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EXTENDING *WINTERS* TO WATER QUALITY: ALLOWING GROUNDWATER FOR HATCHERIES

Amy Choyce Allison

Abstract: The *Winters* Doctrine of federally reserved water rights applies to groundwater and water quality. Because most Indian tribes would have no water rights under state law, the reserved water rights doctrine, known as the *Winters* Doctrine, emerged to establish a federal right to water on Indian reservations sufficient to fulfill the purposes of the reservation. The reserved water rights doctrine originated in *Winters v. United States*, which was preceded by two cases upholding the federal government's right to reserve certain water rights. *Winters* rested on one of the Canons of Construction for Indian treaties that require agreements involving Indians be liberally construed in their favor. Whether *Winters* applies to water quality as well as quantity has never been directly litigated. However, courts have implied that this right extends to water quality by upholding water uses that do not actually require consumption of water, such as maintenance of minimum instream flows. *Winters* and the Canons of Construction also require an extension to water quality. This Comment uses the Lummi Nation to illustrate a real example of water rights problems faced by Indian tribes and concludes that because the *Winters* Doctrine extends to groundwater and water quality, the Lummi Nation is entitled to enjoin non-Indian groundwater users contaminating their groundwater source.

The Lummi Nation of Western Washington has always depended on salmon fishing for its livelihood and culture.¹ But, during the past decade, salmon resources available to the Lummi have begun dwindling due to pollution, logging practices, and dams on salmon streams.² These activities have caused some areas of the Nooksack river to reach high temperatures fatal to salmon.³ In order to preserve and manage salmon populations, the Lummi have introduced fish hatcheries on the reservation.⁴

The Lummi's efforts to rescue the diminishing salmon population are at risk of failure.⁵ While hatcheries can help recover naturally spawning populations of salmon, they require fresh, high quality water to function

1. See Don Newman Taylor, *Changes In The Economy Of the Lummi Indians of Northwest Washington 16* (1969) (unpublished M.A. thesis, Western Washington University) (on file with author); Kurt Russo, *The Lummi Indian Tribe and Life with the Salmon*, at http://www.sustainable.org/casestudies/washington/WA_af_Lummi.html (last modified Sept. 18, 1996).

2. See Russo, *supra* note 1.

3. See *id.*

4. See *id.* Hatcheries are pools of fresh water where fish are artificially raised and were first established in the late 19th century to combat diminishing natural fish runs. See *United States v. Washington*, 759 F.2d 1353, 1360 (9th Cir. 1985).

5. See Russo, *supra* note 1.

successfully.⁶ The Lummi have relied on groundwater underlying the reservation because the surface water available to them is of poor quality.⁷ However, the underground water source is in danger because the State of Washington has issued permits to withdraw the groundwater, and other landowners have pumped the groundwater.⁸ This has resulted in overuse and salt-water intrusion into the reservation's fresh groundwater.⁹ The United States has filed suit on behalf of the Lummi in the Western District of Washington to remedy this intrusion, presenting a dilemma for the courts.¹⁰

The court that hears the Lummi case will have the opportunity to apply the reserved water rights doctrine, also known as the *Winters* Doctrine, to the groundwater in order to preserve the quality of the Lummi's water. In *Winters v. United States*,¹¹ the U.S. Supreme Court held that Congress impliedly reserved enough water for the Indians to fulfill the purposes of their reservation.¹² The scope and extent of the *Winters* Doctrine is a treaty-based inquiry that requires courts to liberally interpret treaties and other documents establishing reservations under the Canons of Construction.¹³

Yet, the scope of *Winters* is uncertain with regard to water quality.¹⁴ No court has specifically extended *Winters* to water quality. Nevertheless, courts have allowed water rights for non-consumptive uses, such as maintenance of instream river flows and preservation of certain water temperatures for fish survival.¹⁵ In addition, the Supreme Court of Arizona broke new ground by extending *Winters* to groundwater when surface water is inadequate.¹⁶

6. Telephone Interview with Greg Johnston, Certified Fisheries Professional (July 20, 2002).

7. See Russo, *supra* note 1; United States' Complaint, *United States v. Washington*, Western District of Washington, 8-9 (Jan. 19, 2001) (No. C01-0047Z). For purposes of this Comment, the assertions in the Complaint are assumed to be true.

8. United States' Complaint at 8-9, *Washington* (No. C01-0047Z).

9. *Id.*

10. See *id.*

11. 207 U.S. 564 (1908).

12. *Id.* at 576-77; *Cappaert v. United States*, 426 U.S. 128, 138-39 (1976).

13. See *Winters*, 207 U.S. at 576-77; see also *infra* Part II.

14. See *infra* Part IV.

15. See *United States v. Adair*, 723 F.2d 1394, 1411 (9th Cir. 1983); *United States v. Anderson*, 591 F. Supp. 1, 5-6 (E.D. Wash. 1982), *rev'd in part, aff'd in part*, 736 F.2d 1358 (9th Cir. 1984). See also *infra* Part III.B.

16. See *In re Gen. Adjudication of All Rights to Use Water In the Gila River Sys. & Source*, 989 P.2d 739, 745-48 (Ariz. 1999) [*hereinafter* Gila III].

This Comment argues that the *Winters* Doctrine reserves groundwater of sufficient quality, as well as quantity, to fulfill the purposes of Indian reservations when surface water is inadequate. The experience of the Lummi Nation illustrates the *Winters* Doctrine when applied to tribes maintaining fish hatcheries on reservations. Part I of this Comment discusses water law in general. Part II explains the *Winters* Doctrine of reserved water rights. Part III discusses the scope of reserved water rights, including how water is quantified, how courts have upheld water rights for non-consumptive uses, and whether *Winters* applies to groundwater. Part IV argues that tribes have a right to a quality of groundwater sufficient to fulfill the purposes of their reservation when surface water is inadequate. Part IV then applies this argument to the Lummi as an example of a fishing tribe using water for fish hatcheries.

I. WATER RIGHTS, THE WEST, AND PRIOR APPROPRIATION

Water rights, unlike other property rights, are held “in common for the public good”¹⁷ and are not subject to a possessory interest.¹⁸ An individual cannot own water.¹⁹ Instead, he or she can own the right to use water.²⁰

With the exception of federally reserved water rights, the laws governing water rights vary as a matter of state law.²¹ The Equal Footing Doctrine provides that the United States holds title to navigable waterways on submerged land in trust for the states, and the states receive the title when they are admitted to the Union.²² Moreover, the Desert Land Act²³ requires water rights belonging to recipients of federal lands to be determined by and subject to state water law.²⁴ The federal government must comply with state law when obtaining water rights for

17. CHRISTINE GREGOIRE ET AL., AN INTRODUCTION TO WASHINGTON WATER LAW 1 (2000).

18. See A. DAN TARLOCK, LAW OF WATER RIGHTS AND RESOURCES 3-12-3-13 (2002 ed.).

19. See GREGOIRE, *supra* note 17, at I.1-I.2; TARLOCK, *supra* note 18, at 3-13.

20. See GREGOIRE, *supra* note 17, at I.1-I.2; TARLOCK, *supra* note 18, at 3-12-3-12.1.

21. See *Murphy v. Kerr*, 296 F. 536, 540 (D.N.M. 1923) (stating that “waters are owned by the state in trust for the people”); see also GREGOIRE, *supra* note 17, at I:5, III:1. Water quality and pollution issues are usually determined by state and federal pollution control programs like the Clean Water Act. See TARLOCK, *supra* note 18, at 2-9.

22. See TARLOCK, *supra* note 18, at 8-8.

23. Codified as amended at 43 U.S.C. §§ 321-23, 325, 327-29 (2002).

24. See *id.*; *Cappaert v. United States*, 508 F.2d 313, 318 (1974); FELIX COHEN, HANDBOOK OF FEDERAL INDIAN LAW 577 (1982 ed.); Todd A. Fisher, Note, *The Winters of Our Discontent: Federal Reserved Water Rights In the Western States*, 69 CORNELL L. REV. 1077, 1081 (1984).

federal lands.²⁵ However, land that has been reserved by the federal government is not subject to state law.²⁶

In the West, state courts apply the doctrine of prior appropriation to surface water rights.²⁷ This doctrine establishes a “prior in time, prior in right” notion.²⁸ The first individual to put water to a beneficial use gets priority as long as he or she continues using the water.²⁹ In water shortages, the first users can require the “junior” users to stop using water.³⁰ Consequently, the issue of timing is essential.

Groundwater has traditionally been treated differently than surface water.³¹ Most courts originally granted the owners of the overlying land absolute rights to underlying groundwater sources under the absolute ownership rule.³² A few states still follow this rule.³³ Yet, other rules have emerged in other states. For example, the correlative rights rule allows for equitable sharing of the groundwater source.³⁴ A third rule, the reasonable use rule, allows owners to take all water required for reasonable use of the overlying land.³⁵ Finally, some western states have applied the prior appropriation doctrine to groundwater as well as surface water, usually by statute.³⁶ For example, in 1945 the Washington Legislature enacted laws extending the prior appropriation standard to

25. See Fisher, *supra* note 24, at 1081.

26. See Fed. Power Comm'n v. Oregon, 349 U.S. 435, 498 (1955); Fisher, *supra* note 24, at 1081.

27. See GREGOIRE, *supra* note 17, at 3. States that use some form of the prior appropriation doctrine include: Alaska, Arizona, California, Colorado, Idaho, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington, and Wyoming. See TARLOCK, *supra* note 18, at 5-10-5-20; Fisher, *supra* note 24, at 1077 n.2. Courts in the eastern United States generally use the doctrine of riparian rights which allows persons owning the land adjacent, over or under the water to make reasonable and beneficial use of the water. See GREGOIRE, *supra* note 17, at 3. In times of insufficiency, equal shares of the water are reduced proportionally. See GREGOIRE, *supra* note 17, at 3.

28. See TARLOCK, *supra* note 18, at 5-52. Washington has also embraced the prior appropriation doctrine through legislation by establishing a permit system for surface water use. WASH. REV. CODE § 90.03.250-340 (2002).

29. See TARLOCK, *supra* note 18, at 5-48-5-49, 5-112.4.

30. See GREGOIRE, *supra* note 17, at 3; TARLOCK, *supra* note 18, at 5-50-5-51.

31. See TARLOCK, *supra* note 18, at 4-2.

32. See *id.* at 4-6.

33. See *id.* at 4-8 (naming Texas, Connecticut, Louisiana, Maine, and Rhode Island).

34. See *id.* at 4-20 (discussing the rule of correlative rights in California). For a discussion on the common law principles of groundwater in Washington, see GREGOIRE, *supra* note 17, at V:4.

