

# NOTES

## Indian Reserved Rights to Groundwater: Victory for Tribes, for Now

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### ABSTRACT

*Many Indian tribes in the United States have a federally reserved right to water to support their reservations and way of life, as recognized in *Winters v. United States*. However, the *Winters* doctrine does not explicitly recognize a reserved right to groundwater. Three states—Wyoming, Arizona, and Montana—faced the question of whether to extend the *Winters* doctrine to groundwater, with each reaching a different conclusion. This inconsistency continued until 2017, when the Ninth Circuit definitively extended reserved water rights to groundwater in *Agua Caliente Band of Cahuilla Indians v. Coachella Valley Water District*. However, States facing water scarcity may still attempt to place restrictions on reserved water rights to groundwater. This Note will discuss the history of the *Agua Caliente* case and the possible curtailments of reserved water rights that states may attempt to place on Indian water rights in times of water scarcity.*

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## INTRODUCTION

The recent decision in *Agua Caliente Band of Cahuilla Indians v. Coachella Valley Water District* marked the first time a federal appellate court ruled that the *Winters* doctrine, which recognizes Indian reserved rights to water, extends to groundwater, following the precedent of several state courts that had addressed the same issue.<sup>1</sup> It is likely that other jurisdictions will follow suit. Although the Supreme Court denied certiorari in 2017, making the Ninth Circuit the highest court to interpret the question to date, with a changing climate and increasing water concerns in the West, it is possible that some jurisdictions facing water scarcity may contrarily impose limits on reserved rights to groundwater that do not currently exist for reserved rights to surface water.

This Note will first discuss the history of the *Winters* doctrine, as well as the recent *Agua Caliente* case and state court cases, which addressed the issue of extending the *Winters* doctrine to groundwater. Next, this Note will address two possible curtailments to the doctrine. Finally, it will lay out the affirmative steps tribes can take to proactively protect their rights to groundwater.

## I. BACKGROUND

### A. THE *WINTERS* DOCTRINE

The *Winters* doctrine recognizes the federal government's power to reserve waters for certain federal reservations of land and exempt them from appropriation under state law.<sup>2</sup> This doctrine has become essential for tribes to successfully assert their water rights against other claimants competing for water in already over-appropriated river systems. It is even more crucial as climate change fundamentally alters the amount of water that will be available, especially because western water resources are particularly sensitive to climate change.<sup>3</sup>

*Winters* arose from a dispute between the Indians on the Fort Belknap Reservation and settlers in the territory.<sup>4</sup> In its decision, the Court announced that, in setting aside land for the Tribes to develop a pastoral way of life, waters were also impliedly reserved to ensure that the lands were not valueless and to allow the Tribes to assimilate into their new agricultural way of life.<sup>5</sup> Reserved

1. *Agua Caliente Band of Cahuilla Indians v. Coachella Valley Water District*, 849 F.3d 1262, 1270 (9th Cir. 2017), *cert. denied*, 138 S. Ct. 469 (2017).

2. *Winters v. United States*, 207 U.S. 564, 577 (1908).

3. Stephen Gray, *Climate Change and Potential Impacts on Western Rivers*, BUREAU OF RECLAMATION 7, <https://perma.cc/LF56-TRPW> (last visited Sep. 4, 2020).

4. *See Winters*, 207 U.S. at 565–70.

5. *Id.* at 576–77.

water rights are not based on a balancing test of competing interests, but rather are straightforward rights determined by the amount of water necessary to accomplish the purpose of the reservation.<sup>6</sup>

Several decades later, the Supreme Court was called upon by states in several cases to expand upon the scope of the *Winters* doctrine. *Arizona v. California* determined that the proper standard to measure a reserved water right is “practically irrigable acreage,” reaffirming the U.S. government’s commitment to making the tribes’ shift to an agricultural way of life possible.<sup>7</sup> Later, in *Cappaert v. United States*, the Court reinforced that the implied reservation of water occurs when the federal government withdraws land from the public domain for a federal purpose by simultaneously reserving appurtenant water—then unappropriated—that is necessary to accomplish the purpose of the reservation.<sup>8</sup> Although the Ninth Circuit extended reserved rights to groundwater when *Cappaert* was before it,<sup>9</sup> the Supreme Court found that the water at issue was surface water and consequently did not take up the issue of distinguishing between surface water and groundwater.<sup>10</sup> However, it did declare that the United States can protect against a diversion of both surface water and groundwater in order to protect water needed to fulfill the purpose of the reservation.<sup>11</sup> In 1978, in *United States v. New Mexico*, the Supreme Court again narrowed the *Winters* doctrine by limiting reserved rights only to the primary purpose of the reservation.<sup>12</sup> For many tribes, that is solely domestic and agricultural use, but jurisdictions vary in how broadly they interpret a primary purpose.<sup>13</sup>

#### B. STATE CASES

At least three state courts also considered extending reserved water rights to groundwater before the Ninth Circuit was presented with the issue.

