reservoir.¹¹² The Nation can consequently serve two distinct water markets along the Colorado River and Rio Grande, whereas most tribes can serve only one.

Since settling its water rights in 1992, the Nation has entered into 10 leases with off-reservation parties.¹¹³ The first and largest of the leases was a 21-year lease of 16,500 acre-feet to the Public Service Company of New Mexico for the utility's coal-fired San Juan Generating Station. The

105. *Id.* at 727.

106. Jicarilla Apache Tribe Water Rights Settlement Act, Pub. L. No. 102-441, § 6(a), 106 Stat. 2237 (1992); CONTRACT, *supra* note 44, § 4(d), at 5.

107. CONTRACT, *supra* note 44, § 11(a), at 10.

108. *Id.* § 11(d)(ii)–(iii), (vi), at 11.

109. The Continental Divide runs through the Jicarilla Apache reservation. See U.S. DEP'T OF THE INTERIOR, OFFICE OF INDIAN AFFAIRS, CONSTITUTION AND BY-LAWS OF THE JICARILLA APACHE TRIBE OF THE JICARILLA APACHE INDIAN RESERVATION NEW MEXICO APPROVED AUGUST 4, 1937, at 2 (1937), available at <http://www.loc.gov/law/help/american-indian-consts/PDF/37028947.pdf>.

110. TILLER'S GUIDE, *supra* note 7, at 727.

111. *Id.*

112. For a map of the San Juan-Chama Diversion Project, see *San Juan Chama Project*, BUCKMAN DIRECT DIVERSION, <http://bddproject.org/history/san-juan-chama-project/> (last visited May 14, 2013).

113. See Figure 1 at the end of this document (providing the general elements of each of the ten leases).

smallest lease was for municipal supply for a single Elks Lodge in Farmington, New Mexico. The lodge—which has a restaurant, lounge, mini casino, and 1,450 members¹¹⁴—received rights to 15-acre-feet per year at \$90 per acre-foot. In addition to these two leases, most of the Nation's off-reservation water went toward industrial uses related to power generation and coal mining. The Nation also made two contracts for municipal supply to cities—one in 2004 to supply the city of Santa Fe, New Mexico with 3,000 acre-feet a year for 52 years, and one in 2011 to supply Gallup, New Mexico with 7,500 acre-feet for 40 years. These were the first instances of a tribe leasing water to cities in New Mexico.¹¹⁵

The Nation has also supplied water to a private developer,¹¹⁶ a private ski area,¹¹⁷ and even the U.S. Bureau of Reclamation, which purchased the right to release up to 5,300 acre-feet to use as in-stream flow to protect the endangered silvery minnow in 2013, a year of markedly low water levels.¹¹⁸ While most of the customers for the Nation's water are within 100–200 miles of the reservation, the tribe is making overtures to potential customers as far away as El Paso, Texas, some 430 miles downstream.¹¹⁹ The tribe expects the demand along the middle Rio Grande to continue to grow.¹²⁰

As of 2013, the tribe was actively leasing 32,000 of its 40,000 acre-feet of water¹²¹ at prices between \$81 and \$110 per acre-foot. According to Herb Becker, attorney for the Jicarilla Apache Nation, the leases generate \$3.5–\$4 million per year for the tribe.¹²² It is hard to say how signifi-

114. See generally *Lodge #1747 Home*, ELKS USA, <http://www.elks.org/lodges/home.cfm?LodgeNumber=1747> (last visited Oct. 22, 2014).

115. See Elizabeth Hartwell Richards, *Over-Allocation and the Doctrine of Prior Appropriation: Water Rights Settlement Agreements in New Mexico*, at 39 (Sept. 2008) (unpublished Ph.D. dissertation, Stanford University), available at http://books.google.com/books?id=KWauJgOBaIEC&pg=PA39&lpg=PA39&dq=jicarilla+water+lease&source=bl&ots=Lhgbd-XDJc&sig=sdk_sVQ3ORP5d_XvPhVC-DtRIgQ&hl=en&sa=X&ei=CRQ1UaD_AYWzygHVkoDIAQ&ved=0CDgQ6AEwADgK#v=onepage&q=jicarilla%20water%20lease&f=false.