35. See TARLOCK, *supra* note 18, at 4-10-4-11 (discussing the reasonable use rule).

36. See William Wilcox, Jr., *Maintaining Federal Water Rights in the Western United States*, ARMY LAW 3, 4 (Oct. 1996).

groundwater.³⁷ With few exceptions, the Washington groundwater code requires a water user to obtain a permit before pumping groundwater and resembles the surface water code that requires a permit for surface water use.³⁸

II. INDIAN TRIBES HAVE A FEDERALLY IMPLIED RIGHT TO WATER THAT TAKES PRIORITY OVER NON-INDIAN USERS

The reserved water rights doctrine gives Indian tribes an opportunity to use water without having to comply with state law.³⁹ Without such rights, tribes in the west would rarely receive water because of the complicated priority system employed in western state water law.⁴⁰ Prior to *Winters*, the U. S. Supreme Court held that the federal government can reserve certain rights⁴¹ and that Indians retain rights not ceded by treaty.⁴² In *Winters*, the Court granted Indians on reservations an implied right to water sufficient to fulfill the purposes of the reservation.⁴³ The legal basis for reserved water rights is provided by the Canons of Construction, which are rules for interpreting documents dealing with Indians.⁴⁴ These water rights also stem from the federal government's ability to reserve certain rights for the Indians.⁴⁵ Reserved water rights are favorable to Indians because they do not carry the strict requirements of state water law in the West.⁴⁶

37. 1945 Wash. Laws ch. 263 § 3 (codified in WASH. REV. CODE § 90.44 (2002)).

38. WASH. REV. CODE § 90.44.050. Permits are not required for stock watering, lawn watering, domestic uses in an amount not exceeding five thousand gallons a day, and industrial purposes not exceeding five thousand gallons a day. See GREGOIRE, *supra* note 17, at V:10; see also WASH. REV. CODE §§ 90.03.250–.340 (establishing a mandatory permit system for surface water use).

39. See *Winters v. United States*, 207 U.S. 564, 576–78 (1908).

40. See *supra* Part I; see also A. Dan Tarlock, *One River, Three Sovereigns: Indian and Interstate Water Rights*, 22 LAND & WATER L. REV. 631, 633 (1987) (stating that “tribes seldom had the financial capability to put their potential reserved rights to actual beneficial use”).

41. See *United States v. Rio Grande Dam & Irrigation Co.*, 174 U.S. 690, 703 (1899).

42. See *United States v. Winans*, 198 U.S. 371, 381–83 (1905).

43. See *Winters*, 207 U.S. at 576–78.

44. See Charles F. Wilkinson & John M. Volkman, *Judicial Review of Indian Treaty Abrogation: “As Long as Water Flows or Grass Grows Upon the Earth”—How Long a Time Is That?*, 63 CAL. L. REV. 601, 608–19 (1975); DAVID GETCHES, *FEDERAL INDIAN LAW* 129–39 (4th ed. 1998).

45. See *Winters*, 207 U.S. at 577.

46. See *id.*; *Colville Confederated Tribes v. Walton*, 647 F.2d 42, 51–52 (9th Cir. 1981); Berrie Martinis, *From Quantification to Qualification: A State Court's Distortion of the Law in In re General Adjudication of All Rights to Use Water In the Big Horn River System*, 68 WASH. L. REV. 435, 448 (1993).

A. *Pre-Winters Case Law Establishing the Federal Reservation of Water Rights*

Until 1908, no courts had considered whether a reserved water right for federal reservations existed.⁴⁷ Yet, several U. S. Supreme Court cases provided significant legal background for the federal reservation of water rights.⁴⁸ The first, *United States v. Rio Grande Dam & Irrigation Co.*,⁴⁹ held that the federal government could preserve the navigability of rivers.⁵⁰ The second, *United States v. Winans*,⁵¹ held that certain Indian treaty rights trumped state law.⁵²

States may govern their own property and water laws with a few salient exceptions.⁵³ The Court examined one such exception in *Rio Grande Dam* when it considered whether the United States retained any rights over a non-navigable tributary of the Rio Grande River.⁵⁴ The defendant dam builders had planned to build a dam on the tributary and divert water for irrigation.⁵⁵ They had complied with all state laws regarding dam building and diversion of public waters.⁵⁶ Thus, construction of the dam was allowed under state law. The United States argued, however, that the defendant dam builders should be enjoined from building a dam that hindered the downstream navigability of the river.⁵⁷

The Supreme Court agreed and held that the jurisdiction of the federal government over interstate commerce allows it to preserve the navigability of water courses "even against any state action."⁵⁸ Although the Court recognized the ability of a state to govern its own water law, it

47. See TARLOCK, *supra* note 18, at 9-71.

48. See *United States v. Rio Grande Dam & Irrigation Co.*, 174 U.S. 690, 703 (1899); *United States v. Winans*, 198 U.S. 371, 382 (1905); see also GREGOIRE, *supra* note 17, at VIII:3; *Worcester v. Georgia*, 31 U.S. 515, 557 (1832) (holding that state regulatory law was inapplicable on Indian reservations).

49. 174 U.S. 690 (1899).

50. *Id.* at 703.

51. 198 U.S. 371 (1905).

52. *Id.* at 382-83.

53. See *Rio Grande Dam*, 174 U.S. at 702-03; *Winans*, 198 U.S. at 382.

54. See *Rio Grande Dam*, 174 U.S. at 690.

55. *Id.*

56. *Id.* at 692-93.

57. *Id.* at 690-92.

58. *Id.* at 703.

acknowledged a limitation on this right.⁵⁹ Specifically, the Court stated that

in the absence of specific authority from Congress a State cannot by its legislation destroy the right of the United States, as the owner of lands bordering on a stream, to the continued flow of its waters; so far . . . as may be necessary for the beneficial uses of the government property.⁶⁰

Thus, the Court held in *Rio Grande* that the federal government has the ability to reserve certain federal water rights.⁶¹

Six years later, the U.S. Supreme Court held that Indians have reserved rights not ceded by treaties in *United States v. Winans*.⁶² In *Winans*, the Court considered whether treaty fishing rights allowing Indians to take fish in common with the citizens of a territory survived after the federal government conveyed the land out of the public domain.⁶³ The United States brought suit on behalf of the Indians when the defendants took virtually all the fish in the river and made Indian fishing physically impossible.⁶⁴ The defendants built fishing devices, called fish wheels, on the Columbia River pursuant to licenses given by the State of Washington.⁶⁵ The United States asked the court to enjoin use of the fish wheels.⁶⁶ The defendants argued that by complying with state law, they had a legal right to maintain the fish wheels⁶⁷ and that the state had control over the shorelines under the Equal Footing Doctrine.⁶⁸ Under this doctrine, states are admitted to the union on an equal footing with the original states, giving them ownership of water shorelines.⁶⁹

In *Winans* the Supreme Court held that treaties and federal law, not state law, define Indian fishing rights.⁷⁰ Further, the Court held that these

59. *Id.* at 702-03.

60. *Id.* at 703.

61. *Id.*

62. 198 U.S. 371, 381 (1905).

63. *Id.* at 379. Public domain refers to land owned by the United States. See BLACK'S LAW DICTIONARY 1229 (6th ed. 1990).

64. *Id.* at 380.

65. *Id.*

66. *Id.* at 377.

67. *Id.* at 379.

68. *Id.* at 382-83.

69. See TARLOCK, *supra* note 18, at 8-5-8-9.

70. *Winans*, 198 U.S. at 382; see also COHEN, *supra* note 24, at 581 (stating that *Winans* established this principle later relied upon in *Winters*).

rights survive the state's power to control riverbeds under the Equal Footing Doctrine.⁷¹ Thus, the Court required the private landowners to allow Indians access to fishing areas, essentially granting the Indians an easement.⁷² The Court also required the defendants to stop using the fish wheels,⁷³ declaring that "the treaty was not a grant of rights to the Indians, but a . . . reservation of those not [ceded]."⁷⁴ Therefore, *Winans* established the notion that Indians retain all rights not ceded and confirmed the federal government's ability to reserve certain rights even after they have been conveyed out of the public domain.⁷⁵

B. *Winters v. United States*

Strictly applying the prior appropriation doctrine to Indian reservations would severely limit tribes' use of water because few tribes put water to beneficial use first, few continued to put it to beneficial use, and few complied with the respective state's procedural requirements.⁷⁶ Moreover, most rivers are over-appropriated and have been for some time.⁷⁷ The U.S. Supreme Court addressed the problem of prior appropriation and Indian Reservations in *Winters v. United States*.⁷⁸

In *Winters*, the Court considered whether Indians on the Fort Belknap Reservation had an implied right to water allowing them to enjoin non-Indian dam builders from building dams or otherwise preventing water flow to the reservation.⁷⁹ The case turned on interpretation of the 1888 treaty establishing the Fort Belknap Reservation.⁸⁰ The tribes agreed

71. *Winans*, 198 U.S. at 382–83.

72. *Id.* at 384.

73. *Id.*

74. *Id.* at 381.

75. *See id.* at 381–83.

76. *See, e.g., Winters v. United States*, 207 U.S. at 571 (1908); *Colville Confederated Tribes v. Walton*, 647 F.2d 42, 46 (9th Cir. 1981); *see also Tarlock, supra* note 40, at 633 (stating that "tribes seldom had the financial capability to put their potential reserved rights to actual beneficial use, even with subsidies"). Even in the fifty years following *Winters*, the federal government did nothing to protect or define Indian water rights. *See NAT'L WATER COMM'N, WATER POLICIES FOR THE FUTURE: FINAL REPORT TO THE PRESIDENT AND TO THE CONGRESS OF THE UNITED STATES 474–75* (June 1973); *see also GETCHES, supra* note 44, at 833.

77. *See Report of the Western Water Policy Review Advisory Commission, Water in the West: Challenge for the Next Century*, 3–6 (June 1998).

78. 207 U.S. 564 (1908).

79. *Id.* at 565.

80. 25 Stat. 113, 213 (1888).

under the treaty to cede a large area of land to the federal government.⁸¹ The treaty reserved the land for the creation of “a permanent home and abiding place” for the tribes at issue.⁸² In addition, the government’s policy was to establish the reservation in order to change Indians into “pastoral and civilized people.”⁸³ However, the agreement was silent on water rights.⁸⁴ Montana settlers, ditch companies, and irrigation companies took advantage of this silence by diverting water upstream from the Fort Belknap Indian Reservation.⁸⁵ These diversions allegedly deprived the Indians of the use of water from the Milk River.⁸⁶

The federal government brought suit on behalf of the Indians to enjoin dam building or any other water diversion.⁸⁷ Under the prior appropriation doctrine, the settlers would have won due to their beneficial use of the water prior to the Indians.⁸⁸ Consequently, the United States alleged that because water was necessary to further the purposes of the reservation, Congress had implied water rights in the Treaty.⁸⁹ The defendants contended that the Indians had given up their water rights when they ceded their land.⁹⁰ Further, the defendants argued that the Indians’ failure to reserve water rights for themselves must have been conscious because the lands ceded to the government for settlement were valueless without water.⁹¹

The *Winters* Court held that the treaty implied a water right for tribes on the reservation under the rules of Indian treaty interpretation.⁹² The Court’s statement that “ambiguities occurring will be resolved from the standpoint of the Indians”⁹³ has become known as one of the Canons of Construction for Indian treaties.⁹⁴ The Court noted that there was an

81. *Winters*, 207 U.S. at 567.