The Supreme Court of Wyoming, in *In re Adjudication of All Rights to Use Water in the Big Horn River System*, was one of the first courts to address whether Indian reserved rights under the *Winters* doctrine extend to groundwater.<sup>14</sup> The

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6. *Id.* at 570, 577. Although the settlers had invested heavily in infrastructure to divert water from the reservation, the Court was unpersuaded to limit the reservation’s water right. *Id.*

7. 373 U.S. 546, 598–601 (1963), *overruled on other grounds by* *California v. United States*, 438 U.S. 645 (1978).

8. 426 U.S. 128, 138, 141 (1976).

9. *United States v. Cappaert*, 508 F.2d 313, 317 (9th Cir. 1974), *rev’d in part*, 426 U.S. 128 (1976).

10. *Cappaert*, 426 U.S. at 142 (determining that the water at issue was in fact surface water).

11. *Id.* at 143.

12. 438 U.S. 696, 715 (1978).

13. *See In re Adjudication of All Rights to Use Water in the Big Horn River System*, 753 P.2d 76, 99 (Wyo. 1988), *abrogated by* *Vaughn v. State*, 962 P.2d 149 (Wyo. 1998) (finding that the purpose of the reservation was solely agriculture, livestock, and domestic and municipal). *But cf.* *Colville Confederated Tribes v. Walton*, 647 F.2d 42, 47–49 (9th Cir. 1981) (holding that “the general purpose, to provide a home for the Indians, is a broad one and must be liberally construed” to extend the purpose of the reservation to agriculture, fishing, and domestic and municipal purposes).

14. 753 P.2d at 99.

court traced the history of the Shoshone and Arapahoe Tribes on the Wind River Reservation from their traditional life, reliant on buffalo, to their shift to an agricultural lifestyle, as well as the effect of settler migration to the Wind River Basin and its effect on the Tribes. The court then examined the Tribes' right to water for quantification purposes.<sup>15</sup> The 1869 treaty establishing the Wind River Reservation implicitly reserved water rights for the Tribes for agricultural purposes, including livestock and domestic or municipal purposes.<sup>16</sup> However, when the court considered the sources from which the water might come, it rejected the possibility that groundwater could be used to fulfill the purposes of the reservation.<sup>17</sup> The court noted that "the logic which supports a reservation of surface water to fulfill the purpose of the reservation also supports reservation of groundwater," such as the hydrological interconnection between surface and groundwater.<sup>18</sup> But, because there was no prior case that applied the reserved rights doctrine to groundwater, it declined to initiate such an extension.<sup>19</sup>

The next state to address the issue was Arizona, in *In re General Adjudication of All Rights to Use Water in Gila River System and Source*.<sup>20</sup> The Supreme Court of Arizona addressed "whether federal reserved water rights extend to groundwater . . . that is not subject to prior appropriation under Arizona law" and answered affirmatively.<sup>21</sup> It noted that the appropriate inquiry was "not whether the water runs above or below the ground but whether it is necessary to accomplish the purpose of the reservation."<sup>22</sup> Importantly, it limited the extension of reserved rights to groundwater to only "where other waters are inadequate to accomplish the purpose of the reservation."<sup>23</sup> The court understood this requires a fact-specific inquiry that must be made on a reservation-by-reservation basis<sup>24</sup> but was not persuaded by the Supreme Court of Wyoming's reluctance to establish new law.<sup>25</sup> Rather, it drew on *Cappaert's* lack of differentiation between diversion of surface water and groundwater<sup>26</sup> as well as the practical consideration that many reservations do not have reliable surface water and depend on groundwater pumping.<sup>27</sup>

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15. *Id.* at 83–84, 100–01.

16. *Id.* at 96, 99.

17. *Id.* at 99–100 (acknowledging that "the logic which supports a reservation of surface water to fulfill the purpose of the reservation also supports reservation of groundwater," but noting that no cases applying the reserved water doctrine to groundwater were cited by the parties).

