HOW TO PROTECT THE SAN PEDRO RIPARIAN NATIONAL CONSERVATION AREA? TIME TO ASSERT A CLAIM IN FEDERAL COURT

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The San Pedro River is one of the last free flowing rivers in the West and an important habitat for many species. Congress recognized the ecological importance of the San Pedro River and expressly reserved water to protect, conserve, and enhance the riparian area—the San Pedro Riparian National Conservation Area ("SPRNCA"). The exact amount of water that Congress reserved is unquantified pending determination in Arizona's Gila River General Stream Adjudication, a comprehensive adjudication, initiated in 1974, of all water claims in the Gila River watershed. Meanwhile, flows in the San Pedro River are strained by groundwater pumping in nearby communities in Cochise County. Cochise County has adopted a requirement that before any proposed housing development is approved, the Arizona Department of Water Resources ("ADWR") must find that there is sufficient groundwater to support the proposed development. Yet the Arizona Supreme Court recently held that ADWR does not need to consider the water reserved for SPRNCA—while it remains unquantified—when determining whether there is sufficient groundwater for a proposed development. This is problematic because the water reserved for SPRNCA will probably not be quantified anytime soon and will continue to be threatened by an increasing population reliant on groundwater. Consequently, the state adjudication is insufficient to protect the water for SPRNCA, and the federal government should take an alternative approach to protect the

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reserved water for SPRNCA—that is, assert the water right in SPRNCA in federal district court.

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INTRODUCTION[1]

The Santa Cruz River starts in southeastern Arizona, runs south across the Mexico border, makes a U-turn in Mexico, heads north, passes through Tucson, Arizona, and eventually flows into the Gila River.[2] The river once had abundant flows,[3] but after years of groundwater pumping, the perennial flows of the river stopped in the mid-20th century.[4] People living along the river may now only see water in response to precipitation events or releases of effluent into the river bed by municipal-wastewater-treatment plants.[5] Without the perennial flows of the river, the vegetation that once lined the river and the wildlife that visited the river disappeared.[6] I am concerned that a similar future threatens the San Pedro River.

I visited the San Pedro River for the first time in 2015 as an environmental science student at the University of Arizona. As part of my Fundamental Environmental Science and Sustainability course, the professor took us out to

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1. Parts of this introduction derive from an earlier piece published on the Western Lands, Western Water blog and are used with permission. *See* Anderson, *supra* note *.

2. *The Santa Cruz River*, FRIENDS OF THE SANTA CRUZ RIVER, https://friendsofsantacruzriver.org/santa-cruz-river/ [https://perma.cc/5WKH-5RXP] (last visited Feb. 25, 2021); *see also The Santa Cruz River Heritage Project*, TUCSON WATER, https://www.tucsonaz.gov/files/water/docs/SCRHP_location_map.pdf [https://perma.cc/TW5N-V2XE] (last visited Sept. 18, 2021); ROBERT GLENNON, WATER FOLLIES: GROUNDWATER PUMPING AND THE FATE OF AMERICA'S FRESH WATERS 36–37 (2002).

3. Rick Wiley, *30 Historic Photos of the Santa Cruz River Through Tucson*, ARIZ. DAILY STAR, https://tucson.com/news/local/historic-photos-of-the-santa-cruz-river-through-tucson/collection_b4a5a702-9b1d-11e7-b2b6-abd7f1554d1c.html#1 [https://perma.cc/7DU3-FWBZ] (Sept. 22, 2021).

4. *See The Santa Cruz River Heritage Project – A Brief History*, TUCSON WATER, https://www.tucsonaz.gov/water/SCRHP-history [https://perma.cc/3DNT-MP2H] (last visited Feb. 25, 2021); GLENNON, *supra* note 2, at 38–39.

5. FRIENDS OF THE SANTA CRUZ RIVER, *supra* note 2.

6. GLENNON, *supra* note 2, at 38–39.

Cascabel, Arizona to meet people who were living sustainably with composting toilets, rainwater harvesting, and solar energy. I was impressed not only by these individuals' water and energy conservation but also by the luscious surrounding riparian zone—the San Pedro River!

The San Pedro River originates in Mexico, travels through southeastern Arizona, and then connects to the Gila River.[7] The San Pedro River is one of the last free flowing rivers in the West and an incredibly important spot for migratory birds and other wildlife.[8] Congress recognized the importance of the river when, in 1988, it created the San Pedro Riparian National Conservation Area ("SPRNCA") expressly reserving "a quantity of water sufficient to fulfill the purposes of the San Pedro Riparian National Conservation Area."[9] Congress defined the purposes of the conservation area to "conserve[], protect[], and enhance[] the riparian area and the aquatic, wildlife, archeological, paleontological, scientific, cultural, educational, and recreational resources of the conservation area."[10]

Further, Congress directed the Secretary of the Interior to file a claim in the Gila River General Stream Adjudication ("GSA")[11] so that the quantity of water to fulfill the various purposes of SPNRCA could be defined. The San Pedro River is part of the Gila River GSA,[12] and the Department of Justice, on behalf of the Department of the Interior, filed a claim in the Gila River GSA in 1989, a year after SPRNCA was created.[13]

Part of the purpose of the Gila River GSA is for the Special Master, a judge appointed by the Arizona Superior Court to assist the Superior Court judge presiding over the GSA, to review all water claims and make a formal decision on the quantity of water that each water user is entitled to.[14] Although the Gila River GSA started in the 1970s, the adjudication has proceeded slowly because of complex legal issues that needed to be resolved before the Special Master could start reviewing and quantifying water claims in the Gila River system.[15] As a result, the Special Master only recently started to review water claims in the San Pedro River Basin.[16] Further,

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7. Rhett Larson & Brian Payne, *Unclouding Arizona's Water Future*, 49 ARIZ. ST. L.J. 465, 488 (2017); *see* Noah Gallagher Shannon, *New Perils Threaten to Destroy an Embattled Desert Haven for Birds*, AUDUBON MAG. (Winter 2020), https://www.audubon.org/magazine/winter-2020/new-perils-threaten-destroy-embattled-desert [https://perma.cc/9DQV-C7KY].

8. Shannon, *supra* note 7 (describing that the San Pedro "remains one of the last major free-flowing rivers in the Southwest" and "serves as a breeding ground or migratory stopover for hundreds of bird species").

9. 16 U.S.C.A. § 460xx–1(d) (Westlaw through Pub. L. No. 117-39).

10. *Id.* § 460xx–1(a).

11. *See id.* § 460xx–1(d).