82. *Id.* at 565 (quoting 25 Stat. 113, 213 (1888)).

83. *Id.* at 576.

84. *Id.*

85. *Id.* at 569.

86. *Id.* at 567.

87. *Id.* at 565.

88. *Id.* at 566.

89. *Id.* at 567.

90. *Id.* at 576.

91. *Id.*

92. *Id.* at 576–77.

93. *Id.* at 576.

94. See COHEN, *supra* note 24, at 221. The three Canons of Construction are: (1) ambiguous terms or words must be resolved in favor of the Indian parties concerned, (2) Indian treaties must be interpreted as the Indians themselves would have understood them, and (3) the treaty’s meaning or purpose must be liberally construed in favor of the Indians. See Wilkinson, *supra* note 44, at 608–17.

ambiguity in the agreement establishing the reservation because it was silent on water rights.⁹⁵ Therefore a “conflict of implications” arose.⁹⁶ One implication was that a water right was implied because the Indians realized that the purpose of the reservation, to become civilized and pastoral, would not be met without water.⁹⁷ Another implication was that the Indians impliedly waived their water rights because they realized that the ceded land was valueless without irrigation, and failed to reserve water rights.⁹⁸ But, construing this ambiguity from the standpoint of the Indians led the *Winters* Court to conclude that Indians were not aware that by accepting the reservation, they gave up the rights to make it prosperous.⁹⁹ When the Indians agreed to relocate to the reservation, they would not have contemplated having to expressly reserve water rights.¹⁰⁰ The Court resolved the ambiguity in favor of the Indians and thereby established an implied right to water on Indian reservations sufficient to fulfill the purpose of the reservation.¹⁰¹

In *Winters*, the Court established that although state law generally governs water rights, federally reserved water rights are not subject to state law.¹⁰² Like the defendants in *Winans*, the defendants in *Winters* argued that the Equal Footing Doctrine gave states the right to determine all water rights.¹⁰³ The Court disagreed, citing *Rio Grande Dam* and *Winans* for the proposition that the state’s right to regulate water is subject to the federal government’s reservation of certain rights.¹⁰⁴ The Court recognized that the agreement contained an implied water right in 1888, when the reservation was established.¹⁰⁵ The *Winters* Court reasoned that Congress must have intended the implied water right to be continued throughout the years, and not be revoked a year later with the

The Canons are comparable to rules of construction for adhesion contracts. See *Wilkinson*, *supra* note 44, at 617.

95. *Winters*, 207 U.S. at 576–77.

96. *Id.*

97. *Id.*

98. *Id.*

99. *Id.* at 577.

100. *See id.*

101. *Id.* at 576–77. See also *Cappaert v. United States*, 426 U.S. 128, 138 (1976).

102. See *United States v. Winters*, 207 U.S. 564, 577 (1908). See also *Colville Confederated Tribes v. Walton*, 647 F.2d 42, 46 (9th Cir. 1981); *Martinis*, *supra* note 46, at 448.

103. See *Winters*, 207 U.S. at 577. For discussion on the Equal Footing Doctrine see *supra* note 22 and accompanying text.

104. See *Winters*, 207 U.S. at 577.

105. *Id.* at 576–77.

admission of Montana to the Union.¹⁰⁶ Thus, in *Winters* the Court established the reserved water rights doctrine, which has come to be known as the *Winters* Doctrine.¹⁰⁷

C. *The Unique Nature of Winters Rights In the Reservation Context*

Courts and commentators have recognized that the *Winters* Doctrine provides three unique privileges: first, reserved water rights may be asserted at any time;¹⁰⁸ second, they are need-based and thus do not require continued beneficial use;¹⁰⁹ and third, they take priority over all junior water users in water shortages.¹¹⁰ These characteristics have become apparent in cases subsequent to *Winters* and by various commentators¹¹¹ and have been collectively referred to as “*Winters* rights.”¹¹² Applied in the context of an Indian reservation, *Winters* rights guarantee an adequate water supply to fulfill the purposes of the reservation.¹¹³ Many tribes benefit from the safeguards offered in *Winters* to fulfill the purposes of their reservations.¹¹⁴

Winters rights can be asserted at any time.¹¹⁵ The priority date—the date the water right commences—depends on the nature of the reserved water rights.¹¹⁶ For example, treaty confirmed aboriginal rights,¹¹⁷ such as

106. *Id.* at 577.

107. *See, e.g., Nevada v. United States*, 463 U.S. 110, 116 n.1 (1983); *In re Gen. Adjudication of All Rights To Use Water In the Gila River Sys. and Source (Gila IV)*, 35 P.3d 68, 71 (Ariz. 2001).

108. *See Taiawagi Helton, Indian Reserved Water Rights in the Dual-System State of Oklahoma*, 33 TULSA L.J. 979, 990 (1998); Fisher, *supra* note 24, at 1090.

109. *See COHEN, supra* note 24, at 578; Fisher, *supra* note 24, at 1090; Helton, *supra* note 108, at 990; Harold A. Ranquist, *The Winters Doctrine and How It Grew: Federal Reservation of Rights to the Use of Water*, 1975 BYU L. REV. 639, 655 (1975).

110. *See Cappaert v. United States*, 426 U.S. 128, 138 (1976); COHEN, *supra* note 24, at 578; Helton, *supra* note 108, at 990.

111. *See, e.g., COHEN, supra* note 24, at 578; Fisher, *supra* note 24, at 1090; Helton, *supra* note 108, at 990; Harold A. Ranquist, *The Winters Doctrine and How It Grew: Federal Reservation of Rights to the Use of Water*, 1975 BYU L. REV. 639, 655 (1975).

112. *See, e.g., Gila IV*, 35 P.3d at 77; *In re Gen. Adjudication of All Rights to Use Water in the Big Horn River Sys.*, 899 P.2d 848, 854 (Wyo. 1995).

113. *See Winters v. United States*, 207 U.S. 564, 576–78 (1908).

114. *See, e.g., Arizona v. California*, 373 U.S. 546, 599–601 (1963); *United States v. Adair*, 723 F.2d 1394, 1408–11 (9th Cir. 1984); *Colville Confederated Tribes v. Walton*, 647 F.2d 42, 46–47 (9th Cir. 1981); *Gila IV*, 35 P. 3d at 71–73; *Gila III*, 989 P.2d 739, 745 (Ariz. 1999).

115. *See Cappaert*, 426 U.S. at 138; Helton, *supra* note 108, at 990; Fisher, *supra* note 24, at 1090.

116. *See United States v. Adair*, 723 F.2d 1394, 1412–15 (9th Cir. 1984).

117. Aboriginal rights are rights to use and occupy. *See Johnson v. McIntosh*, 21 U.S. 543, 574 (1823); GETCHES, *supra* note 44, at 70.

the right to hunt and fish in all usual and accustomed places, carry a priority date of time immemorial.¹¹⁸ Indian users with a priority date of time immemorial take priority over all non-Indian users, no matter when the reservation was established.¹¹⁹

All other implied water rights vest on the date the federal reservation was established.¹²⁰ These rights carry a priority date of the establishment of the reservation.¹²¹ Thus, under prior appropriation, *Winters* rights trump all other uses that were established after the reservation.¹²² This is in contrast to the general prior appropriation doctrine that gives priority to the first water user to establish a beneficial use.¹²³ Consequently, tribes on reservations in western states receive implied water rights senior to non-reservation users as long as the government created the reservation before any other user could put the water to use.¹²⁴

Second, unlike prior appropriation, *Winters* rights do not depend on any continued beneficial use.¹²⁵ Water users under state law must continually put their water to use, or lose the right to use it.¹²⁶ By contrast, water users with *Winters* rights can let their water lie dormant for years before using it.¹²⁷ *Winters* rights are need-based rights instead of use-based rights.¹²⁸ Thus, as long as a federally reserved piece of land needs water to satisfy its purpose, a water right exists.¹²⁹ The *Winters*

118. See *Adair*, 723 F.2d at 1412–15; COHEN, *supra* note 24, at 578 n.20; GREGOIRE, *supra* note 17, at VIII:7. But see *Martinez v. Lewis*, 861 P.2d 235, 238 (N.M. Ct. App. 1993) (refusing to address a tribe's reserved water right claim with a priority date of time immemorial).

119. See *Adair*, 724 F.2d at 1412–15.

120. See *id.*; COHEN, *supra* note 24, at 578.

121. See *Cappaert v. United States*, 426 U.S. 128, 138 (1976); GREGOIRE, *supra* note 17, at VIII:6.

122. Although the federal right is limited by state law because *Winters* rights only take priority over non-Indian uses that commence after the reservation is established, this issue does not usually arise in the Indian reservation context. See Helton, *supra* note 108, at 989; GREGOIRE, *supra* note 17, at VIII:7. This is because most Indian reservations were established before any other user could claim a water use. See Helton, *supra* note 108, at 989; GREGOIRE, *supra* note 17, at VIII:7.

123. See COHEN, *supra* note 24, at 578; Helton, *supra* note 108, at 990.

124. See *Adair*, 724 F.2d at 1412–15; COHEN, *supra* note 24, at 578.

125. See COHEN, *supra* note 24, at 578; Fisher, *supra* note 24, at 1090; Helton, *supra* note 108, at 990; Ranquist, *supra* note 109, at 655.

126. See TARLOCK, *supra* note 18, at 5-112.4.

127. See Fisher, *supra* note 24, at 1090.

128. See Helton, *supra* note 108, at 990–91 (stating that *Winters* rights are based on the existence of reserved land in need of water).

129. See *id.* at 991.

Doctrine is meant to provide enough water to satisfy present and future needs.¹³⁰

Third, consistent with the doctrine of prior appropriation's priority system, users with *Winters* rights are not required to share water with other users in water shortages.¹³¹ During a water shortage, non-reservation users with a late priority must stop using the water until the purposes of the reservation are met.¹³² Read together, these three points illustrate the elevated status the courts have afforded *Winters* rights and the priority they receive over other water users.