18. *Id.* at 99 (citing *Tweedy v. Texas Co.*, 286 F. Supp. 383, 385 (D. Mont. 1968)).

19. *Id.* at 99–100.

20. 989 P.2d 739, 741 (Ariz. 1999) (en banc).

21. *Id.* at 741.

22. *Id.* at 747.

23. *Id.* at 748.

24. *Id.* (citing *United States v. New Mexico*, 438 U.S. 696, 700 (1978)).

25. *Id.* at 745.

26. *Id.* at 746 (citing *Cappaert v. United States*, 426 U.S. at 142–43).

27. *Id.*

In 2002, Montana was confronted with the issue.<sup>28</sup> Like the Wyoming court, the Supreme Court of Montana noted that there was no precedent for the proposition that tribes have reserved rights in groundwater, but decided that the federal reserved rights doctrine applies to both surface water and groundwater, without making a determination on whether it was necessary to accomplish the purpose of the Flathead Reservation of the Salish and Kootenai Tribes' reservation.<sup>29</sup> It found that there was no distinction between surface water and groundwater that would preclude the extension of the doctrine to groundwater, but rather that the same implications which led the Supreme Court to hold that surface waters had been reserved would apply to underground waters as well. The land was arid—water would make it more useful, and whether the waters were found on the surface of the land or under it should make no difference.<sup>30</sup>

### C. FEDERAL CASES

#### 1. History of the Coachella Valley Aquifer

The Agua Caliente Band of Cahuilla Indians has lived in the Coachella Valley since time immemorial and have long been aware of the seasonality and unreliability of surface waters in the arid region.<sup>31</sup> They learned to use surface water when available, but they also developed walk-in groundwater wells tapping into the underlying Coachella Valley Aquifer to supplement their water needs.<sup>32</sup>

The Coachella Valley Aquifer is large and currently supports 400,000 people across nine cities and tens of thousands of acres of irrigation.<sup>33</sup> However, studies show that since the mid-twentieth century, the aquifer has been declining because of population growth, development of the region, and droughts.<sup>34</sup> Since 1975, the aquifer has dropped at least 34 feet, and the Coachella Valley Water District estimates an average annual overdraft of 239,000 acre-feet.<sup>35</sup> To address this depletion, the Colorado River Aqueduct has helped artificially recharge the aquifer since the 1970s.<sup>36</sup> But, during times of drought, the groundwater level continues to drop due to lack of recharge combined with unsustainable groundwater practices and overuse.<sup>37</sup>

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28. *Confederated Salish and Kootenai Tribes of the Flathead Reservation v. Stults*, 59 P.3d 1093, 1095 (Mont. 2002).

29. *Id.* at 1095, 1099.

30. *Id.* at 1098 (quoting *Tweedy v. Texas Co.*, 286 F. Supp. 383, 385 (D. Mont. 1968)).

31. NATIVE AM. RIGHTS FUND, *Agua Caliente v. Coachella Valley Water District, et al.*, <https://perma.cc/G9RR-5ZNL> (last visited Sep. 8, 2020).

32. *Id.*

33. COACHELLA VALLEY WATER DIST., *THE STATE OF THE COACHELLA VALLEY AQUIFER*, <https://perma.cc/ZRR8-N2QB> (last visited Sep. 8, 2020).

34. Ian James, *Scientists: Coachella Valley Aquifer Decline Continues*, *DESERT SUN* (July 22, 2015, 1:32 PM), <https://perma.cc/KTZ3-K3NY>.

35. NATIVE AM. RIGHTS FUND, *supra* note 31.

36. COACHELLA VALLEY WATER DIST., *supra* note 33.

37. James, *supra* note 34.

Climate change is expected to put increased strains on the aquifer. Scientists expect the Colorado River Aqueduct to deliver lower amounts of water due to less snow in the Rocky Mountains, and the Coachella Valley region is expected to experience more severe and more common droughts.<sup>38</sup> Additionally, groundwater may be relied upon more as local surface waters dry up and water users are forced to use the aquifer's resources more heavily.<sup>39</sup>

## 2. Legal History of *Agua Caliente*

*Agua Caliente* was the first federal appellate decision<sup>40</sup> that recognized that a tribe's reserved right to water can extend to groundwater under the *Winters* doctrine.<sup>41</sup> Although not expressly following the state courts who heard similar cases, it reached many of the same legal conclusions that the state courts had established.