12. *Overview of General Stream Adjudications*, JUD. BRANCH ARIZ. MARICOPA CNTY., http://www.superiorcourt.maricopa.gov/SuperiorCourt/GeneralStreamAdjudication/faq.asp [https://perma.cc/NA7W-9ELG] (last visited Oct. 26, 2020).

13. *See* Larson & Payne, *supra* note 7, at 489.

14. *See generally* JUD. BRANCH ARIZ. MARICOPA CNTY., *supra* note 12.

15. *See generally id.*

16. *See Active Cases*, JUD. BRANCH ARIZ. MARICOPA CNTY., http://www.superiorcourt.maricopa.gov/SuperiorCourt/GeneralStreamAdjudication/whatsNew.asp [https://perma.cc/UC38-M442] (last visited Sept. 18, 2021).

the water reserved for SPRNCA remains unquantified; i.e., the amount of water that Congress reserved to fulfill the purposes of SPRNCA is still undefined.[17]

Meanwhile in the surrounding area, developers are proposing and building communities that would pump groundwater as the main water supply.[18] For example, proposed housing developments in Sierra Vista are just five miles from the San Pedro River, and groundwater pumping in Sierra Vista certainly impacts surface water flows in the San Pedro River[19] because groundwater and surface water are interconnected.

Groundwater and surface water are connected through the hydrologic cycle.[20] To illustrate, water evaporates, eventually condenses, and returns to the surface as precipitation, part of which infiltrates into the ground in a process called recharge.[21] Then, some of that groundwater flows into streams and rivers in a process called discharge.[22] Some of that discharged water evaporates and continues moving through the hydrologic cycle.[23] In other words, as water moves through the hydrologic cycle, "[g]roundwater may become surface water in some portions of a stream, and surface water may become groundwater in other portions."[24] An individual affects the processes of discharge and recharge by pumping groundwater from a well.[25] Specifically, discharge of groundwater to the stream decreases, recharge from the stream to the groundwater increases, and consequently, the water table lowers.[26] These processes may continue until the river runs dry—exactly what happened to the Santa Cruz.[27]

Despite this scientific reality of the interconnectedness of surface water and groundwater, the Arizona Supreme Court recognized and affirmed in 1931, 1993, and again in 2000 the legal distinction between surface and groundwater.[28] The Court established a bifurcated system of allocating water rights to surface water and groundwater users.[29] That is, surface water is appropriable under the prior

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17. *See* Silver v. Pueblo Del Sol Water Co., 423 P.3d 348, 351 (Ariz. 2018).

18. *See id.*; Shannon, *supra* note 7 (describing Villages at Vigneto as a proposed "Tuscan-style village" "30 miles downstream from Sierra Vista" that could pump "2 billion gallons of groundwater per year").

19. *See Silver*, 423 P.3d at 351; *see also* Shannon, *supra* note 7 (describing that the U.S. Army Corp of Engineers suspended Villages at Vigneto's permit after consulting with the U.S. Fish and Wildlife service, as required by the Endangered Species Act, and finding that the groundwater pumping would "likely damage habitat for ESA-listed wildlife along the San Pedro").

20. GLENNON, *supra* note 2, at 42–44.

21. *Id.* at 39–40.

22. *Id.*

23. *See id.*

24. *Id.* at 42.

25. *Id.* at 45.

26. *Id.* at 47.

27. *Id.*

28. *In re* Gen. Adjudication of All Rts. to Use Water in Gila River Sys. & Source, 9 P.3d 1069, 1083 (Ariz. 2000) [hereinafter Gila IV]; *In re* Gen. Adjudication of All Rts. to Use Water in Gila River Sys. & Source, 857 P.2d 1236, 1241, 1243 (Ariz. 1993) [hereinafter Gila II].

29. *Gila IV*, 9 P.3d at 1073.

appropriation doctrine, and the reasonable use doctrine governs groundwater.[30] Under the prior appropriation doctrine, the most senior users of the water have the highest priority right to water in a time of drought, regardless of the type of water use.[31] Thus, this doctrine is often referred to as "first in time, first in right."[32] In comparison, the reasonable use doctrine permits landowners "to withdraw percolating groundwater beneath their property in any amount so long as they apply it to the land from which it is extracted for a reasonable and beneficial use."[33]

To add to this complexity, Arizona also governs subflow under the rules of prior appropriation, meaning that subflow is appropriable and also within the scope of a GSA.[34] Hydrologically, subflow is groundwater, but legally, the Arizona Supreme Court has decided that subflow is appropriable because it is "water from the bed of a stream, or from the area immediately adjacent to a stream, and that water is more closely related to the stream than to the surrounding alluvium."[35] In *Gila IV,* the Court more specifically defined subflow as the saturated Floodplain Holocene Alluvium ("FHA").[36]

The distinction between groundwater and surface water plus subflow is consequential because only water claims of "a river system and source"[37] that solely include appropriable water under Arizona state law[38] or "'water subject to claims based upon federal law'" are within the scope of the GSA.[39] In other words, surface-water-plus-subflow uses—not groundwater uses—are subject to GSAs. Federal reserved water rights in groundwater are the exception to this rule as explained below.

In contrast to the bifurcated system of water under state law, the Arizona Supreme Court has held that federal water claims under federal laws—i.e., federal reserved water rights—are subject to greater groundwater protections than holders

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30. *Id.*

31. BARTON THOMPSON ET AL., LEGAL CONTROL OF WATER RESOURCES: CASES AND MATERIALS 177 (6th ed. 2018).

32. *Id.*

33. Kirsten Engel et al., *Arizona's Groundwater Management Act at Forty: Tackling Unfinished Business*, 10 ARIZ. J. ENVTL. L. & POL'Y 187, 196 (2020).

34. Gila II, 857 P.2d 1236, 1241 (Ariz. 1993).

35. *Id.* at 1245.

36. Gila IV, 9 P.3d 1069, 1083 (Ariz. 2000). The FHA is the "most recent portion of 'stream alluvium'" and "includes materials deposited during both the Pleistocene era (approximately 1.8 million to 10,000 years ago) as well as the Holocene era (approximately the past 10,000 years to date)." *Id.* at 1081. Consequently, any well within the FHA is presumed to be pumping appropriable subflow and is subject to the GSA. *Id.* at 1083. Further, the Court held that wells outside the FHA could in part be pumping subflow and thus be subject to the adjudication. *Id.*

37. *Gila II*, 857 P.2d at 1240.