III. THE SCOPE OF *WINTERS* RIGHTS

The scope of *Winters* rights has been heavily litigated.¹³³ Courts are often called upon to quantify water rights on Indian reservations.¹³⁴ These courts quantify the amount of water necessary to fulfill the purpose of the reservation and no more.¹³⁵ Courts have utilized several methods to quantify water. First, the traditional practicably irrigable acreage standard allows tribes enough water to irrigate tribal land.¹³⁶ Second, preservation of instream flows allows tribes to maintain a certain quantity of water to stay in streams to protect fish populations.¹³⁷ Third, a new multifaceted approach quantifies water based on factors including history, culture, geography, economic base, and past water use.¹³⁸ No courts have explicitly extended the scope of *Winters* rights to water quality. Courts are divided on whether *Winters* rights extend to groundwater.¹³⁹

130. See *Arizona v. California*, 373 U.S. 546, 600–01 (1963); *United States v. Ahtanum Irrigation Dist.*, 236 F.2d 321, 326 (9th Cir. 1956).

131. See COHEN, *supra* note 24, at 578; Helton, *supra* note 108, at 990.

132. See COHEN, *supra* note 24, at 578; Helton, *supra* note 108, at 990.

133. See, e.g., *United States v. Adair*, 723 F.2d 1394, 1408–11 (9th Cir. 1956); *United States v. Anderson*, 591 F. Supp. 1, 4–9 (E.D. Wash. 1982), *rev'd in part, aff'd in part*, 736 F.2d 1358 (9th Cir. 1984); *Gila IV*, 35 P.3d 68, 73–81 (Ariz. 2001); *Gila III*, 989 P.2d 739, 742–50 (Ariz. 1999); *In re Gen. Adjudication of All Rights to Use Water in the Big Horn River Sys.*, 753 P.2d 76, 99–100 (Wyo. 1988) [hereinafter *Big Horn*].

134. See, e.g., *Arizona*, 373 U.S. at 600–01; *Big Horn*, 753 P.2d at 100–12.

135. See *Cappaert v. United States*, 426 U.S. 128, 141 (1976).

136. See *Arizona*, 373 U.S. at 600–01.

137. See *Adair*, 723 F.2d at 1417; *Anderson*, 591 F. Supp. at 5.

138. See *Gila IV*, 35 P.3d at 80.

139. Compare *Gila III*, 989 P.2d 739, 745 (Ariz.1999), with *Big Horn*, 753 P.2d 76, 100 (Wyo. 1988).

A. *Quantifying Water For Indian Reservations*

Courts quantify water according to the purpose of the reservation,¹⁴⁰ thereby limiting how much water a tribe receives.¹⁴¹ Once a court determines the purpose of a reservation, it is sometimes asked to quantify the water needed to fulfill that purpose.¹⁴² Courts have awarded water for consumptive uses like irrigation of agricultural land,¹⁴³ and for non-consumptive uses like maintaining instream flows¹⁴⁴ and water temperature.¹⁴⁵

Indians on reservations are limited to using only enough water necessary to fulfill the purpose of the reservation.¹⁴⁶ The U.S Supreme Court, in *Winters*, allowed the Indians water because without it the purposes of the reservation, providing a pastoral homeland and lifestyle, could not have been fulfilled.¹⁴⁷ Water that is used in excess of the right or water that is used for non-reservation purposes is subject to state water law.¹⁴⁸ Therefore, courts are faced with the essential task of determining the purpose of the reservation.¹⁴⁹ Some courts have applied a narrow interpretation to Indian reservations, finding very specific agricultural purposes.¹⁵⁰ Other courts have defined purpose broadly, finding several

140. See *Adair*, 723 F.2d at 1408–09; *Big Horn*, 753 P.2d at 99–101 (finding a sole agricultural purpose to the reservation and applying the practicably irrigable acreage standard to measure the water right).

141. See *United States v. New Mexico*, 438 U.S. 696, 702 (1978); see also *Cappaert v. United States*, 426 U.S. 128, 141 (1976). Another possible backstop to the implied right to water is the “sensitivity doctrine” which “requires reserved water rights to be quantified with sensitivity to the impact on state and private appropriators.” See Andrew C. Mergen & Sylvia F. Liu, *A Misplaced Sensitivity: The Draft Opinions In Wyoming v. United States*, 68 U. COLO. L. REV. 683, 702 (1997); see also NAT’L WATER COMM’N, *supra* note 76, at 481 (recommending that the United States provide water from alternative sources or compensate Indians when fulfilling the *Winters* right would impair non-Indian use).

142. See *Adair*, 723 F.2d at 1408–09; *Big Horn*, 753 P.2d at 99–101.

143. See *Big Horn*, 753 P.2d at 100–12.

144. See *Adair*, 723 F.2d at 1417–18.

145. See *United States v. Anderson*, 591 F. Supp. 1, 5–6 (E.D. Wash. 1982), *rev’d in part, aff’d in part*, 736 F.2d 1358 (9th Cir. 1984).

146. See *Cappaert v. United States*, 426 U.S. 128, 141 (1976); *Adair*, 723 F.2d at 1408–09.

147. See *Winters v. United States*, 207 U.S. 564, 576 (1908).

148. See *Colville Confederated Tribes v. Walton*, 647 F.2d 42, 46 (9th Cir. 1981).

149. See, e.g., *United States v. New Mexico*, 438 U.S. 696, 702 (1978); *Cappaert*, 426 U.S. at 141; *Gila IV*, 35 P.3d 68, 73–77 (Ariz. 2001); *Big Horn*, 753 P.2d 76, 94–99 (Wyo. 1988).

150. See, e.g., *Big Horn*, 753 P.2d at 94–98 (finding the primary purpose of the Wind River Indian Reservation was apparent from treaty language referring to agriculture).

primary purposes in Indian reservations.¹⁵¹ A few courts have broadly stated that the purpose of all reservations is simply to create a permanent homeland.¹⁵² Under this interpretation, purpose encompasses a wide array of water use on reservations and reserves water for uses that were not necessarily contemplated at the time of the creation of the reservation.¹⁵³

After courts determine the purpose of a reservation, they must often quantify the water needed to fulfill that purpose.¹⁵⁴ Courts have used several methods to quantify the water available under *Winters* rights.¹⁵⁵ The Practicably Irrigable Acreage (PIA) standard was introduced in *Arizona v. California*¹⁵⁶ and has been traditionally used to quantify water for reservations created with agricultural purposes.¹⁵⁷ In *Arizona*, the U.S. Supreme Court determined the water rights of the Colorado River and its tributaries.¹⁵⁸ The case was referred to a special master to recommend a decree because the litigation involved Arizona, California, Nevada, New Mexico, Utah, and several Indian tribes.¹⁵⁹ The special master introduced the PIA standard to quantify water rights on the Indian reservations.¹⁶⁰ The PIA standard allows tribes enough water to irrigate all of the acres on the reservation that are practical to irrigate.¹⁶¹ This

151. See *Adair*, 723 F.2d at 1409 (finding two primary purposes of the Indian reservation: fishing and agriculture); *Colville Confederated Tribes v. Walton*, 647 F.2d 42, 47–48 (9th Cir. 1981) (considering the historical importance of fishing and finding both a fishing and agricultural purpose); see also COHEN, *supra* note 24, at 584 (“[T]he relevant inquiry in ascertaining Indian reserved rights is not whether a particular use is primary or secondary but whether it is completely outside the scope of a reservation’s purposes.”).

152. See, e.g., *Adair*, 723 F.2d at 1410; *Colville Confederated Tribes*, 647 F.2d at 47–48.

153. See *Ranquist*, *supra* note 109, at 658; see also *United States v. Ahtanum Irrigation Dist.*, 236 F.2d 321, 327 (9th Cir. 1956) (stating that the right to use water “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”).

154. See, e.g., *Arizona v. California*, 373 U.S. 546, 595–601 (1963); *Big Horn*, 753 P.2d at 100–12; *United States v. Anderson*, 591 F. Supp. 1, 5–6 (E.D. Wash 1982), *rev’d in part, aff’d in part*, 736 F.2d 1358 (9th Cir. 1984).

155. Compare *Arizona*, 373 U.S. at 600–01 (using the practicable irrigable acreage standard), with *Anderson*, 591 F. Supp. at 5–6 (quantifying enough water to keep a creek’s temperature below 68 degrees).

156. 373 U.S. 546, 600–01 (1963).

157. See, e.g., *Big Horn*, 753 P.2d at 100–01; see also *Tarlock*, *supra* note 76 at 662–71 (discussing the use of the PIA standard in water rights settlements); *TARLOCK*, *supra* note 18, at 9–76 (stating that practicable irrigable acreage remains the presumptive standard).

158. See *Arizona*, 373 U.S. at 551.

159. *Id.* at 550–51.

160. *Id.* at 600.

161. *Id.*

type of analysis involves examining factors such as soil, slope, drainage, and economic feasibility to determine how much of the reservation land is irrigable.¹⁶² The state of Arizona rejected this standard, arguing that quantification should be based on the tribes' "reasonably foreseeable needs."¹⁶³ The Court, however, disagreed and concluded that the reasonably foreseeable needs approach would create too much uncertainty and adopted the PIA standard as the only fair way to quantify reserved water on reservations.¹⁶⁴ *Arizona* is still the only case in which the U.S. Supreme Court has quantified reserved water rights.¹⁶⁵

In *In re General Adjudication of All Rights To Use Water In the Gila River System and Source* [hereinafter *Gila IV*]¹⁶⁶ the Supreme Court of Arizona held that the U.S. Supreme Court did not intend for the PIA standard to be the sole method for quantification.¹⁶⁷ After determining that the purpose of all Indian reservations was to provide a homeland, the court concluded that the PIA standard was flawed.¹⁶⁸ The U.S. and several tribes argued that prior cases had determined that the PIA standard must be used. The court reasoned, however, that the PIA standard was advantageous for tribes with land conducive to agriculture but was unfair to tribes on mountainous land or land that could not be irrigated.¹⁶⁹ In addition, the court stated that the PIA standard forced tribes to become agricultural even though farming is sometimes risky.¹⁷⁰ Although the court did not completely disregard the PIA standard, stating "future irrigation projects are subject to a PIA-type analysis . . .,"¹⁷¹ it expressly required a multifaceted approach instead of a strict PIA approach.¹⁷² Under the multifaceted approach, the court called for consideration of the tribe's history, culture, geography, economic base, infrastructure, and past water use to determine the water necessary to fulfill the homeland purposes of the reservation.¹⁷³ The case was then

162. See GETCHES, *supra* note 44, at 833.

163. See *Arizona*, 373 U.S. at 600–01.

164. *Id.* at 601.

165. See Jennele Morris O'Hair, *The Federal Reserved Rights Doctrine and Practicably Irrigable Acreage: Past, Present, and Future*, 10 BYU J. PUB. L. 263, 273 (1996).