The Cahuilla Indians have lived in the Coachella Valley since before California became a state in 1850.<sup>42</sup> Executive orders in 1876 and 1877 established their reservation across extremely arid land for the "the permanent use and occupancy of the Mission Indians," or "Indian purposes."<sup>43</sup> The reservation's only source of surface water is the Whitewater River System, which flows seasonally nearby and to which the Tribe has a small water right under state law.<sup>44</sup> The vast majority of their water is purchased from the Coachella Valley Water District ("CVWD"), which pumps water from the Coachella Valley Aquifer.<sup>45</sup> The aquifer lies directly underneath the reservation.<sup>46</sup>

The entire case is divided into three phases. The first phase resulted in the groundbreaking decision in which the Ninth Circuit affirmatively decided that a tribe's reserved right to water can extend to groundwater.<sup>47</sup> The Supreme Court denied certiorari, thereby shielding the Tribe's position for now.<sup>48</sup> The second phase will determine whether the Tribe owns the groundwater storage space

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38. *Id.*

39. BUREAU OF RECLAMATION, U.S. DEP'T OF THE INTERIOR, SECURE WATER ACT SECTION 9503(C) —RECLAMATION CLIMATE CHANGE AND WATER 2016, 1-20 (2016).

40. The Western District of Washington previously extended reserved water rights to groundwater in a decision now vacated due to settlement. *United States v. Washington*, 375 F. Supp. 2d 1050, 1076 (W.D. Wash. 2005), *vacated sub nom.* U.S. ex rel Lummi Indian Nation v. Washington, No. C01-0047Z, 2007 WL 4190400 (W.D. Wash. Nov. 20, 2007).

41. *Agua Caliente Band of Cahuilla Indians v. Coachella Valley Water Dist.*, 849 F.3d 1262, 1270 (9th Cir. 2017).

42. *Id.* at 1265.

43. *Id.*

44. *Id.* at 1266. The Tribe's water right under the Whitewater River Decree provides enough to irrigate 360 acres, although it is often fulfilled outside the growing season because of river flows. *Id.*

45. *Id.*

46. *Id.* at 1271 n.10.

47. *With Recent Decision, Agua Caliente Tribal Water Rights Will Stand*, NATIVE AM. RIGHTS FUND (Nov. 30, 2017), <https://perma.cc/3T8K-DFYK>.

48. *Id.*

under the reservation, what standard will be used to determine the right, and whether there is a right to a certain level of water quality.<sup>49</sup> The final phase will determine the actual quantification of the Tribe's right to groundwater from the aquifer.<sup>50</sup>

The Ninth Circuit divided the first phase into three distinct questions. The first question considered whether the U.S. intended to reserve water for the Tribe when the reservation was created.<sup>51</sup> Based on the *Winters* doctrine, the court found that the purposes expressed in the executive orders did indeed reserve federal water rights for the Tribe because the "general purpose, to provide a home for the Indians, is a broad one and must be liberally construed."<sup>52</sup> The primary purpose of the executive order was to provide a home for the Indians, and water is inherently tied to the Tribe's ability to live on the arid reservation.<sup>53</sup>

Second, and most importantly, the court asked whether the reserved rights doctrine encompasses groundwater.<sup>54</sup> The court responded affirmatively,<sup>55</sup> holding that the *Winters* doctrine allows federal reservation of water appurtenant to the reservation and is not limited to surface water.<sup>56</sup> In *Cappaert*, the Supreme Court implied that the federal government can protect against groundwater diversions, which, the Ninth Court inferred, means that the federal government can protect the groundwater itself.<sup>57</sup> Furthermore, groundwater use is the only viable water source in many locations, including the Coachella Valley.<sup>58</sup> With minimal surface water, survival is conditioned on access to groundwater.<sup>59</sup>

The final question the court addressed was whether the Tribe's rights under state law and the historical lack of pumping for groundwater affects the previous analysis.<sup>60</sup> The court noted that reserved water rights preempt state law, are flexible and change over time, and are not lost through non-use.<sup>61</sup> Even if a tribe did not historically use groundwater, its federally reserved right to use groundwater is not destroyed.<sup>62</sup> *United States v. New Mexico* does not ask whether the water is currently needed to sustain the reservation, but whether water was seen as necessary at the creation of the reservation.<sup>63</sup>

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49. *Id.*

50. *Id.*

51. *Agua Caliente*, 849 F.3d at 1267.

52. *Colville Confederated Tribes v. Walton*, 647 F.2d 42, 47 (9th Cir. 1981).

53. *Agua Caliente*, 849 F.3d at 1270.