38. ARIZ. REV. STAT. ANN. § 45–141(A) (Westlaw through 1st Spec. Sess. of 55th Leg.).

39. *Gila II*, 857 P.2d at 1240 (citing ARIZ. REV. STAT. ANN. § 45–251(7) (Westlaw through 1st Spec. Sess. of 55th Leg.)).

of surface water rights under state law.[40] That is, unlike surface water rights under state law that water-right holders can only enforce against other surface water users, federal reserved water rights extend to both surface and groundwater and can be enforced against other surface *and groundwater users*.[41] In other words, groundwater pumpers may be subject to the Gila River GSA's jurisdiction if the federal government has a federal reserved water right that extends to groundwater. This is the case for SPRNCA.

Because federal reserved water rights extend to *both* surface and groundwater, it seems that the State of Arizona should protect the federal reserved right in SPRNCA against any nearby groundwater pumping pending quantification of the water necessary to fulfill the purposes for SPRNCA.[42] In rejecting this reasoning, the Arizona Supreme Court held that the Arizona Department of Water Resources ("ADWR") does not need to consider water reserved for SPRNCA when it decides whether there is both legally and physically available water for proposed developments in Sierra Vista.[43] As a result, proposed developments may pump groundwater, threatening flows in the San Pedro that are already strained due in part to community growth in Sierra Vista.[44]

In this Note, I will address the issue of whether the Gila River GSA adequately protects the federal reserved water right in SPRNCA and if not, an alternative way the United States can protect this water right. In Part I, I will describe the creation, protection, and adjudication of federal reserved water rights. In Part II, I will describe the express federal reserved water right in SPRNCA, the Gila River GSA's role in quantifying that right, and the implications of the *Silver* decision on the adequacy of the GSA to protect that right. Lastly in Part III, I will identify an alternative solution for the United States to protect its federal reserved water right in SPRNCA.

I. CREATION, PROTECTION, AND ADJUDICATION OF FEDERAL RESERVED WATER RIGHTS

A. Creation and Scope of a Federal Reserved Water Right

Under the Commerce and Property Clauses of the U.S. Constitution, the Federal government can reserve land for a federal purpose and create an implied federal reserved water right.[45] Courts may find an implied federal reserved water

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40. *See In re* Gen. Adjudication of All Rts. to Use Water in Gila River Sys. & Source, 989 P.2d 739, 750 (Ariz. 1999) [hereinafter Gila III].

41. *See id.*

42. *See* Silver v. Pueblo Del Sol Water Co., 423 P.3d 348, 364–65 (Ariz. 2018) (Bales, J., concurring in part) (arguing that the state should consider the federal reserved water right in SPRNCA before approving nearby groundwater pumping).

43. *Id.* at 359; *see also* ARIZ. REV. STAT. ANN. § 45–108 (Westlaw through 1st Spec. Sess. of 55th Leg.).

44. Shannon, *supra* note 7.

45. *See, e.g.*, U.S. CONST. art. I, § 8, cl. 3; *id.* art. IV, § 3, cl. 2; Arizona v. California, 373 U.S. 546, 597–98 (1963); TIM BUTLER & MATTHEW KING, WASHINGTON PRACTICE SERIES, ENVIRONMENTAL LAW AND PRACTICE § 8.80 (2d ed. 2019) (explaining that the Commerce Clause "permits federal regulation of navigable streams," and the Property Clause "permits federal regulation of federal lands").

right when the federal government reserves land for some federal purpose.[46] For example, when the federal government creates a reservation by treaty, the courts recognize an implied federal reserved water right.[47] Specifically in *Winters,* the Court found that the federal government created an implied federal reserved water right when it created Fort Belknap Indian Reservation by treaty.[48] The Court reasoned that the United States must have also implicitly reserved water because without water the Reservation would become a "barren waste" and thus unlivable and useless for the pastoral lifestyle the federal government was imposing on the previously nomadic tribes.[49]

In contrast, courts do not find an implied water right when Congress reserves land for a purpose that would not entirely be defeated without water.[50] For example, in *Potlatch Corp.*, the Idaho Supreme Court held that the Wilderness Act of 1964 did not create an implied federal reserved water right because the purpose of the Act was to prevent development in wilderness areas.[51] The court reasoned that this purpose would not be entirely defeated without water, and thus water was not reserved.[52]

Further, courts limit implied reserved water to primary and not secondary purposes.[53] In *United States v. New Mexico*, the Court held that under the Multiple Sustained Yield Act of 1960, Congress intended to broaden the purposes of national forests to include recreation and preservation of wildlife but not to reserve water rights for those secondary purposes.[54] The Court also reasoned that water was not reserved for secondary purposes partly because the secondary purposes would contravene the primary purpose of securing favorable water flows through national forests under the Organic Administration Act of 1897.[55] In another case, the Idaho Supreme Court similarly held that the congressional act to create a National Recreation Area ("NRA") did not create an implied water right where the primary purpose of the Act was to protect the NRA from unrestricted development and mining operations.[56] Even though the Act mentioned protecting fish, this did not create an implied water right because this was a secondary (rather than primary) purpose, and the need for water was not great enough to defeat the primary purpose of the Act.[57] Yet again in another case, the Idaho Supreme Court held that islands reserved by executive order in Deer Flat National Wildlife Refuge for the purposes ascertained in the Migratory Bird Act did not create an implied water right because

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46. *See, e.g.*, Winters v. United States, 207 U.S. 564, 576–77 (1908).
47. *See, e.g.*, *id.* at 577.
48. *Id.*
49. *Id.*
50. *See* United States v. State, 23 P.3d 117 (Idaho 2001); Potlatch Corp. v. United States, 12 P.3d 1260, 1266 (Idaho 2000); *see also* State v. United States, 12 P.3d 1284 (Idaho 2000).
51. *Potlatch Corp.*, 12 P.3d at 1266.
52. *See id.* at 1267.
53. *See* United States v. New Mexico, 438 U.S. 696, 715 (1978).
54. *Id.* at 713, 715.
55. *Id.*
56. State v. United States, 12 P.3d 1284, 1291 (Idaho 2000).
57. *Id.* at 1290–91.

the primary purpose of the Act was to create safe places for birds to rest and nest by prohibiting hunting.[58] While the executive order may have envisioned availability of water (because islands are inherently *not islands* without water), this was not the primary purpose of the executive order, and consequently, there was no implied reserved water right.[59]