116. The lease provided water to Las Campanas, which developed luxury homes and a golf course on the outskirts of Santa Fe, New Mexico. See *AGREEMENT BETWEEN NATION AND CLUB*, *supra* note 5, at 1. See generally *THE CLUB AT LAS CAMPANAS*, <http://www.theclubatlascampanas.com/Club/Scripts/Home/home.asp> (last visited Oct. 7, 2014).

117. New Mexico's Sipapu ski area leased the water to make snow. *A Proposed Water Transfer from the Jicarilla Apaches to Sipapu Ski Area: "Real" or Paper Water?* LA JICARITA, Nov. 1, 2012, <http://lajicarita.wordpress.com/2012/11/01/a-proposed-water-transfer-from-the-jicarilla-apaches-to-sipapu-ski-area-real-or-paper-water/>.

118. *CONTRACT BETWEEN UNITED STATES AND NATION*, *supra* note 5, at 1–2.

119. Telephone Interview with Herb Becker, *supra* note 6.

120. *Id.*

121. *Id.*

122. *Id.*

cant an amount of revenue this is for the tribe, since the Nation would not disclose its general operating budget. "It's a sizeable chunk of money, but I don't think it's a sizeable percentage of the government's budget. But it can pay for considerable activities that the tribe has," Becker said.¹²³ The revenue goes into the Nation's general fund to pay for police, senior services, and other municipal programs.¹²⁴

The water leases appear to have no downside for the tribe. The Nation itself has limited water needs. The current water usage for on-reservation demands is about 4,200 acre-feet per year,¹²⁵ none of which is supplied with the water rights obtained through the 1992 settlement.¹²⁶ The Nation's current needs are all met with a set of adjudicated water rights that the tribe previously obtained, and the tribe has no foreseeable on-reservation use for the 40,000 acre-feet it obtained through the 1992 settlement. Agriculture is not a major part of the Nation's economy. While the reservation has about 58,000 acres of irrigable land, only about 1,000 acres is actually irrigated, with another 6,496 acres put to non-irrigated use.¹²⁷ Only 17 people were employed in agriculture in 2005.¹²⁸ In 1990, the tribe's crops were worth a mere \$365,000.¹²⁹ If the Nation were unable to lease the water it received through the settlement, it would simply flow past the reservation each year without benefitting the tribe at all.¹³⁰

The settlement water does come with some costs. The Nation must pay a portion of the operation, maintenance, and replacement costs of the Heron and Navajo reservoirs each year. For example, between 1992 and 2012, the tribe paid \$2.60 per acre-foot for costs related to the Navajo Reservoir, and the Nation owes \$29.40 per acre-foot for water stored in the San Juan Chama Project through 2021.¹³¹ However, the Nation often passes these costs on to the leasing parties.¹³²

123. *Id.*

124. *Id.*

125. Telephone Interview with Herb Becker, *supra* note 31.

126. Telephone Interview with Herb Becker, *supra* note 6.

127. See TILLER'S GUIDE, *supra* note 7, at 730.

128. *Selected Economic Characteristics: 2005–2009*, AMERICAN FACTFINDER, http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_09_5YR_DP5_YR3&prodType=table (last visited Nov. 5, 2014).

129. TILLER'S GUIDE, *supra* note 7, at 729.

130. Telephone Interview with Herb Becker, *supra* note 6.

131. CONTRACT, *supra* note 44, § 10(a)(ii), (b)(i), at 8–9.

132. For example, PNM's 2000 contract with the Nation included a clause that PNM will pay a proportionate amount of the tribe's share of the Navajo Dam and Reservoir capital construction costs of \$2.60 per acre-foot each year. This helped the tribe offset \$42,120 each year between 2006 and 2012.