54. *Id.*

55. *Id.*

56. *Id.* at 1271.

57. *Id.* (citing *Cappaert v. United States*, 426 U.S. 128, 143 (1976)).

58. *Id.* (citing *Colville Confederated Tribes v. Walton*, 647 F.2d 42, 47–48 (9th Cir. 1981)).

59. *Id.*

60. *Id.* at 1272.

61. *Id.* at 1272 (citing *Walton*, 647 U.S. at 47–48, 51–53).

62. *Id.*

63. *Id.*

Based on these factors, the Ninth Circuit expressly recognized the *Winters* doctrine's application to groundwater.<sup>64</sup>

## II. THE FUTURE OF TRIBES' RESERVED RIGHT TO GROUNDWATER

Although the Ninth Circuit's decision in *Agua Caliente* was a win for tribal interests, climate change and reduced water supplies may lead some courts to narrowly construe the ruling. With the 2017 denial of certiorari for *Agua Caliente*, the Ninth Circuit's ruling will remain binding in its circuit, and the ruling (and denial of certiorari) will be persuasive law for other jurisdictions facing similar issues. However, with increasing concerns over both water scarcity in the West and the effects of climate change,<sup>65</sup> jurisdictions that have not faced the question may be tempted to narrow the *Winters* doctrine regarding groundwater. With groundwater becoming a more valuable resource as surface waters become more vulnerable, along with the absence of an affirmative Supreme Court decision on the matter, water districts and states have some latitude to argue for a restriction on the application of the *Winters* doctrine to groundwater. There are two sources from which parties interested in curtailing the *Winters* doctrine regarding groundwater can adjust arguments. First, in *Gila River System* the Supreme Court of Arizona narrowed the doctrine to include groundwater only when surface waters are inadequate for the purposes of the reservation.<sup>66</sup> Second, in 1989, the Supreme Court of the United States suggested an openness to narrowing the *Winters* doctrine in general.<sup>67</sup> Although never adopted by the Supreme Court, the sensitivity doctrine in Justice O'Connor's draft opinion<sup>68</sup> offers another theory for limiting the *Winters* doctrine and allowing courts faced with this issue to balance the needs of non-Indian western water users with the United States' implicit treaty obligations to Indian nations.

### A. THE SENSITIVITY DOCTRINE

Justice O'Connor's unpublished majority opinion in *Wyoming v. United States* indicated the willingness of the 1989 Court to accept a radical change to the *Winters* doctrine by considering the economic impact on other appropriators.<sup>69</sup> In that case, the Court affirmed that practicably irrigable acreage ("PIA") is the

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64. *Id.* at 1272–73.

65. BUREAU OF RECLAMATION, *supra* note 39, at 1-20; Philip Womble et al., *Indigenous Communities, Groundwater Opportunities*, 361 SCIENCE 453, 453 (2018).

66. *In re General Adjudication of All Rights to Use Water in Gila River System and Source*, 989 P.2d 739, 748 (Ariz. 1999).

67. *Wyoming v. United States*, Opinion, 2d Draft, No. 88-309 (U.S. 1989) (recirculated June 12, 1989) (O'Connor, J.), reprinted in Andrew C. Mergen & Sylvia F. Liu, *A Misplaced Sensitivity: The Draft Opinions in Wyoming v. United States*, 68 U. COLO. L. REV. 683, app. at 725–40 (1997).

68. *Id.* Justice O'Connor recused herself due to a conflict of interest, and the case was decided without a published opinion.

69. *Id.*



correct standard to measure the quantification of a tribe's water right where the purpose of the reservation is agricultural.<sup>70</sup> While affirming PIA, Justice O'Connor delved into the considerations that go into PIA. She would have found that PIA is not just a scientific calculation, but also requires a consideration of the impacts on state and private appropriators of water under state law.<sup>71</sup> This would undermine decades of development of the *Winters* doctrine, even reaching back to the original decision in *Winters* itself, which has been interpreted to mean that reserved rights to water do not consider the economic impact on other appropriators.<sup>72</sup> Justice O'Connor found precedent for this "pragmatic" approach in *New Mexico*, where the Court said:

When . . . a river is fully appropriated, federal reserved water rights will frequently require a gallon-for-gallon reduction in the amount of water available for water-needy state and private appropriators. This reality has not escaped the attention of Congress and must be weighed in determining what, if any, water Congress reserved for use in the national forests.<sup>73</sup>