The federal government's implied water right extends to the appurtenant water that is necessary for the purpose of the reserved land.[60] In *Cappaert*, the Court held that the federal reserved water right in Devil's Hole Monument reserved the water necessary to fulfill the purpose—to preserve an adequate water level at Devil's Hole pool to preserve scientific interest—specified in President Truman's express proclamation.[61] Also, courts have held that the purpose of reserved land can include both present and future water needs.[62] In *Arizona v. California,* the Court held that the Special Master appropriately calculated the amount of reserved water for the Indian Reservation by irrigable acreage because this measure satisfied the purpose of the reservation to fulfill both present and future water needs.[63]

In addition to the courts finding implied federal reserved water rights, Congress can also expressly create a federal reserved water right.[64] Courts do not need to engage in the same careful examination of the primary purposes of the reservation when Congress expressly identifies the purposes for which it reserves water.[65] For example, in *Potlatch Corp.*, the court pointed to the text of the Hells Canyon National Recreation Area ("HCNRA") Act to find an express reservation of water for the federal land.[66] Namely, the wilderness area comprised of the "lands and waters" within the boundaries of HCNRA.[67]

B. Legal Protections of a Federal Reserved Water Right

Federal reserved water rights can extend to both surface and ground water.[68] In *Cappaert*, the Court held that when the United States reserved Devil's Hole as a part of a national monument, it reserved an implied water right in the unappropriated appurtenant waters, and thus, the United States could protect its

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58. United States v. State, 23 P.3d 117, 121, 127 (Idaho 2001).

59. *Id.* at 125–26.

60. *See* Cappaert v. United States, 426 U.S. 128, 138 (1976) (explaining that when the federal government reserves land, by implication, it also reserves appurtenant unappropriated water to the extent to fulfill the purpose of the reserved land).

61. *Id.* at 141.

62. *See* Arizona v. California, 373 U.S. 546, 600–01 (1963).

63. *Id.*

64. THOMPSON ET AL., *supra* note 31, at 1076; *see also* Potlatch Corp. v. United States, 12 P.3d 1260, 1269 (Idaho 2000) (finding an express federal reserved water right in Hells Canyon National Recreation Area).

65. *Cf.* United States v. New Mexico, 438 U.S. 696, 699–702 (1978) (explaining that a "careful examination" of the appurtenant water necessary to accomplish the purpose of the reservation is required because the "reservation is implied, rather than expressed").

66. *Potlatch Corp.*, 12 P.3d at 1269.

67. *Id.*

68. *See* Cappaert v. United States, 426 U.S. 128, 143 (1976); *see also* Agua Caliente Band of Cahuilla Indians v. Coachella Valley Water Dist., 849 F.3d 1262, 1271–72 (9th Cir. 2017); Gila III, 989 P.2d 739, 750 (Ariz. 1999).

water from "subsequent diversion, whether the diversion is of surface *or groundwater*."[69] Similarly in *Gila III*, the Arizona Supreme Court afforded the benefits of federal substantive law to reserved-water-right holders, and in so doing, the Court held that a federal reserved water right may extend to groundwater to the extent necessary to fulfill the purpose of the federally reserved land.[70] The Court specifically rejected applying the reasonable use doctrine for groundwater under state law to the federal reserved water right and provided the following reasons: (1) the U.S. Supreme Court has made it clear that state law cannot be applied to destroy a federal reserved water right; and (2) in Arizona, the reasonable use doctrine would not adequately protect federal reserved water rights because it affords no protection against off-reservation pumpers depleting the groundwater supply of the federally reserved land.[71] Additionally, the Ninth Circuit held in *Agua Caliente Band of Cahuilla Indians* that the "[t]he creation of the Agua Caliente Reservation therefore carried with it an implied right to use water from the Coachella Valley aquifer."[72] The court explained that the only limits on implied federal reserved water rights are that the water must be appurtenant and for the primary purpose of the reserved land.[73] Implied federal reserved water rights are *not* limited to surface water.[74] Further, the court reasoned that it would not make sense for the implied federal reserved water right to only extend to surface water in such an arid region.[75]

Also, federal reserved water rights can be enforced against junior-water-right holders.[76] In *Baley*, the court held that the government's actions did not constitute an impermissible taking under the Fifth Amendment where the senior federal reserved water rights of tribes in Klamath-Project waters were asserted against the junior rights of ranchers who received irrigation water through the Klamath Project.[77] Further, the court held that the ranchers, as junior-water-right holders, were not entitled to any water before the senior federal reserved water right of the tribe was fulfilled.[78]

C. Adjudication of a Federal Reserved Water Right

Under the McCarran Amendment, the federal government consents to be joined as a party in "any [state] suit (1) for the adjudication of rights to the use of water of a river system or other source, or (2) for the administration of such rights."[79]

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69. *Cappaert*, 426 U.S. at 143 (emphasis added).
70. *Gila III*, 989 P.2d at 744, 750.
71. *Id.* at 747–48.
72. *Agua Caliente Band of Cahuilla Indians*, 849 F.3d at 1271–72.
73. *Id.* at 1271.
74. *Id.*
75. *Id.*
76. *See* Baley v. United States, 134 Fed. Cl. 619, 679–80 (Fed. Cl. 2017), *aff'd*, 942 F.3d 1312 (Fed. Cir. 2019). "The appropriator with the earliest date of appropriation is called the senior, and each person with a later date is junior to anyone with an earlier date." THOMPSON ET AL., *supra* note 31, at 177.
77. *Baley*, 134 Fed. Cl. at 679–80.
78. *Id.*
79. 43 U.S.C.A. § 666(a) (Westlaw through Pub. L. No. 117-39). Note that the McCarran Amendment did not amend a statute but rather became known as the McCarran

Before the McCarran Amendment, it was more challenging for states to manage water resources because the federal government had sovereign immunity.[80] Consequently, most federal reserved water rights were quantified in federal court separate from state water adjudications.[81] In response, Senator McCarran successfully pushed for the McCarran Amendment as part of an appropriations bill in 1952.[82]

The McCarran Amendment applies to all federal water claims acquired through both state and federal law.[83] In *District Court in & for the County of Eagle*, the Court held the federal reserved water rights of the United States were subject to the Colorado supplemental water adjudication because the McCarran Amendment is an "all-inclusive statute" that includes the adjudication of all water rights: appropriated rights, riparian rights, and reserved rights.[84] The Court rejected the United States' argument that the McCarran Amendment does not cover federal reserved water rights but only water rights acquired by the United States under state law.[85]

Further, courts have held that even if a state water adjudication does not implicate all water users and water rights, the adjudication can still be comprehensive enough to fall within the scope of the McCarran Amendment.[86] In *District Court in & for the County of Eagle*, the Court held that a supplemental adjudication was within the scope of adjudications intended by the McCarran Amendment even though it only included claims since the prior adjudication and did not include previously decreed rights.[87] Similarly, in *District Court in & for Water Division No. 5*, the Court held that state monthly proceedings for the adjudication of water rights fall within the scope of adjudications under the McCarran Amendment even though each monthly proceeding only considered the claimants that filed within a particular month.[88] Additionally, in *United States v. Oregon,* the Ninth Circuit held that even though the Klamath Basin adjudication does not attempt to determine groundwater rights in the basin, the adjudication is still within the scope of adjudications under the McCarran Amendment, and

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Amendment after "Senator Pat McCarran of Nevada succeeded in attaching a 'rider' to a Department of Justice appropriation bill." *See* THOMPSON ET AL., *supra* note 31, at 1076, 1083.