The Nation has used the terms of the leases to protect its interests in a few ways. Most of the leases are for reasonably short periods, allowing the tribe to access its reversionary interest more quickly in the event the water is needed on the reservation. Two leases were for a year or less¹³³ and five leases were for nine years. The two longest leases were to cities—the 52-year lease to Santa Fe and 40-year lease to Gallup. These leases are long enough that the cities may rely on the supply for their own long-term water planning,¹³⁴ but they are much shorter than the 99-year and 100-year leases signed by the Salt River Pima-Maricopa Indian Community and Ak-Chin communities, which are more akin to permanent alienations of the water.¹³⁵

Another lease element present in many of these contracts is an early termination clause that allows the tribe, the buyer, or both parties to terminate the contract before its term expires, often with a pre-determined or liquidated damage amount.¹³⁶ This clause came into play most prominently in the Nation's 2004 lease of water to Santa Fe. The Santa Fe lease called for the tribe to supply the city with 3,000 acre-feet per year from the Nation's San Juan-Chama Project water for 53 years.¹³⁷ The city had a right to opt out of the contract for any reason, upon payment of a specified liquidated damage amount and four years of payments for the water it relinquished.¹³⁸ Santa Fe exercised its right to opt out of the contract when a new city council expressed concerns about the cost of the water.¹³⁹ Generally, cities are best served by acquiring permanent water rights—i.e., by buying them outright—so as to not risk losing them when a water rights lease ends.¹⁴⁰ But the Nation's early termination clauses protect cities from committing to a long term water supply that turns out to be too expensive or unnecessary.¹⁴¹

133. See Figure 1 at the end of this article. One was to the U.S. Bureau of Reclamation for inflow protection for the endangered silvery minnow, and the other was to the Sipapu ski area for snowmaking.

134. See Richards, *supra* note 115, at 39.

135. Telephone Interview with Bonnie Colby, Professor, University of Arizona (Mar. 25, 2013).

136. See, e.g., AGREEMENT BETWEEN SANTA FE AND NATION, *supra* note 5, 14–16. The leases are public documents that can be retrieved by Freedom of Information Act Request to the U.S. Department of Interior, and are on file with the author.

137. *Id.* at 4.

138. *Id.* at 14–15.

139. Telephone Interview with Herb Becker, *supra* note 6.

140. See Richards, *supra* note 115, at 41.

141. For example, the 40-year contract with Gallup does not appear to have a similar opt out mechanism for the city. See AGREEMENT BETWEEN GALLUP AND NATION, *supra* note 5, at 3, 13.

The Nation retained a right to terminate the contract early without any penalty in just one of its leases. In its 2007 contract with the Public Service Company of New Mexico (PNM), Arizona Public Service Company, and BHP Navajo Coal Company to supply 8,500 acre-feet for nine years, the Nation reserved the right to terminate the contract early.¹⁴² This apparently gives the Nation the ability to stop delivering water to PNM without exposing itself to liability, although the tribe's payments will be reduced pro rata for the reduction in water delivery.¹⁴³ This gives the tribe ample flexibility to respond to changing needs on the reservation.

The flexibility can extend in the other direction, as well. Some of the Nation's contracts allow buyers to reserve water through an early "opt-in" agreement. For example, in the Nation's 2011 lease to Gallup, New Mexico, the city began paying \$30,000 to the Nation each year for the right to access 7,500 acre-feet per year. Actual use of the water is scheduled to begin in 2025 once the city's water delivery infrastructure is ready.¹⁴⁴ "We will be paid for 15 years before the city actually takes any water," Becker said.¹⁴⁵ The Nation is free to use the water in the meantime, and could potentially lease it out to another party, provided the water is available for Gallup when the city is ready for it.