166. 35 P.3d 68, (Ariz. 2001).

167. See *id.* at 79.

168. See *id.* at 78–79.

169. *Id.*

170. *Id.*

171. *Id.* at 80.

172. *Id.* at 79.

173. *Id.* at 79–81.

remanded to the trial court to implement the multifaceted approach.¹⁷⁴ Thus, *Gila IV* broke new ground in holding that the U.S. Supreme Court's PIA standard was not appropriate for all Indian tribes.

B. A Strong Relationship Exists Between Water Quality and Quantity

Courts frequently imply that water rights on Indian reservations allow a certain quality of water as well as quantity, although no court has ever spoken to the issue directly.¹⁷⁵ For example, a federal district court in the District of Arizona found that quantity alone is insufficient when granting tribes water for consumptive uses in *United States v. Gila Valley Irrigation District*.¹⁷⁶ Although it never considered *Winters* rights, the court awarded a certain quality of water for Indian agricultural use.¹⁷⁷ The district court held that users upstream from a reservation had to cease using water in order to allow the tribe water of sufficient quality.¹⁷⁸ In *Gila Valley*, the court considered a 1935 Consent Decree that provided for a system of priorities, based on the law of prior appropriation.¹⁷⁹ The Decree provided the Apache tribe with 6,000 acre feet per year¹⁸⁰ and gave them a right to the "natural flow" of the stream.¹⁸¹ Because of farming and groundwater pumping in the upper valleys, the tribe's water was becoming concentrated with salt because the flow rate was diminished.¹⁸² This high salt concentration forced the Apache tribe to stop growing some salt-sensitive crops.¹⁸³ The *Gila Valley* court held that injunctive relief was necessary to restore the water to a sufficient quality to sustain the salt-sensitive crops that were grown by the tribe at the time of the Decree.¹⁸⁴

Courts recognize that where a primary purpose of a reservation is fishing, the *Winters* Doctrine protects reserved water rights for non-

174. See *id.* at 81.

175. For discussion on extending *Winters* to quality, see Margaret Seelye Treuer, *An Indian Right to Water Undiminished in Quality*, 7 *HAMLIN L. REV.* 347, 347-68 (1984); Robert S. Pelcyger, *The Winters Doctrine and the Greening of the Reservations*, 4 *J. CONTEMP. L.* 19, 34-35 (1977).

176. 920 F. Supp. 1444, 1448 (D. Ariz. 1996), *aff'd*, 117 F.3d 425 (9th Cir. 1997).

177. *Id.* at 1454-55.

178. See *id.* at 1448.

179. See *United States v. Gila Valley Irrigation Dist.*, 31 F.3d 1428, 1430 (9th Cir. 1994).

180. *Id.* at 1431.

181. See *Gila Valley*, 920 F. Supp. at 1448.

182. *Id.* at 1450-51.

183. *Id.* at 1454.

184. *Id.* at 1454-55.

consumptive uses, such as maintenance of certain instream flows of streams and rivers containing fish.¹⁸⁵ In *United States v. Adair*,¹⁸⁶ the Ninth Circuit held that because the Klamath tribe's right to fish was preserved in the treaty establishing the reservation, water should be reserved to fulfill this fishing purpose.¹⁸⁷ The Ninth Circuit held that the fishing right required maintenance of a natural stream flow to ensure that enough water flowed through the areas used by the tribe to fish.¹⁸⁸ According to the Ninth Circuit, this right was non-consumptive in nature and prevented other water users from depleting the stream waters below a minimum level.¹⁸⁹

At least one court has recognized that *Winters* protects the temperature of streams.¹⁹⁰ In *United States v. Anderson*,¹⁹¹ a federal district court in the Eastern District of Washington held that *Winters* rights reserve water to maintain a certain instream flow *and* a certain temperature.¹⁹² The *Anderson* court determined that one of the purposes of the Spokane Indian Reservation was to preserve the tribe's access to fishing.¹⁹³ In order to preserve this right, the temperature of the Lower Chamokane Creek had to be maintained at sixty-eight degrees because at any higher temperature, fish in the creek would not thrive.¹⁹⁴ The temperature of the Creek related directly to the quantity of water flowing into the creek.¹⁹⁵ In sum, the *Anderson* court upheld a special master's recommendation on a flow sufficient to maintain a sixty-eight degree temperature.¹⁹⁶

185. See *United States v. Adair*, 723 F.2d 1394, 1417 (9th Cir. 1984); see also *Joint Bd. of Control of the Flathead, Mission and Jocko Irrigation Dist. v. United States*, 832 F.2d 1127, 1132 (9th Cir. 1987) (finding that treaty fishing rights allowed tribe to maintain instream flows); *Colville Confederated Tribes v. Walton*, 647 F.2d 42, 48 (9th Cir. 1981) (holding that an implied reservation of water existed to maintain replacement fishing grounds); *Muckleshoot Indian Tribe v. Trans-Can. Enters., Ltd.*, 713 F.2d 455, 458 (9th Cir. 1983) (holding that the grant of an Indian reservation included the bed of the river and its waters).

186. 723 F.2d 1394 (9th Cir. 1984).

187. See *Adair*, 723 F.2d at 1410; see also *Colville Confederated Tribes*, 647 F.2d at 47-48 (finding a fishing purpose behind a reservation established by a mere one-paragraph executive order stating only that the land would be reserved "for said Indians").

188. See *Adair*, 723 F.2d at 1411, 1418.

189. *Id.* at 1418.

190. See *United States v. Anderson*, 591 F. Supp. 1, 5-6 (E.D. Wash. 1982), *rev'd in part, aff'd in part*, 736 F.2d 1358 (9th Cir. 1984).

191. 591 F. Supp. 1 (E.D. Wash. 1982), *rev'd in part, aff'd in part*, 736 F.2d 1358 (9th Cir. 1984)

192. See *id.* at 5.

193. *Id.* at 4-5.

194. See *id.* at 5.

195. See *id.*

196. See *id.* at 5-6.

A strong link exists between water quantity and water quality.¹⁹⁷ Instream flow is directly related to water quality because without a certain quantity of water to dilute pollutants, rivers will become too contaminated to sustain a fish population.¹⁹⁸ A minimum instream flow of water is also imperative because reductions in flow result in increased temperatures and poor water quality that impair fish survival and reproduction.¹⁹⁹ Many times, higher quantities of water in a stream equal a better quality of water.²⁰⁰

C. Courts are Divided on Whether *Winters* Applies to Groundwater

The U.S. Supreme Court has never directly considered whether *Winters* applies to groundwater and lower courts are divided on the issue. Although the Ninth Circuit held that reserved water rights include groundwater in *United States v. Cappaert*,²⁰¹ the U.S. Supreme Court did not reach this conclusion on appeal because it determined that the water at issue was surface water, not groundwater.²⁰² The Supreme Court of Wyoming, when confronted with this issue, refused to extend *Winters* to groundwater because no court had ever done so.²⁰³ In contrast, the Supreme Court of Arizona held that *Winters* extends to groundwater because of the policies behind *Winters*.²⁰⁴

I. United States v. Cappaert

In *United States v. Cappaert*,²⁰⁵ the Ninth Circuit extended *Winters* to groundwater.²⁰⁶ Although the U.S. Supreme Court did not reach this

197. See PUD No. 1 of Jefferson County v. Wash. Dept. of Ecology, 511 U.S. 700, 719 (1994) (recognizing that water quality is closely related to water quantity); COHEN, *supra* note 24, at 587; NAT'L WATER COMM'N, *supra* note 76, at 4; TARLOCK, *supra* note 18, at 2-8 (recognizing that if water quality is to be improved, water use must be limited).

198. See *supra* note PUD No. 1 of Jefferson County, 511 U.S. at 719, NAT'L WATER COMM'N, *supra* note 76, at 4; TARLOCK, *supra* note 18, at 2-8.

199. Telephone Interview with Greg Johnston, Certified Fisheries Professional (July 20, 2002); see also Anderson, 591 F. Supp. at 5; COHEN, *supra* note 24, at 587.

200. See PUD No. 1 of Jefferson County, 511 U.S. at 719, NAT'L WATER COMM'N, *supra* note 76, at 4; TARLOCK, *supra* note 18, at 2-8.

201. See *United States v. Cappaert*, 508 F.2d 313, 317 (9th Cir. 1974).

202. See *United States v. Cappaert*, 426 U.S. 128, 142 (1976).

203. See *Big Horn*, 753 P.2d 76, 99-100 (Wyo. 1988).

204. See *Gila III*, 989 P.2d 739, 747 (Ariz. 1999).

205. 508 F.2d 313 (9th Cir. 1974).

206. *Id.* at 317.

issue on appeal, the Ninth Circuit's reasoning continues to be persuasive.²⁰⁷ *Cappaert* involved a non-Indian federal reservation called Devil's Hole.²⁰⁸ The reservation housed a cavern containing a pool with a rare species of desert fish.²⁰⁹ The case arose when ranch owners began pumping groundwater from an underground aquifer that was also the source of water for the unique Devil's Hole pool.²¹⁰ The United States sued to enjoin the ranch owners from pumping in several locations because it harmed the survival of the rare fish.²¹¹ The United States argued that the 1952 proclamation reserving the pool from public domain contained an implied right to enough groundwater to assure the preservation of the rare fish.²¹² The defendant ranch owners denied that Devil's Hole reserved any water rights for the United States and asserted that *Winters* rights did not apply to groundwater.²¹³

The Ninth Circuit disagreed and explicitly extended the *Winters* Doctrine to groundwater.²¹⁴ The court held that it made no difference where the waters were located.²¹⁵ The court reasoned that the purpose of the federal reservation was to assure that the pool would not suffer changes in its condition.²¹⁶ Because the pool and the rare fish were located underground, the Ninth Circuit determined that in order to protect the reservation's purpose, it had to extend *Winters* to

207. See, e.g., E. Brendan Shane, Note, *Water Rights and Gila River III: The Winters Doctrine Goes Underground*, 4 U. DENV. WATER L. REV. 397, 403–04 (2001).

208. See *Cappaert*, 508 F.2d at 313. The *Winters* Doctrine arose in an Indian reservation context but applies to all federally reserved lands. The federal government has reserved land for many purposes such as for Indian reservations, military reservations, or to establish national forests, parks, or monuments. See, e.g., *United States v. New Mexico*, 438 U.S. 696, 718 (1978) (holding that a reserved right existed to preserve timber in national forest); *United States v. Dist. Court for Eagle County*, 401 U.S. 520, 522–23 (1971) (holding that the federal government's authority to reserve lands extended to any federal enclave); *Arizona v. California*, 373 U.S. 546, 600–01 (1963) (holding that the federal government impliedly reserved enough water to fulfill the purposes of the Indian reservations and non-Indian federal land in the area); *Fed. Power Comm'n v. Oregon*, 349 U.S. 435, 448 (1955) (implying that federal reserved lands are not subject to state water law).