Justice O'Connor also cited *Cappaert* for its proposition that water should be reserved only to the "amount of water necessary . . . no more."<sup>74</sup> Even Justice Powell, dissenting from the majority opinion, agreed with the sensitivity approach, stating, "I agree with the Court that the implied-reservation doctrine should be applied with sensitivity to its impact upon those who have obtained water rights under state law and to Congress' general policy of deference to state water law."<sup>75</sup> Both *New Mexico* and *Cappaert* applied to water reservations with a mostly non-consumptive use (a national forest and monument, respectively),<sup>76</sup> but, in her *Wyoming* opinion, Justice O'Connor extended her interpretation to Indian reservations, which sustain societies and so are inherently more consumptive than those other uses. This profound change in the *Winters* doctrine, particularly the sensitivity to the rights of one private group over another, was, according to Justice Brennan, a "strike at the heart of the *Winters* right itself."<sup>77</sup>

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70. *Id.* (considering and affirming *Arizona's* use of the standard to decide the appropriate measure of quantification for an agricultural reservation).

71. Mergen & Liu, *supra* note 67, at 706–07.

72. *Winters v. United States*, 207 U.S. 564, 569 (1908).

73. *United States v. New Mexico*, 438 U.S. 696, 705 (1978).

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

75. *New Mexico*, 438 U.S. at 718 (Powell, J., dissenting).

76. Mergen & Liu, *supra* note 67, at 706–07.

77. *Wyoming v. United States*, Opinion, 2d Draft, No. 88-309 (U.S. 1989) (recirculated June 12, 1989) (Brennan, J., dissenting), *reprinted in* Mergen & Liu, *supra* note 67, app. 741–60 ("Never before has this doctrine been applied to the quantification of Indian reserved water rights. Both *New Mexico* and *Cappaert* . . . were non-Indian cases involving, respectively, the Government's reserved water rights for a national forest and a national monument. . . . [I]t would be error to overlook the fact that Indian rights are in some respects more substantial.").

B. IMPACT OF THE SENSITIVITY DOCTRINE AND *GILA RIVER SYSTEM* ON FUTURE CASES

In the draft *Wyoming* opinion, the Court did not clarify why it was willing to essentially abandon a century's worth of *Winters* doctrine in order to adopt a method of determining water rights that would balance Indian interests with interests of non-Indians. States may have protested *Winters*' principles because it undermines their traditional authority over groundwater,<sup>78</sup> or because of the increasing scarcity of precious water in the West and the accompanying pressures on non-Indian industry, agriculture, and municipalities.<sup>79</sup> Both concerns are still valid today. In fact, water scarcity is becoming more of an issue, and it is likely that water users will turn to groundwater to supply their water needs in reaction to fuller appropriation of surface waters, drought, and climate change.<sup>80</sup>

The exact reasons the Supreme Court was willing to accept a monumental change to the *Winters* doctrine in 1989 are unclear, but the opinion provides guidance for future courts interested in curtailing the *Winters* doctrine. The sensitivity doctrine and the *Gila River* decision from the Supreme Court of Arizona offer two theories for future courts to weigh practical and economic considerations when deciding how far the *Winters* doctrine extends to groundwater. Although every court but one that has faced the issue has extended the right to groundwater so far, that does not mean that it will be extended without restrictions by all future courts.<sup>81</sup> By placing restrictions on the right to groundwater and not on the right to surface water, courts could address concerns of non-Indian water users in the West without disrupting a century of *Winters* precedent from applying to surface waters. These restrictions may not allay states' sovereignty concerns, but they would address scarcity concerns.

Groundwater is also likely to play a greater role in satisfying water needs. By 2030, consumptive water use is projected to exceed legally available surface and groundwater in the West, and surface water will become more fully appropriated.<sup>82</sup> Climate change may modify river flows.<sup>83</sup> Because of that, groundwater will be more widely utilized and perhaps lead to groundwater mining, which could deplete some aquifers indefinitely.<sup>84</sup> Because many Indian tribes would be the most senior appropriator for groundwater and have rights to substantial portions of water,<sup>85</sup> non-Indian users similarly dependent on groundwater would

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78. Womble et al., *supra* note 65; Mergen & Liu, *supra* note 67, at 751.

79. BUREAU OF RECLAMATION, *supra* note 39, at 1-13.

80. *Id.* at 1-20. *See also, e.g.*, NATIVE AM. RIGHTS FUND, *supra* note 31.