80. THOMPSON ET AL., *supra* note 31, at 1076, 1082.

81. *Id.*

82. *Id.* at 1076, 1083.

83. *See* United States v. Dist. Ct. in & for the Cnty. of Eagle, 401 U.S. 520, 524 (1971).

84. *Id.*

85. *Id.*

86. *See id.* at 525; United States v. Dist. Ct. in & for Water Div. No. 5, Colo., 401 U.S. 527, 529–30 (1971); United States v. Oregon, 44 F.3d 758, 768–70 (9th Cir. 1994); *see also* Gila II, 857 P.2d 1236, 1247–48 (Ariz. 1993) (rejecting the United States' argument that state proceedings were not within the scope of the McCarran Amendment because they do not consider groundwater).

87. *Dist. Ct. in & for the Cnty. of Eagle*, 401 U.S. at 525.

88. *Dist. Ct. in & for Water Div. No. 5, Colo.*, 401 U.S. at 529.

consequently, the United States waives its sovereign immunity to be joined as a defendant in the adjudication.[89]

Importantly, the McCarran Amendment does not give states exclusive jurisdiction over federal reserved water rights; rather, the federal courts have concurrent jurisdiction.[90] Specifically, 28 U.S.C. § 1345 states that "[e]xcept as otherwise provided by Act of Congress, the district courts shall have original jurisdiction of all civil actions, suits or proceedings commenced by the United States."[91] In *South Delta Water Agency*, a corporation filed suit in federal district court claiming that the federal government had violated its water rights under federal laws, and the Ninth Circuit affirmed the lower court's denial of the federal government's motion to dismiss for lack of subject matter jurisdiction.[92] The court reasoned that the McCarran Amendment does not preclude federal-district-court original jurisdiction under 28 U.S.C. § 1331, 28 U.S.C. § 1345, or 28 U.S.C. § 1362.[93] Also in *Kittitas Reclamation District*, the Ninth Circuit affirmed the district court's authority to, first, hold that a consent decree for an irrigation district's junior water right did not limit measures to protect the senior fishing rights of the Yakima Nation when the former right violated the latter and, second, order water releases to protect the Yakima Nation's fishing rights even though there was an ongoing state court water adjudication for the Yakima Basin.[94] The court reasoned that it was appropriate for the district court to exercise jurisdiction despite the ongoing state water adjudication because the district court was interpreting a decree it entered in 1945, the parties did not intend for the general adjudication of water rights, and neither party moved to dismiss the federal suit.[95]

Even though the federal courts have federal question jurisdiction over federal reserved water right claims, a federal court may abstain from exercising jurisdiction after considering various factors.[96] The factors that may warrant federal court abstention include: (1) the relative progress of the state and federal suits; (2) the convenience of the federal forum; (3) the general judicial bias against piecemeal litigation; and (4) the federal government's participation in the state proceedings.[97] In *Colorado River Water Conservation District*, the Court held that all four of these factors weighed against the federal court exercising jurisdiction over the suit that the United States brought in district court to protect its federal reserved water rights against 1,000 water users where there was also an ongoing water adjudication in the

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89. *Oregon*, 44 F.3d at 768–70.

90. *See* 28 U.S.C.A. § 1345 (Westlaw through Pub. L. No. 117-39); S. Delta Water Agency v. U.S., Dep't of Interior, Bureau of Reclamation, 767 F.2d 531, 543 (9th Cir. 1985); *see also* Kittitas Reclamation Dist. v. Sunnyside Valley Irr. Dist., 763 F.2d 1032, 1034 (9th Cir. 1985).

91. 28 U.S.C.A. § 1345.

92. *S. Delta Water Agency*, 767 F.2d at 534, 543.

93. *Id.* at 543.

94. *Kittitas Reclamation Dist.*, 763 F.2d at 1034.

95. *Id.* at 1035.

96. CONF. OF W. ATT'YS GEN., AMERICAN INDIAN LAW DESKBOOK § 8:15 (2021); *see* Colo. River Water Conservation Dist. v. United States, 424 U.S. 800, 820 (1976).

97. CONF. OF W. ATT'YS GEN., *supra* note 96; *see Colo. River Water Conservation Dist.*, 424 U.S. at 820.

state.[98] The Court applied each factor in determining whether it was appropriate for the federal district court to abstain from exercising jurisdiction.[99] First, the relative progress of the state and federal suits weighed against exercising jurisdiction because of "the apparent absence of any proceedings in the District Court, other than the filing of the complaint, prior to the motion to dismiss."[100] Second, the convenience of the federal forum also weighed against exercising jurisdiction because of "the 300-mile distance between the District Court in Denver and the court in Division 7" (the Colorado water division where the government's asserted water rights were located).[101] Third, the general judicial bias against piecemeal adjudication weighed against exercising jurisdiction because of "the extensive involvement of state water rights occasioned by this suit naming 1,000 defendants."[102] Fourth, the federal government's participation in the state proceedings weighed against exercising jurisdiction because of "the existing participation by the Government in Division 4, 5, and 6 [state water] proceedings."[103] The Court held that these factors, *particularly* the policy behind the McCarran Amendment to avoid "piecemeal adjudication of water rights" (i.e., factor three) justified the lower court's decision to abstain from the case.[104]

But importantly for SPRNCA, the Court indicated that it may be proper for a federal district court to exercise jurisdiction, despite the four factors weighing against exercising jurisdiction, when the state court proceedings are inadequate to protect a federal reserved right.[105] Specifically, the Court noted that a federal district court's decision not to exercise federal jurisdiction over a federal reserved water right claim because of the opposing factors may not extend to a situation where the "state proceeding [was] in some respect inadequate to resolve the federal claims."[106]