209. *Cappaert*, 508 F.2d at 313–16.

210. *Id.* at 315–16.

211. *Cappaert v. United States*, 426 U.S. 128, 134 (1976).

212. See *Cappaert*, 508 F.2d at 318.

213. *Id.* at 317.

214. See *id.*

215. See *id.* (citing *Tweedy v. Tex. Co.*, 286 F. Supp. 383, 385 (D. Mont. 1968)).

216. *Id.* at 318.

groundwater.²¹⁷ The Ninth Circuit reasoned that the purpose of the reservation was more important than the location of the water source.²¹⁸

The Ninth Circuit rejected the defendants' argument that under Nevada law a landowner has dominion over all water beneath his or her property.²¹⁹ The *Cappaert* court noted that Nevada groundwater rights were governed by the prior appropriation doctrine until a 1913 Nevada statute declared that the water belonged to the public and required groundwater permits.²²⁰ The defendants did not begin using the groundwater until 1968.²²¹ Thus, the Ninth Circuit held that they had not established a water right under prior appropriation before the Nevada statute came into effect.²²² Further, the court dismissed the state of Nevada's argument that state water laws bind the federal government with respect to federal reservations.²²³ The court held that state water law does not apply to federal reservations and that an implied reserved water right existed to sustain the rare fish.²²⁴ The Ninth Circuit remanded the case with instructions to act to preserve the pool's water level and protect the rare fish.²²⁵

On appeal the U. S. Supreme Court avoided ruling on the Ninth Circuit's conclusion that *Winters* applies to groundwater by holding that the pool was surface water, not groundwater.²²⁶ After examining the Proclamation establishing the reservation, the Supreme Court reasoned that one of the purposes of the reservation was to preserve the scientific interest of the pool.²²⁷ Because the surface water and groundwater are "physically interrelated as integral parts of the hydrologic cycle,"²²⁸ the Court determined that the ranch owners' pumping threatened the fish, and thereby prevented the reservation from fulfilling its scientific

217. *See id.*

218. *See id.*

219. *See id.*

220. *Id.* at 319.

221. *Id.*

222. *Id.*

223. *See id.* at 320.

224. *See id.*

225. *See id.* at 322.

226. *United States v. Cappaert*, 426 U.S. 128, 142 (1976). Tribes can also claim groundwater based on ownership of the overlying land. *See TARLOCK*, *supra* note 18, at 9-81. This claim is beyond the scope of this Comment.

227. *See Cappaert*, 426 U.S. at 140-41.

228. *Id.* at 142 (internal quotations omitted).

purpose.²²⁹ The Court stated that, “since the implied-reservation-of-water-rights doctrine is based on the necessity of water for the purpose of the federal reservation, we hold that the United States can protect its water from subsequent diversion, whether the diversion is of surface or ground water.”²³⁰ The Supreme Court recognized that when diversions from groundwater hinder the purpose of the reservation, pumping can be enjoined.²³¹ Although the Supreme Court did not consider the Ninth Circuit’s conclusion, at least one court has found the Supreme Court’s rationale to be persuasive enough to include groundwater in *Winters* rights.²³²

2. *The Supreme Court of Wyoming Has Refused to Extend Winters to Groundwater*

In *In re the General Adjudication of All Rights to Use Water in the Big Horn River System* [hereinafter *Big Horn*], the Supreme Court of Wyoming considered an action to determine all Indian water rights in the Big Horn River drainage basin in western Wyoming.²³³ The basin encompassed the Wind River Indian Reservation as well as parts of Yellowstone National Park and various other national forests and parks.²³⁴ The case arose from a special master’s general adjudication that had been divided into three phases, including Indian reserved water rights, non-Indian reserved water rights, and state water rights.²³⁵ On appeal, the *Big Horn* court examined the special master’s decision regarding the Indian reserved water rights.²³⁶ The main issues on appeal were how to quantify the water and for what purposes.²³⁷ The United States and the tribes also claimed a *Winters* right to the groundwater,

229. *See id.* at 142–43.

230. *Id.* at 143; *see also* *New Mexico v. Aamodt*, 618 F. Supp. 993, 1010 (D.N.M. 1985) (stating that the surface water and groundwater of the stream system at issue were interrelated and therefore the Pueblos had a prior right to use groundwater as well); *Colville Confederated Tribes v. Walton*, 460 F. Supp. 1320, 1325 (E.D. Wash. 1978), *aff’d in part, rev’d in part*, 647 F.2d 42 (9th Cir. 1981) (stating that *Winters* rights “extend to ground water as well as surface water”).

231. *See Cappaert*, 426 U.S. at 143.

232. *See Walton*, 460 F. Supp. at 1326.

233. *See Big Horn*, 753 P.2d 76, 83 (Wyo. 1988).

234. *Id.* at 83.

235. *See Peg Rogers, Note, In re Rights to Use Water in the Big Horn River*, 30 NAT. RESOURCES J. 439, 442 (1990).

236. *Id.*

237. *See Big Horn*, 753 P.2d at 88–112.

even though surface water from the Big Horn River System was available to the tribes.²³⁸

Regarding groundwater, the Wyoming Supreme Court stated that because groundwater and surface water are often interconnected, “[t]he logic which supports a reservation of surface water to fulfill the purpose of the reservation also supports reservation of groundwater.”²³⁹ However, the *Big Horn* court refused to extend *Winters* to groundwater because “not a single case applying the reserved water doctrine to groundwater” had been cited.²⁴⁰ Because of the lack of strong precedent, the court refused to break new ground.²⁴¹ One commentator has suggested that the court may have refused to extend *Winters* because of the possible implications for state law that would result.²⁴² Changing the established state law would impact many of the more than twenty-thousand water users who were affected by the *Big Horn* adjudications.²⁴³

3. *The Supreme Court of Arizona Extended Winters to Groundwater*

The Supreme Court of Arizona extended the *Winters* Doctrine to groundwater in *In re the General Adjudication of All Rights to Use Water In the Gila River System and Source* [hereinafter *Gila III*].²⁴⁴ The court conducted a general adjudication to determine the rights of all water claimants asserting rights to use water from the Gila River system.²⁴⁵ Specifically, the court considered whether federal reserved rights include groundwater.²⁴⁶ The petitioners argued that the court should “decline to extend the doctrine to groundwater out of deference to state water law” and that deferring to state law would not defeat federal water rights because Arizona state law allowed overlying landowners an equal right to pump as much groundwater as they could put to reasonable use.²⁴⁷

238. See *id.* at 99–107 (adjudicating the right to groundwater and quantifying the amount of surface water for the Wind River Indian Reservation).

239. *Id.* at 99.

240. *Id.*

241. See *id.*

242. See Shane, *supra* note 207, at 403.

243. See Rogers, *supra* note 235, at 434.

244. See *Gila III*, 989 P.2d 739, 745 (Ariz.1999).

245. See *id.* at 742.

246. See *id.*

247. See *id.* at 747–48.

Unlike the *Big Horn* court, the *Gila III* court found guidance in *Winters* and *Cappaert*.²⁴⁸ Referring to *Big Horn*, the Supreme Court of Arizona stated the fact “[t]hat no previous court has come to grips with an issue does not relieve a present court . . . of the obligation to do so.”²⁴⁹ The Arizona court found the reasoning in *Winters*, that arid reservation land is valueless without water, to be persuasive and held that it supported an implied right to groundwater.²⁵⁰ Recognizing that some reservations do not have surface water to sustain life, the court insisted that certain reservations must be able to pump groundwater in order to make their arid land workable.²⁵¹ The Supreme Court of Arizona reasoned that if *Winters* reserved water to use for the purpose of the reservation, and groundwater was the only water source, then *Winters* must apply to groundwater.²⁵² That notion, combined with the acknowledgment from *Cappaert* of the interrelated nature of groundwater and surface water, led the court to determine “that if, the United States implicitly intended, when it established reservations, to reserve sufficient unappropriated water to meet the reservations’ needs, it must have intended that reservation water to come from whatever particular sources each reservation had at hand.”²⁵³ Consequently, the Supreme Court of Arizona held that groundwater can be an implied reserved water right under *Winters*.

In response to the petitioners’ arguments that the Supreme Court of Arizona should defer to state water law, the *Gila III* court concluded that it could not defer to state law when doing so would defeat federal water rights.²⁵⁴ Arizona state law interfered with the federal water rights because under the Arizona system, groundwater would have eventually become depleted.²⁵⁵ The state had consumed “more groundwater than nature [could] replenish.”²⁵⁶ The Supreme Court of Arizona limited its holding, however, by stating that the reserved right to groundwater only exists “where other waters are inadequate to accomplish the purpose of a reservation.”²⁵⁷ Thus, in *Gila III* the Supreme Court of Arizona stated

248. *See id.* at 746.

249. *Id.* at 745.

250. *See id.* at 746.

251. *Id.*

252. *See id.* at 747.

253. *Id.*

254. *Id.* at 747–48.

255. *See id.* at 748.

256. *Id.*

257. *Id.*

that the adequacy of the other waters and the purpose of a reservation must be determined on a case-by-case basis.²⁵⁸

In sum, despite the Supreme Court of Wyoming's refusal to include groundwater in the scope of *Winters* rights in *Big Horn*, the Supreme Court of Arizona has in *Gila III* expressly extended *Winters* to groundwater. The *Gila III* court's rationale is consistent with the U.S. Supreme Court's holding in *Cappaert* that groundwater diversions can be enjoined if the purpose of the reservation is compromised. Both courts determined that the purpose of the reservation is more important than the location of the water source.

IV. *WINTERS* RESERVES WATER OF A QUANTITY AND QUALITY SUFFICIENT TO FULFILL THE PURPOSES OF THE RESERVATION, INCLUDING GROUNDWATER FOR HATCHERIES WHEN SURFACE WATER IS INADEQUATE

The reserved water rights doctrine should mandate a quality of water sufficient to support the purposes of a reservation.²⁵⁹ The holding in *Winters*, that tribes are allowed water sufficient to fulfill the purposes of the reservation,²⁶⁰ along with its rationale, and the Canons of Construction,²⁶¹ support this conclusion. In addition, courts have already implied a right to water quality in cases granting water for instream flows and water temperature.²⁶² When surface water is inadequate due to quality problems or the expense of obtaining such supplies, groundwater should be awarded to tribes because reservation purposes cannot be fulfilled without water from an underground source.²⁶³

Applying these general premises to the case of the Lummi Nation leads to the conclusion that groundwater use should be awarded to the Lummi. Their homeland and fishing purposes are threatened because the surface water available to them is of inadequate quality to maintain the purposes of the reservation²⁶⁴ and the groundwater quality is threatened

258. *Id.*

259. See Treuer, *supra* note 175, at 368.

260. See *Cappaert v. United States*, 426 U.S. 128, 141 (1976); *Winters v. United States*, 207 U.S. 564, 576–77 (1908).

261. See *Winters*, 207 U.S. at 576–77.

262. See *United States v. Anderson*, 591 F. Supp. 1, 5 (E.D. Wash. 1982), *rev'd in part, aff'd in part*, 736 F.2d 1358 (9th Cir. 1984); *United States v. Adair*, 723 F.2d 1394, 1411 (9th Cir. 1956).