81. Judith V. Royster, *Indian Tribal Rights to Groundwater*, 15 KAN. J.L. & PUB. POL'Y 489, 491 (2006).

82. Womble et al., *supra* note 65.

83. *Id.*

84. *Id.*; Gwendolyn Griffith, Note, *Indian Claims to Groundwater: Reserved Rights or Beneficial Interest?*, 33 STAN. L. REV. 103, 118 (1980).

85. Griffith, *supra* note 84, at 115; Royster, *supra* note 81, at 490; CHARLES V. STERN, CONG. RESEARCH SERV., R44148, INDIAN WATER RIGHTS SETTLEMENTS 1-2 (2019).

face pressures beyond the ones they face now. It will be more and more difficult for non-Indian users to invest and utilize water for industry and agriculture as more Indians quantify their rights to both surface and groundwater through settlements or general stream adjudications.<sup>86</sup> Although the Ninth Circuit has spoken for the courts under its jurisdiction, and although that will be persuasive for other courts considering the issue, other states in the West with Indian reservations will have to face similar issues and may find courts more sympathetic to the plight of their non-Indian citizens.

Although only persuasive, these two limitations offer varying levels of restrictiveness for the courts to choose from. The *Gila River System* limitation would limit tribes to groundwater rights only if surface water rights were not enough to fulfill a tribe's water rights. The sensitivity doctrine could be much broader, limiting rights regardless of whether surface water is enough to fulfill them. If an Indian tribe and non-Indians were both dependent on groundwater, the sensitivity doctrine would limit the tribe's right by weighing non-Indian users' needs with how much water the tribe actually uses. This approach might be more palatable to the courts, especially as water supplies become increasingly more strained. However, it would be a reversal of Indian policy to accept the sensitivity doctrine and place Indian tribes in a disadvantaged position for the future.<sup>87</sup> Although state courts may be more open to this, federal courts will likely be reluctant to accept such a policy, even though Justice O'Connor's draft opinion indicated the Supreme Court's willingness to do so thirty years ago. That opinion was never adopted, and the Ninth Circuit's *Agua Caliente* decision is now persuasive federal precedent for the extension of reserved rights to groundwater. If water scarcity increases and the West continues to suffer, though, courts in western states may be more willing to consider a change in policy. If state courts and district courts outside the Ninth Circuit are faced with the issue—which is probable as groundwater claims are likely to be more common with the passage of time and as the effects of climate change become more visible—either the sensitivity doctrine or the *Gila River System* restriction would offer ready-made solutions to the issue.

### III. HOW TRIBES CAN PROTECT THEIR GROUNDWATER RIGHTS

Because of the threat of climate change and its effects on water supplies, especially in the West, there may be potential for a shift in judicial application of the *Winters* doctrine as applied to groundwater, which is not as well-established as the *Winters* doctrine as applied to surface waters. Tribes would be well-advised

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86. Lawrence J. MacDonnell, *Rethinking the Use of General Stream Adjudications*, 15 WYO. L. REV. 347, 349–50 (2015) (“In a few cases, senior water users initiated the general adjudication seeking a determination of priorities so junior uses could be administered (curtailed) in times of shortage”); STERN, *supra* note 85, at 1–2 (noting the increasing use of settlements by tribes to quantify water rights).

87. Mergen & Liu, *supra* note 67, at 685.

to take affirmative steps now to ensure their groundwater rights are protected against any future changes in the law.

For one, tribes should make actual use of their groundwater now, if possible. Many states apply the prior appropriation doctrine to groundwater or integrate it with surface water.<sup>88</sup> Although not legally necessary to determine whether a reserved right exists, applying the “first in time, first in right” method of attaining water rights is a practical way to ensure that the state and other appropriators are aware of the tribe’s claim to groundwater. And, if the tribe actually uses the water rights it is claiming, it can bypass the problem of paper rights, in which the tribe has a legal claim to water but cannot develop or use it.<sup>89</sup> Wet rights, which are gained by actual use, cannot be taken away as easily as paper rights, and they offer a much stronger position for tribes in future lawsuits or negotiations.<sup>90</sup>

Tribes can also make concrete development plans that will show that the groundwater is necessary for the primary purposes of the reservation. Jurisdictions vary in how broadly or narrowly they construe the “primary purpose” of a reservation, although, at the very least, it would include agriculture and irrigation, as well as municipal and domestic use.<sup>91</sup> By showing that groundwater is necessary for the development of primary purposes, tribes can at least make claims to paper rights, arguing that groundwater will be applied to these developments in the near future. This may be a more difficult task for tribes, as irrigation projects can be prohibitively expensive or infeasible.