As discussed earlier, courts have held that a state water adjudication is *not* inadequate in resolving federal reserved water rights just because it does not "determine the rights of users of all hydrologically-related water sources."[107] In particular, the Court explained that state water proceedings that do not determine the

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98. *Colo. River Water Conservation Dist.*, 424 U.S. at 805, 820.
99. *Id.* at 820.
100. *Id.*
101. *Id.*
102. *Id.*
103. *Id.*
104. *Id.* at 819.
105. *See id.* at 820; *cf.* United States v. Oregon, 44 F.3d 758, 770 (9th Cir. 1994); Arizona v. San Carlos Apache Tribe of Ariz., 463 U.S. 545, 570–71 (1983) (affirming district court dismissal of federal suit regarding federal reserved water right on tribal land because of an ongoing concurrent state court proceeding but also warning that "any state court decision alleged to abridge Indian water rights protected by federal law can expect to receive, if brought for review before this Court, a particularized and exacting scrutiny commensurate with the powerful federal interest in safeguarding those rights from state encroachment"); United States v. Dist. Court in & for the Cnty. of Eagle, 401 U.S. 520, 525–26 (1971) (noting that in the supplemental water adjudication if federal reserved rights are conflicted by "previously decreed rights" absent from the adjudication, the state court judgement is reviewable by the Supreme Court).
106. *Colo. River Water Conservation Dist.*, 424 U.S. at 820.
107. *Oregon*, 44 F.3d at 769.

rights of claimants to groundwater are not inadequate.[108] Similarly in *United States v. Oregon,* the court held that Congress did not intend the McCarran Amendment "to require comprehensive stream adjudications . . . to include the adjudication of groundwater rights as well as rights to surface water."[109] However, the court pointed out that the omission of groundwater claims from the state water proceedings (despite the scientific understanding of the connectedness of groundwater and surface water) went to the merits of the adjudication, and if federal reserved water rights were not respected, the state proceedings were reviewable by the Supreme Court.[110]

So despite a situation where the four *Colorado River Water Conservation District* factors weigh against the federal district court exercising jurisdiction, the federal courts may exercise jurisdiction over the federal reserved water right when a state proceeding is "in some respect *inadequate* to resolve federal claims."[111] As discussed in Parts II and III, the Gila River GSA is no longer adequate to protect the express federal reserved water right in SPRNCA, and this is reason for a federal court to exercise jurisdiction if the United States asserts its federal reserved water right in federal district court.

II. AN EXPRESS FEDERAL RESERVED WATER RIGHT IN SPRNCA

SPRNCA has an *express* federal reserved water right, meaning that Congress clearly defines the purposes for which water is reserved in the statute.[112] Thus, reviewing courts can rigorously protect the expressly reserved water and do not need to carefully examine the purposes for which the water is reserved.[113] In 1988, under 16 U.S.C. § 460xx(a), Congress created SPRNCA "to protect the riparian area and the aquatic, wildlife, archeological, paleontological, scientific, cultural, educational, and recreational resources of the public lands surrounding the San Pedro River."[114] Additionally under 16 U.S.C § 460xx–1(d), Congress expressly reserved water for "the purposes of this reservation, a quantity of water sufficient to fulfill the purposes of the San Pedro Riparian National Conservation

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108. *Id.* at 768–69; *see also* Gila II, 857 P.2d 1236, 1248 (Ariz. 1993).

109. *Oregon*, 44 F.3d at 770.

110. *Id.* at 770.

111. Alexander Wood, *Watering Down Federal Court Jurisdiction: What Role Do Federal Courts Play in Deciding Water Rights?*, 23 J. ENV'T L. & LITIG. 241, 258, 271–72 (2008); Colo. River Water Conservation Dist. v. United States, 424 U.S. 800, 820 (1976) (emphasis added).

112. *See* Robert Jerome Glennon & Thomas Maddock, III, *In Search of Subflow: Arizona's Futile Effort to Separate Groundwater from Surface Water*, 36 ARIZ. L. REV. 567, 602–03 (1994) (arguing that the express federal reserved water right in SPRNCA has a greater scope of protection compared to the implied federal reserved water right in *United States v. New Mexico*, which only extended rights to the primary and not secondary purposes of the federal forest); *see also* Wendy Weiss, *The Federal Government's Pursuit of Instream Flow Water Rights*, 1 U. DENV. WATER L. REV. 151, 166 (1998).

113. *Cf.* United States v. New Mexico, 438 U.S. 696, 699–700 (1978) (explaining that a "careful examination" of the appurtenant water necessary to accomplish the purpose of the reservation is required because the "reservation is implied, rather than expressed").

114. 16 U.S.C.A. § 460xx(a) (Westlaw through Pub. L. No. 117-39).

Area created by this subchapter."[115] This federal reserved water right extends to both surface water and groundwater.[116]

Under 16 U.S.C § 460xx–1(d), Congress specified that the priority date of the express federal reserved water right is November 18, 1988, and directed the Secretary of the Interior to file a claim in the appropriate general stream adjudication (i.e., the Gila River GSA).[117] One year later, the Secretary filed a claim in the Gila River GSA.[118] But this claim has not yet been quantified (i.e., the Special Master has not decided the amount of water associated with the federal reserved water right).[119]

With the water right still unquantified, the Gila River GSA is inadequate to protect the federal reserved water right in SPRNCA after a recent Arizona Supreme Court decision. Communities near the San Pedro River, like Sierra Vista in Cochise County, are outside of the Active Management Areas ("AMA")[120] defined under Arizona law, and therefore, communities like Sierra Vista are subject to a less stringent requirement—i.e., an adequate-water-supply designation—to pump groundwater than communities in AMAs.[121] By Arizona statute, an adequate water supply requires that:

> 1. Sufficient groundwater, surface water or effluent of adequate quality will be continuously, *legally* and *physically* available to satisfy the water needs of the proposed use for at least one hundred years.
>
> 2. The financial capability has been demonstrated to construct the water facilities necessary to make the supply of water available for the proposed use, including a delivery system and any storage facilities or treatment works.[122]

Under Arizona law, for a developer to sell land, an adequate-water-supply designation is not mandatory.[123] But a municipality can choose to have a mandatory

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115. *Id.* § 460xx–1(d).

116. *See* Cappaert v. United States, 426 U.S. 128, 129 (1976); *see also* Agua Caliente Band of Cahuilla Indians v. Coachella Valley Water Dist., 849 F.3d 1262, 1271–72 (9th Cir. 2017); Gila III, 989 P.2d 739, 750 (Ariz. 1999).