263. See *Gila III*, 989 P.2d 739, 745 (Ariz. 1999).

264. *United States' Complaint, United States v. Washington*, Western District of Washington, 8–9 (Jan. 19, 2001) (No. C01-0047Z).

by overuse.²⁶⁵ Therefore, the Lummi should be able to enjoin users that threaten the quality of the groundwater they receive.

A. *Winters Rights Should Entitle Fishing Tribes to Water of a Quality Sufficient to Fulfill the Fishing Purpose of the Reservation*

Winters should extend to water quality for two reasons. First, the rule and rationale in *Winters* require courts to award water to Indian tribes in order to fulfill the purposes of a reservation.²⁶⁶ Second, courts have established a strong relationship between water quantity and quality.²⁶⁷

1. *Winters's Holding and Rationale Support Extending Reserved Water Rights to Water Quality*

Water quality is required in order to comply with the holding in *Winters*. In *Winters*, the U.S. Supreme Court guaranteed a tribe's right to water sufficient to maintain the purposes of the reservation.²⁶⁸ The Court contemplated the fact that arid Indian lands are uninhabitable without water.²⁶⁹ The purpose of reserving these lands was to allow tribes the right to make these lands prosperous.²⁷⁰ This could not be done without water, nor could it be done with poor water. Thus, courts should grant tribes an implied right to water of sufficient quality to fulfill the purposes of their reservations under *Winters*.

Without a right to water quality, *Winters* rights would be meaningless. The goal in *Winters* was to allow tribes water to make their land valuable and fulfill the purposes of their reservations.²⁷¹ Not upholding a quality of water frustrates this goal because the purposes of reservations, whether they be homeland, fishing, or agricultural, cannot be fulfilled with polluted or otherwise unsatisfactory water.²⁷² Crops do not grow, fish do not swim, and people do not survive without water of a minimum quality.²⁷³ If tribes need water of a sufficient quality to support the

265. *Id.*

266. *See supra* note 101 and accompanying text.

267. *See supra* notes 175–200 and accompanying text.

268. *See Winters v. United States*, 207 U.S. 564, 576–77 (1908); *Cappaert v. United States*, 426 U.S. 128, 141 (1976).

269. *See Winters*, 207 U.S. at 576.

270. *See id.*

271. *See id.*

272. *See Treuer, supra* note 175, at 368.

273. *See, e.g., id.* at 365–67.

purpose of the reservation, *Winters* requires an implied right to water quality.²⁷⁴ Thus, denying tribal injunctions against activities that pollute tribal waters violates the reserved water rights theory because an inadequate quality of water prevents the purposes of the reservation from being fulfilled.

The right to quality water should trump non-Indian users' water rights because of the priority attached to federally reserved water rights under the prior appropriation doctrine. The priority date for *Winters* rights is the date of the reservation's establishment, and sometimes time immemorial.²⁷⁵ Because of this early priority date on reservations, Indian water users almost always trump non-Indian water diverters.²⁷⁶ In water shortages, non-Indians must cease using the water.²⁷⁷ Many times, decreased quantities of water result in poor quality water.²⁷⁸ Thus, when quality is poor and cannot be used to fulfill the purpose of a reservation, there is in fact a water shortage. Therefore, tribes should be able to enjoin non-Indian diverters when water quality is poor.

Winters relied on the Canons of Construction, which require courts to resolve ambiguities in favor of the Indians and look at the treaty from the Indians' standpoint.²⁷⁹ The dispute in *Winters* arose because no mention was made regarding water in the agreement establishing the reservation.²⁸⁰ This ambiguity permitted two possible inferences: (1) by signing the agreement, the Indians gave up their water rights, or (2) water rights were implied in the agreement because the purpose of the reservation, to become civilized and pastoral, could not be met without water rights.²⁸¹ This ambiguity was resolved in favor of the Indians and the latter inference was accepted.²⁸² Looking at the dilemma from the Indians' standpoint, the *Winters* Court found that, when agreeing to give up land and live on a reservation pursuant to a treaty, the Indians would not have given up the waters that made the reservation valuable and adequate.²⁸³ When considering water quality, courts must look at treaties

274. See Treuer, *supra* note 175, at 365–68.

275. See *United States v. Adair*, 723 F.2d 1394, 1412–15 (1984).

276. See *supra* note 122.

277. See TARLOCK, *supra* note 18, at 5-49.

278. See *supra* notes 197–200 and accompanying text.

279. See *Winters v. United States*, 207 U.S. 564, 576–77; Wilkinson, *supra* note 44, at 608–19.

280. See *Winters*, 207 U.S. at 576–77.

281. See *id.*

282. *Id.*

283. *Id.*

from the standpoint of the Indians and resolve all ambiguities in the Indians' favor.²⁸⁴ Courts should conclude that because Indians would not have given up the means to make their land valuable, and water of poor quality makes their land valueless, Indians would not have interpreted the establishment of their reservation to imply that polluted water would be satisfactory even though their land remained valueless and its possibilities limited.

2. *Courts Have Preserved Water Quality Through Reservation of Water Quantity*

Courts have already acted to preserve water quality by making changes in water quantity.²⁸⁵ By restricting withdrawals from junior users, the Ninth Circuit in *Adair* has reserved minimum instream flows where fishing is a primary purpose, thereby preserving water quality for non-consumptive uses.²⁸⁶ In addition, a federal district court in the Eastern District of Washington in *Anderson* held that the *Winters* right extends to maintain a certain instream flow *and* a certain temperature to preserve a fishing purpose.²⁸⁷ Although these courts did not expressly extend *Winters* to imply a certain water quality, applying their rationale and results suggests that *Winters* does reserve quality as well as quantity. Fish need a certain quantity of water in the streams so that pollutants are diluted and temperatures are minimized.²⁸⁸ Without a certain water quantity, the water is of an inadequate quality to support fish life.²⁸⁹

Courts should account for water quality when determining quantity because tribes need a sufficient quality to accomplish the fishing purposes of their reservations. Courts must determine the amount of water necessary to sustain fishing and if water quality is poor, then they must reserve more water instream flows until fish can thrive.²⁹⁰ Instream flow is directly related to water quality because without a certain flow,

284. See *supra* notes 93–101 and accompanying text.

285. See *United States v. Adair*, 723 F.2d 1394, 1417–18 (1984); *United States v. Anderson*, 591 F. Supp. 1, 5 (E.D. Wash. 1982), *rev'd in part, aff'd in part*, 736 F.2d 1358 (9th Cir. 1984).

286. See *Adair*, 723 F.2d at 1417–18.

287. See *Anderson*, 591 F. Supp. at 5.

288. See *PUD No. 1 of Jefferson County v. Wash. Dept. of Ecology*, 511 U.S. 700, 719 (1994); *NAT'L WATER COMM'N*, *supra* note 76, at 4; *TARLOCK*, *supra* note 18, at 2–8.

289. See *PUD No. 1 of Jefferson County*, 511 U.S. at 719; *NAT'L WATER COMM'N*, *supra* note 76, at 4; *TARLOCK*, *supra* note 18, at 2–8.

290. See *supra* notes 185–200 and accompanying text.

rivers will become too contaminated or too warm to sustain a fish population.²⁹¹

Further, quality water should be guaranteed for consumptive uses as well. For example, under the PIA standard, courts quantify enough water to irrigate the irrigable acreage.²⁹² In adjudicating water rights, courts should reduce the amount of water allocated to non-Indian users if the quality of water is insufficient to allow crops to grow on the Indian reservations. *Gila Valley* best illustrates this situation.²⁹³ Although the case dealt with a Consent Decree instead of *Winters* rights, it enjoined non-Indian users in order to restore the water to a quality sufficient to sustain the salt-sensitive crops that were grown by the tribe at the time of the Decree.²⁹⁴ Thus, water quality was implied when a certain water quantity was granted under the Consent Decree.

In sum, many factors support the extension of the *Winters* Doctrine to water quality for fisheries, most importantly, the holding of *Winters*, that tribes are allowed water sufficient to fulfill the purposes of the reservation. In addition, the Canons of Construction for Indian treaties, relied on in *Winters*, apply to situations involving water quality. Moreover, several courts have implied that water quality accompanies water rights by holding that tribes can maintain minimum instream flows and certain temperatures of rivers in order to dilute pollution and ensure fish survival. Consequently, courts should extend the *Winters* doctrine to include water quality.

B. Winters Rights Extend to Groundwater When Surface Water is Inadequate to Fulfill the Purposes of the Reservation

Washington, and other states with fishing tribes, should apply the *Winters* Doctrine to groundwater for several reasons. First, the U.S. Supreme Court acknowledged the connection between surface water and groundwater in *Cappaert v. United States*.²⁹⁵ Second, the only opinion holding that there is no reserved right to groundwater, *Big Horn*, is not

291. See *supra* notes 93–101 and accompanying text.

292. See *Arizona v. California*, 373 U.S. 546, 600 (1963).

293. See *supra* notes 179–184 and accompanying text.

294. See *United States v. Gila Valley Irrigation Dist.*, 920 F. Supp. 1444, 1454–55 (D. Ariz. 1996).

295. 426 U.S. 128, 143 (1976).

persuasive or binding.²⁹⁶ Third, some reservation purposes cannot be met without groundwater.²⁹⁷

In *Cappaert*, the U.S. Supreme Court held that “the United States can protect its water from subsequent diversion, whether the diversion is of surface or ground water.”²⁹⁸ The Court acknowledged the strong connection between groundwater and surface water.²⁹⁹ When one source is overused, the other source suffers.³⁰⁰ Courts should not differentiate between depleted groundwater or depleted surface water when adjudicating reserved water rights issues because groundwater and surface water are so interconnected.