One difficulty in forming long-term water leases is determining a fair price for the water over the term of the lease. It is impossible to know how quickly the value of water will grow in a given market, and tribes risk undervaluing their water by leasing it out for many years at a fixed price.¹⁴⁶ Therefore, all of the Nation's leases that are longer than one year have a price escalator clause, whereby the price of the water increases over time. Most have a fixed, 8–10 percent price inflator built in, but a

142. WATER SUPPLY AGREEMENT, *supra* note 5, at 4, 21.

143. *See id.* at 7.

144. AGREEMENT BETWEEN GALLUP AND NATION, *supra* note 5, at 3, 6.

145. Telephone Interview with Herb Becker, *supra* note 6.

146. Compensation agreements must take into account how the value of the water will change over time. If a discrepancy emerges over the years between the market value of water and the lease payments, the stability of the agreement may be threatened. To overcome this problem, the lease agreement should provide that lease payments be adjustable periodically. The adjustment factor should reflect changes in water values over time, be readily measurable, and not be subject to manipulation by parties to the agreement. The adjustment factor may be based on energy costs in the region (since energy is one of the primary costs of supplying water), on water rates charged by regional water providers, or on a general price index, such as the consumer price index. The adjustment factor should be acceptable to all parties and specified in the lease agreement.

BONNIE G. COLBY ET AL., *supra* note 50, at 86.

few are tied directly to the market rate for water, or to a fluctuating rate set by the U.S. Bureau of Reclamation. In the leases to Gallup and Santa Fe, the price is regularly readjusted to “fair market value.” Every two years, an independent consultant determines the increase or decrease in the fair market value for the water in the region, and the price paid by the city is adjusted accordingly.¹⁴⁷ This protects the Nation from tying itself to the price of water at the time it enters into a lease when the value of water is expected to grow significantly in coming years due to increased demand from growth and decreased supply from climate change.

All of the Nation’s leases contain provisions that relieve the tribe of a responsibility to deliver water, and of the buyer’s continued obligation to pay, if there is a water shortage.¹⁴⁸ The leases also contain a “use it or lose it” clause, whereby the buyer loses the rights to the water if it is not called for by the end of the year—a buyer cannot store the water in a reservoir, or credit non-use toward future use.¹⁴⁹ This reflects the Nation’s own inability to bank water at the Navajo and Heron reservoirs under federal contract.¹⁵⁰

V. CONCLUSION

The Jicarilla Apache Nation’s water rights leases serve as an example of how a tribe can leverage surplus water rights for economic gain without unduly restricting the tribe’s ability to use the water for on-reservation uses in the future. The financial return on the Nation’s leases may not be a windfall, but the \$3.5–4 million per year the tribe currently receives from its leases is a significant source of revenue given the tribe’s size and the amount of water at its disposal. Revenue may also grow as demand for the water increases in the region. Most importantly, the example of the Jicarilla Nation demonstrates that leases can be structured in a way that is not burdensome for tribes and preserves both their long-term access to water and flexibility to respond to changing circumstances, such as spikes in water prices or a sudden need for the water on the reservation. In the Nation’s experience, this has made water leasing a “win-win” for both the tribe and its water customers, with no apparent downside for the tribe. “We have no complaints,” says Becker. “The tribe

147. See AGREEMENT BETWEEN GALLUP AND NATION, *supra* note 5, at 7–8; AGREEMENT BETWEEN SANTA FE AND NATION, *supra* note 5, at 7–8.

148. The leases are public documents that can be retrieved by Freedom of Information Act Request to the U.S. Department of Interior, and are on file with author.

149. The leases are public documents that can be retrieved by Freedom of Information Act Request to the U.S. Department of Interior, and are on file with author.