The two main ways for a tribe to quantify their water rights are a settlement or litigation in a general stream adjudication. Although general stream adjudications are more common, a settlement with the federal government is often a better approach for tribes when possible.

A general stream adjudication is a state-level adjudication regarding the perfection of water rights of each individual claimant of a particular river.<sup>92</sup> They are useful because they provide an inventory of all valid water rights in a river and prioritize the rights by seniority, but they can be contentious, expensive, and lengthy.<sup>93</sup> Often, general stream adjudications are not the best way for tribes to

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88. Royster, *supra* note 81, at 500; Griffith, *supra* note 84, at 109–10.

89. For example, a tribe may lack the financial capital needed to develop a water resource for which it has a legal claim. STERN, *supra* note 85, at 2.

90. See, e.g., Susan D. Brienza, Wet Water v. Paper Rights: Indian and Non-Indian Negotiated Settlements and Their Effects, 11 STAN. ENVTL. L. J. 151, 167 (1992).

91. Compare, e.g., *In re* General Adjudication of All Rights to Use Water in the Big Horn River System, 753 P.2d 76, 96–99 (Wyo. 1988) (finding that the primary purpose of the reservation is agriculture) with *Colville Confederated Tribes v. Walton*, 647 F.2d 42, 47 (9th Cir. 1981) (finding the primary purpose of the reservation is to create a homeland, which includes water rights for agriculture and fishing).

92. MacDonnell, *supra* note 86, at 349–50.

93. Sidney Ottem, *Quantifying Water Rights in General Stream Adjudications*, J. CONTEMP. WATER RES. & EDUC., May 2006, at 10, 10.

affirm their rights because general stream adjudications may award only paper rights to the tribe.<sup>94</sup> Tribes should generally seek to avoid state channels, which often treat tribes less favorably than federal courts do.<sup>95</sup> However, it may be difficult for tribes to avoid state courts due to the McCarran Amendment,<sup>96</sup> which waived the sovereign immunity of the federal government so it could be joined as a defendant in general stream adjudications and adjudications of federal reserved water rights.<sup>97</sup>

Perhaps the better way for tribes to move forward is to settle their reserved water rights with the federal government. Settlement negotiations can also be lengthy but are often less costly than general stream adjudications.<sup>98</sup> Settlements are also federally approved by Congress and come with wet rights in the form of funding for new water projects or infrastructure.<sup>99</sup> Although tribes may lose rights to a larger quantity of water by settling,<sup>100</sup> they can settle their rights to both surface water and groundwater,<sup>101</sup> even if the tribe is not in the Ninth Circuit or in a state that has definitively extended reserved rights to groundwater. Settling would protect the tribes against any future changes to the *Winters* doctrine and establish certainty for the future, even as water becomes scarcer due to climate change.

#### CONCLUSION

Although the sensitivity doctrine was never adopted and the *Gila River System* restriction only exists in Arizona, increased water scarcity, resulting in part from climate change, may tempt jurisdictions in water-scarce regions to adopt these practical limitations on the *Winters* doctrine's application to groundwater. Even though the Ninth Circuit has decided that the *Winters* doctrine does apply to groundwater without restrictions, other jurisdictions that have yet to decide may want to curtail the doctrine to allow for practical concerns. This would entail a balancing test between Indian and non-Indian interests in aquifers, which may be increasingly used to fulfill water needs as rivers become fully appropriated and drier—or at least more unpredictable—due to climate change. Restricting the *Winters* doctrine's application to groundwater would be a blow to the current understanding of the doctrine and contrary to the opinion of the highest court that

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94. STERN, *supra* note 85, at 2.

95. Royster, *supra* note 81, at 500–01.

96. 43 U.S.C. § 666(a).

97. *Colo. River Water Conservation Dist. v. United States*, 424 U.S. 800, 819 (1976).

98. STERN, *supra* note 85, at summary.

99. *Id.* at 2.

100. *Id.* at 17.

101. *Id.* at 16.

has considered the *Winters* doctrine on this issue. However, because there is no explicit extension to groundwater except in the Ninth Circuit, other jurisdictions have room to manipulate the doctrine to regulate an increasingly important water source to the benefit of non-Indian interests.

To protect their water rights against this potential threat, tribes should be proactive in making plans for development or settling with the government to legally establish their water sources and the quantification they were impliedly given when their reservations were created.