Besides the favorable language from the U.S. Supreme Court, *Winters* rights should include groundwater because the only court to refuse to extend *Winters* rights to groundwater is not persuasive. In *Big Horn*, the Supreme Court of Wyoming declined to extend *Winters* rights to groundwater because the parties had not cited a case where a court had included groundwater in *Winters* rights.³⁰¹ *Big Horn*'s rationale is no longer accurate since the *Gila III* court expressly extended *Winters* to groundwater.³⁰² Further, a court should not shirk its responsibility to analyze and rule on legal issues purely because no other court has done so.³⁰³

In addition, *Big Horn* can be distinguished from cases involving other fishing tribes with the need for quality groundwater. Adequate surface water was available to the agricultural reservation in *Big Horn*.³⁰⁴ Although the court did not indicate that availability of surface water was a reason for refusing to extend *Winters* to groundwater, the court awarded ample surface water to the tribes in *Big Horn*.³⁰⁵ This shows that perhaps the purpose of the reservation in *Big Horn* was already being fulfilled with surface water and groundwater was not necessary. Thus, *Big Horn* is not persuasive because the reasoning is flawed and the facts

296. See *Big Horn*, 753 P.2d 76, 99 (Wyo. 1988).

297. See *Gila III*, 989 P.2d 739, 746 (Ariz. 1999); *Cappaert v. United States*, 508 F.2d 313, 317 (9th Cir. 1974).

298. *Cappaert*, 426 U.S. at 143.

299. See *id.* at 142.

300. See *id.*

301. *Big Horn*, 753 P.2d at 99.

302. See *Gila III*, 989 P.2d at 747.

303. See *id.* at 745.

304. See *Big Horn*, 753 P.2d at 99–107.

305. See *id.*

are distinguishable from cases involving tribes depending on groundwater for their only adequate water source.

The third reason to include groundwater in *Winters* rights is the importance courts have placed on the purpose of a reservation. If surface water does not satisfy the purposes of a reservation, groundwater must be reserved if it is available.³⁰⁶ Using the Supreme Court's decisions in *Winters* and *Cappaert* as "guidepost[s]," the *Gila III* court asserted that it was illogical that *Winters* would not apply to reservations that lacked streams and instead depended on groundwater.³⁰⁷ In *Winters*, the Court reserved an implied water right without limiting where the water was found.³⁰⁸ Thus, as the *Gila III* court articulated, "[t]he significant question . . . is not whether the water runs above or below the ground but whether it is necessary to accomplish the purpose of the reservation."³⁰⁹ Some tribes have only one natural source of freshwater to use for drinking, hatcheries, and other homeland purposes.³¹⁰ It makes little sense to allow a reserved right to tribes whose land runs appurtenant to adequate surface water, but not to tribes whose land lies above a groundwater source. An implied water right is an implied right to any water necessary to fulfill the purposes of the reservation, no matter the source.

The Supreme Court of Arizona's holding is buttressed by the Ninth Circuit's declaration in *Cappaert* that, "the United States may reserve not only surface water, but also underground water."³¹¹ The Ninth Circuit found that it made no difference whether the water was found on the surface of the land or under it.³¹² Although the holding was never affirmed by the Supreme Court on review, the Ninth Circuit's view is persuasive because *Winters* guarantees water sufficient to fulfill the purposes of the reservation and tribes without surface water must sometimes use groundwater to fulfill these purposes. Because groundwater and surface water are intricately related and both are sometimes required in order to fulfill purposes of reservations, *Winters* rights should include groundwater.

306. See *Gila III*, 989 P.2d at 747.

307. See *id.* at 746–47.

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

309. See *Gila III*, 989 P.2d at 747.

310. See United States' Complaint, *United States v. Washington*, Western District of Washington, 8–9 (Jan. 19, 2001) (No. C01-0047Z).

311. See *Cappaert v. United States*, 508 F.2d 313, 317 (9th Cir. 1974).

312. See *id.* (citing *Tweedy v. Tex. Co.*, 286 F. Supp. 383, 385 (D. Mont. 1968)).

C. *The Lummi Nation is Entitled to Enjoin Other Users to Protect the Quality of Their Reserved Water Rights in Groundwater*

The Winters Doctrine should be extended to allow the Lummi to protect the quality of their groundwater. The Lummi reservation has a fishing purpose that must be fulfilled.³¹³ Because surface water is inadequate to fulfill some fishing activities, like hatcheries, the Lummi need to use the groundwater underlying the reservation.³¹⁴ However, this groundwater is becoming contaminated by overuse.³¹⁵ Under Winters, the Lummi should be able to enjoin non-Indian groundwater pumpers until the groundwater is of a sufficient quality to maintain the fish hatcheries.

The Lummi Nation is entitled to the quantity and quality of water to fulfill the fishing purposes of its reservation. Fishing has historically been and still is the primary way of life for the Lummi.³¹⁶ The 1855 Treaty of Point Elliott,³¹⁷ the agreement establishing the Lummi reservation, confirmed the importance of fishing in Article V allowing Lummi to take fish in usual and accustomed places.³¹⁸ This provision demonstrates that the U.S. government meant to preserve a fishing way of life. Like the tribe in Adair, the Lummi Nation deserves water rights sufficient to satisfy this fishing purpose,³¹⁹ including preserving instream flows and maintaining fish hatcheries.³²⁰

Because the Lummi's fish hatcheries cannot be maintained with the polluted surface water available to the tribe,³²¹ the Lummi should be entitled to clean groundwater for hatcheries. The tribe is entitled to groundwater because surface water is inadequate to fulfill the purpose of

313. See *infra* notes 316–320 and accompanying text.

314. See *supra* notes 5–7 and accompanying text.

315. See United States' Complaint, *United States v. Washington*, Western District of Washington, 8–9 (Jan. 19, 2001) (No. C01-0047Z).

316. See Don Newman Taylor, *Changes In The Economy Of the Lummi Indians of Northwest Washington* 16 (1969) (unpublished M.A. thesis, Western Washington University) (on file with author); Kurt Russo, *The Lummi Indian Tribe and Life with the Salmon*, at http://www.sustainable.org/casestudies/washington/WA_af_Lummi.html (last modified Sept. 18, 1996).

317. 12 Stat. 927 (January 22, 1855).

318. *Id.* at art. V.

319. See *United States v. Adair*, 723 F.2d 1394, 1417–18 (9th Cir. 1984).

320. See *Colville Confederated Tribes v. Walton*, 647 F.2d 42, 48 (9th Cir. 1981) (holding that fishing purpose includes replacement fisheries). The result would possibly be the same if the court used the legal analysis set forth in *Gila IV* after finding a homeland purpose of the reservation. However, that analysis is beyond the scope of this Comment.

321. See United States' Complaint, *United States v. Washington*, Western District of Washington, 8–9 (Jan. 19, 2001) (No. C01-0047Z).

the reservation.³²² The *Gila III* court declared that when the Supreme Court in *Winters* found an implied right to water for federal reservations, it must have intended the water to come from whatever sources each reservation had at hand.³²³ The Lummi Nation has a groundwater source at hand to fulfill the fishing purposes of its reservation³²⁴ and can protect its water from subsequent diversion, whether the diversion is of surface water or groundwater.³²⁵

The Lummi Nation should be entitled to enjoin junior users from pumping until the water is no longer contaminated with saltwater intrusion. Under *Winters*, the Lummi are entitled to water to fulfill the purposes of the reservation.³²⁶ The purposes of the Lummi reservation are not being met without uncontaminated groundwater.³²⁷ The purposes can only be fulfilled if the non-Indian users are enjoined from pumping the groundwater.

The Canons of Construction, used as the rationale for *Winters*, also support an injunction. The Treaty of Point Elliot, which established the Lummi reservation, must be construed from the standpoint of the Lummi.³²⁸ The Lummi would not have understood the Treaty as giving up the right to water quality sufficient to sustain their fishing lifestyle. Like the tribe in *Winters*, the Lummi would not have believed that the Treaty required them to give up the means to make their land prosperous.³²⁹ Here, the Lummi require access to high quality water as the means to make their land prosperous.

Just like in *Winters*, an ambiguity exists in the Treaty establishing the Lummi reservation, because no mention of water or water quality exists.³³⁰ Two inferences could be made from this fact. First, it could be inferred that by signing the treaty, the Lummi gave up its prior landholdings without reserving good quality water. Second, it could be inferred that the Lummi realized that the purpose of the reservation, to become civilized and prosperous using a fishing lifestyle, would only be met with quality water for fish survival and such a water right must be

322. *See id.*

323. *See Gila III*, 989 P.2d 739, 747 (Ariz. 1999).

324. *See United States' Complaint* at 8, *Washington* (No. C01-0047Z).

325. *See Cappaert v. United States*, 426 U.S. 128, 143 (1976).

326. *See Winters v. United States*, 207 U.S. 564, 577 (1908); *Cappaert*, 426 U.S. at 141.

327. *See United States' Complaint* at 8–9, *Washington* (No. C01-0047Z).

328. *See Winters*, 207 U.S. at 576–77; *see also Wilkinson, supra* note 44, at 608–19.

329. *See Winters*, 207 U.S. at 577.

330. *See id.* at 576–77; 12 Stat. 927 (January 22, 1855).

implied. Because this ambiguity must be resolved in favor of the Indians, the latter inference must be accepted because it is more favorable to the Indians, under the Canons of Construction.

In sum, *Winters* rights give Indian tribes like the Lummi Nation priority over non-Indian water users. The *Winters* Doctrine guarantees water sufficient to fulfill the purposes of a reservation. Therefore, when these purposes are threatened by poor quality water, tribes like the Lummi are entitled to enjoin non-Indian users contributing to the contamination. Considering water quality issues from the standpoint of the Indians should lead courts to the conclusion that Indians would not have given up their land in exchange for reservations with poor water.

V. CONCLUSION

The *Winters* Doctrine gives tribes an implied right to water to fulfill the purposes of their reservations. Although no court has extended *Winters* to imply a certain quality of water, many factors support such a notion. Without adequate water quality, reservation purposes cannot be fulfilled, in violation of *Winters*. The Canons of Construction for agreements with Indians also require a liberal view of the water quality issue: tribes would not have given up the quality of water needed to make their reservations prosperous. In addition, courts have recognized the strong link between water quality and quantity by granting tribes non-consumptive water rights to increase river flows and dilute pollutants.

When surface water is inadequate, the purposes of reservations must be fulfilled by the sources available, including groundwater sources. The *Winters* Doctrine is an implied right to water, no matter the source. The Supreme Court has expressly recognized the strong hydrologic connection between surface water and groundwater in *Cappaert*.

Tribes, like the Lummi of Western Washington, should be able to enjoin overuse of their water sources. Surface water on the Lummi Nation's reservation is inadequate to fulfill all of the fishing purposes of the reservation. Therefore, the Lummi should be entitled to groundwater. Since the Lummi's groundwater source is becoming contaminated through overuse, the Lummi should be able to enjoin non-Indian junior users from pumping the groundwater source. This analysis should be applied to other Northwest fishing tribes facing similar problems.