150. CONTRACT, *supra* note 44, § 4(g), at 6.

has been happy because we have the escalator clauses in there, and we haven't had to cancel any of the leases—so that makes the users happy. But if there is any aspect of any of these leases that either side is not happy with, then we can sit down and renegotiate.”¹⁵¹

151. Telephone Interview with Herb Becker, *supra* note 6.

FIGURE 1: Jicarilla Apache Nation water rights leases to off-reservation users: 1992–2013.¹⁵²

Party	Purpose	Amount (max acre- feet)	Price	Other Payments	Date of Contract	Date of First Delivery	End Date	Early Termination	Water Price Escalator Clause
Public Service Company of New Mexico (PNM)	Coal mining, irrigation of reclaimed lands, electrical generation, San Juan Generating Station	16,200	“USBR CRSP Rate”	\$2,033,073 (non- reimbursable reserve fee, credited toward usage), \$42,120 for O&M*	July 17, 2000	Jan. 1, 2006	Dec. 31, 2027	Yes for PNM, if generating station ceases operation. Not for tribe.	Yes. Limited to +/- 10% per year.
City of Santa Fe, NM	Municipal water supply	3,000	\$1.5 million per year	\$300,000 per year “holding rights” until contract was approved	Sept. 2, 2004	Oct. 27, 2005	Dec. 31, 2057	Yes. City may terminate early with four years notice. Tribe may not.	Yes. Indexed to CPI and increase in FMV every 2 years.
San Juan Refining Co.	Industrial use, petroleum refinery	500	\$100 per AF	n/a	Jan. 1, 2006	Jan. 1, 2006	Dec. 31, 2015	No.	Yes. 8% increase each year.

152. The leases are public documents that can be retrieved by Freedom of Information Act Request to the U.S. Department of Interior, and are on file with author.

Party	Purpose	Amount (max acre- feet)	Price	Other Payments	Date of Contract	Date of First Delivery	End Date	Early Termination	Water Price Escalator Clause
San Juan Basin Waterhaulers Association	Industrial use, oil and gas drilling	200	\$100 per AF	n/a	Jan. 1, 2006	Jan. 1, 2006	Dec. 31, 2015	No, but “penalty” of 1 year costs results if buyer terminates early.	Yes. 10% increase each year.
Elks Lodge No. 1747 (Farmington, NM)	Water Supply, municipal use	15	\$90 per AF	n/a	Jan. 1, 2006	Jan. 1, 2006	Dec. 31, 2015	No.	Yes. 8% increase each year.
PNM, Arizona Public Service Company, BHP Navajo Coal Company	Drought protection for electrical generating station and coal mining	8,500	\$110 per AF	\$220,000 increased by 10% per year (non- reimbursable reserve fee, credited toward supply)	Mar. 2, 2007	Jan. 1, 2007	Dec. 31, 2016	Yes. Tribe or buyer may reduce or terminate early at its discretion.	Yes. 10% increase each year.
City of Gallup, NM	Municipal supply	7,500	“Fair Market Value” (FMV)	\$30,000 per year holding fee until delivery begins	Nov. 22, 2011	[TBD]	40 years after 1st delivery	No.	New calculation of FMV every 2 years.

Party	Purpose	Amount (max acre- feet)	Price	Other Payments	Date of Contract	Date of First Delivery	End Date	Early Termination	Water Price Escalator Clause
U.S. Bureau of Reclamation	In-stream flow to protect endangered silvery minnow	5,300	\$81 per AF	\$42,930 (non- refundable advance payment)	2012	“Released as necessary”	Sept. 30, 2013	No.	No.
Club at Las Campanas	Water supply for luxury residential development, Santa Fe, NM	600	\$82 per AF	\$39,32 per AF in “project fees”	Feb. 8, 2013	Jan. 1, 2013	Dec. 31, 2022	Yes. Buyer can terminate early for any reason; Tribe may not.	Yes. Indexed to CPI or 2%, whichever is higher.
Sipapu Recreational Development	Water supply (ski area)	100	\$82 per AF	n/a	Feb. 15, 2013	Jan. 1, 2013	Dec. 31, 2013	No.	No.

*Pass-through charge for operation & maintenance (O&M) of federal infrastructure