117. 16 U.S.C.A. § 460xx–1(d).

118. Larson & Payne, *supra* note 7, at 489.

119. *Id.*

120. AMAs are parts of the state of Arizona defined under the Groundwater Management Act ("GMA") of 1980, and the GMA "limit[s] all future groundwater withdrawals within AMAs to only those specifically authorized by the Act." Engel et al., *supra* note 33, at 193.

121. Larson & Payne, *supra* note 7, at 487. In comparison, a developer within an AMA may not sell land without an assured-water-supply designation from ADWR. ARIZ. REV. STAT. ANN. § 45–576 (A)–(B) (Westlaw through 1st Spec. Sess. of 55th Leg.); Larson & Payne, *supra* note 7, at 486. The assured-water-supply designation is "designed to limit the use of groundwater for urban development." Larson & Payne, *supra* note 7, at 486–87.

122. ARIZ. REV. STAT. ANN. § 45–108(I)(1–2) (Westlaw through 1st Spec. Sess. of 55th Leg.) (emphasis added).

123. *Id.* § 32–2181(F)(2).

adequate-water-supply requirement before a development is approved.[124] Specifically, Cochise County has adopted regulations that require developments to receive an adequate-water-supply designation from ADWR before the development is approved by the county.[125]

By regulation, ADWR requires developers to have a Certificate of Convenience and Necessity ("CC&N") to meet the legally available requirement for an adequate-water-supply designation.[126] Further, by regulation, ADWR requires that for groundwater to be considered physically available, groundwater must be withdrawn from wells that are in the service area of the applicant and at depths that do not exceed the maximum 100-year depth-to-static water level (i.e., 1,200 feet below the land surface for housing developments outside of AMAs).[127] Despite the pending quantification of the federal reserved water right in SPRNCA, in communities near the San Pedro River—like Sierra Vista—who have opted in to mandatory adequate-water-supply designations, developers are still able to receive adequate-water-supply designations from ADWR and start pumping groundwater because of a recent Arizona Supreme Court decision.[128]

In this decision, the Arizona Supreme Court held that ADWR does not need to consider unquantified federal reserved water rights when making adequate-water-supply designations.[129] In *Silver*, the Court reasoned that because both the Arizona statutes and ADWR regulations are silent on the issue of unquantified federal reserved water rights, ADWR need not consider unquantified federal reserved water rights to determine whether water will be physically and legally available for 100 years.[130] The Court further justified its interpretation on the history of the statute, specifically that the state legislature amended the statute in 2007 *after* ADWR had adopted its regulations.[131] By not expressly ordering changes of ADWR's regulatory definitions of legal and physical availability to include unquantified federal reserved water rights, the legislature implicitly approved of the regulatory definitions.[132] The Court held that ADWR appropriately made an adequate-water-supply designation to approve Pueblo Del Sol Water to supply water to Tribute, a proposed

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124. *Id.* § 11–823(a); *see also* Larson & Payne, *supra* note 7, at 487.

125. COCHISE COUNTY, ARIZ. SUBDIVISION REGULATIONS art. 4, § 408.03 (2008).

126. *See* Silver v. Pueblo Del Sol Water Co., 423 P.3d 348, 354 (Ariz. 2018); ARIZ. ADMIN. CODE § R12–15–718 (2020).

127. *Silver*, 423 P.3d at 353–54; ARIZ. ADMIN. CODE § R12–15–716. Static water level is "the depth of the water in the well when the pump is off long enough for the aquifer to return to its normal level." WASH. STATE DEP'T HEALTH, MEASURING WATER LEVELS IN WELLS 1 (2009), https://www.doh.wa.gov/portals/1/Documents/pubs/331-428.pdf [https://perma.cc/FL38-M7PL].

128. *See Silver*, 423 P.3d at 361.

129. *Id.*; *see also* ENERGY AND RESOURCES COMMITTEE, ABA ENVIRONMENT, ENERGY, & RESOURCES LAW: THE YEAR IN REVIEW 2018, at 292 (2019) (explaining that in *Silver*, "the Arizona Supreme Court held that an Arizona statute requiring a subdivider to demonstrate an adequate water supply for a proposed subdivision did not require the Arizona Department of Water Resources (ADWR) to consider potentially competing but unquantified federal reserved rights for a conservation area established by Congress in 1988").

130. *Silver*, 423 P.3d at 360.

131. *See id.* at 355.

132. *See id.* at 356.

development in Sierra Vista.[133] Specifically, the Court explained that the water is legally available for 100 years because Pueblo received a CC&N in 1972, and the water is physically available because the wells are located within Tribute and will not withdraw water from greater than 650 feet, which is well within the 1,200-foot limit.[134]

ADWR's determination that water is legally and physically available when making an adequate-water-supply designation does not consider the water that the federal government has expressly reserved for SPRNCA.[135] This is problematic for Tribute because once the express federal reserved water right in SPRNCA is quantified in the Gila River GSA, the federal government will be able to assert its senior water right against Pueblo Del Sol Water's nearby groundwater pumping that infringes on the government's water right.[136] Importantly, because federal reserved water rights extend to both surface water (including subflow) and groundwater, it is irrelevant whether the nearby groundwater pumpers are pumping groundwater (nonappropriable) versus subflow (appropriable and subject to rules of prior appropriation).[137] In other words, the federal government can assert its federal reserved water right in SPRNCA against *both* diversions of subflow and groundwater by nearby Tribute residents using water pumped from wells.

The consequences of this decision reach beyond Tribute. In particular, adequate-water-supply designations no longer are an accurate way to signal to future homeowners that they will have physically and legally available water for 100 years because once the United States enforces its federal reserved water right in SPRNCA, there may no longer be an adequate water supply for homeowners in nearby communities—potentially rendering their property "almost worthless due to inadequate water supply."[138] This result would be entirely contrary to the purpose of adequate-water-supply designations under A.R.S. § 45–108, which was to "ensure purchasers do not unknowingly buy land without access to adequate water."[139]

Moreover, ADWR's failure to consider the federal reserved water right in SPRNCA when determining that water is legally and physically available is also problematic for SPRNCA and the federal government. Because ADWR does not need to consider unquantified federal reserved water rights to make an adequate-water-supply designation, it is likely that, pending quantification of the federal reserved water right in the Gila River GSA, groundwater pumping in these nearby communities will affect water flows in SPRNCA, threaten the riparian ecosystem,

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133. *Id.* at 351, 361.

134. *Id.* at 351, 354; *see also* Larson & Payne, *supra* note 7, at 490.

135. *See supra* text accompanying notes 129–134.

136. *See* Cappaert v. United States, 426 U.S. 128, 129 (1976); *see also* Agua Caliente Band of Cahuilla Indians v. Coachella Valley Water Dist., 849 F.3d 1262, 1271–72 (9th Cir. 2017); Gila III, 989 P.2d 739, 750 (Ariz. 1999).

137. *See Gila III*, 989 P.2d at 750.

138. *Silver*, 423 P.3d at 366 (Bales, J., concurring in part).

139. *Id.* at 361 (Bales, J., concurring in part).

and therefore conflict with the federal reserved water right in SPRNCA.[140] The U.S. Geological Survey created a groundwater-flow model for the Upper San Pedro basin (which includes Sierra Vista) to assess the impacts of groundwater pumping on the river and the riparian habitat.[141] The study found that "[o]ne of the possible undesired consequences of withdrawal of ground water is reduction of water available to connected streams, springs, and riparian trees dependent on ground water."[142] Consequently, until the United States can enforce its rights, the groundwater pumpers with inferior water rights could "bring the conservation area's wildlife populations and aquatic environments to the brink of collapse."[143] Thus, this Arizona Supreme Court decision threatens both the federal reserved water right in SPRNCA and junior-water-right holders (e.g., Pueblo Del Sol Water, which will deliver water to residents in Tribute).

In order for the United States to protect its federal reserved water right in SPRNCA, it should assert a claim in federal court because the state court proceedings are now inadequate to protect the federal reserved water right in SPRNCA as a result of the following conditions: (i) the ability of ADWR to make adequate-water-supply designations (finding water physically and legally available for 100 years) without considering federal reserved water rights;[144] (ii) the proximity of proposed groundwater pumping to SPRNCA;[145] (iii) the slow pace of the Gila River GSA and the resulting unquantified federal reserved water right in SPRNCA;[146] and (iv) Arizona's bifurcated system for water rights where groundwater pumping is only limited by the reasonable use doctrine in housing developments outside of AMAs (whereas surface water plus subflow water uses are subject to prior appropriation).[147]

III. HOW TO PROTECT THE FEDERAL RESERVED WATER RIGHT IN SPRNCA

The United States can file a claim in federal district court to protect its federal reserved water right in SPRNCA.[148] Because the state GSA is not adequately

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140. *Id.* at 365–66 (Bales, J., concurring in part); *see also* STANLEY A. LEAKE ET AL., U.S. GEOLOGICAL SURVEY, SIMULATED EFFECTS OF GROUND-WATER WITHDRAWALS AND ARTIFICIAL RECHARGE ON DISCHARGE TO STREAMS, SPRINGS, AND RIPARIAN VEGETATION IN THE SIERRA VISTA SUBWATERSHED OF THE UPPER SAN PEDRO BASIN, SOUTHEASTERN ARIZONA 14 (2014).

141. LEAKE ET AL., *supra* note 140, at 1, 3.

142. *Id.* at 14.

143. *Silver*, 423 P.3d at 366 (Bales, J., concurring in part).

144. *See supra* text accompanying notes 129–134.

145. *See supra* text accompanying notes 133–134.

146. *See supra* text accompanying notes 117–119.

147. Gila IV, 9 P.3d 1069, 1073 (Ariz. 2000).

148. Alternatively, the federal government can engage in settlement negotiations with the state and opt to give up some priority in return for state cooperation. In Utah, for example, the United States settled a federal reserved water rights claim in Zion National Park by negotiation. THOMPSON ET AL., *supra* note 31, at 1079. Similarly, in Colorado, the United States has successfully negotiated with the state to settle federal reserved water rights to instream flows in national parks. *See* Weiss, supra note 112, at 160–62. Additionally, in

protecting the federal reserved water right in SPRNCA, the federal district court has reason to exercise its concurrent jurisdiction.[149] Generally, federal courts abstain from exercising jurisdiction over federal reserved water rights claims if there is an ongoing state water adjudication in light of the *Colorado River Water Conservation District* factors (particularly factor three): (1) the relative progress of the state and federal suits; (2) the convenience of the federal forum; (3) the general judicial bias against piecemeal litigation; and (4) the federal government's participation in the state proceedings.[150] But when a state proceeding is inadequate to protect a federal reserved water right, the federal district court may exercise jurisdiction despite the opposing factors.[151]

Here, based on the policy goals of the McCarran Amendment and the subsequent importance of factor three, the four *Colorado River Water Conservation District* factors probably weigh against the federal court exercising jurisdiction. Unlike the factor analysis in *Colorado River Water Conservation District,* factors one and two weigh in favor of the federal court exercising jurisdiction over a SPRNCA claim. With respect to the first factor (i.e., the relative progress of the state and federal suits), there is no federal proceeding related to the adjudication of SPRNCA because the statute directs the Secretary to file a claim in the relevant state GSA,[152] and the McCarran Amendment allows for the federal government to be joined as a defendant in comprehensive state GSAs.[153] But while the Gila River GSA commenced in 1974,[154] adjudications in the San Pedro watershed have just started

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Montana, the United States settled federal reserved water rights in national parks, national wildlife refuges, Bureau of Land Management land, and wild and scenic rivers in the state of Montana by negotiation (i.e., giving up some priority in return for state cooperation). THOMPSON ET AL., *supra* note 31, at 1080; *see also* Michelle Bryan, *At the End of the Day: Are the West's General Stream Adjudications Relevant to Modern Water Rights Administration?*, 15 WYO. L. REV. 461, 462 (2015). Similarly, in Idaho, the United States settled federal reserved water rights of wild and scenic rivers and tributaries of HCNRA by negotiating to subordinate federal reserved rights to existing water rights and specific, limited, future uses. THOMPSON ET AL., *supra* note 31, at 1080; *see also* Ann Y. Vonde et al., *Understanding the Snake River Basin Adjudication*, 52 IDAHO L. REV. 53, 188–89 (2016).

149. *See supra* text accompanying notes 90, 105.

150. CONF. OF W. ATT'YS GEN., *supra* note 96; *see also* Colo. River Water Conservation Dist. v. United States, 424 U.S. 800, 820 (1976) (holding that "[b]eyond the congressional policy expressed by the McCarran Amendment and consistent with furtherance of that policy, we also find significant (a) the apparent absence of any proceedings in the District Court, other than the filing of the complaint, prior to the motion to dismiss, (b) the extensive involvement of state water rights occasioned by this suit naming 1,000 defendants, (c) the 300-mile distance between the District Court in Denver and the court in Division 7, and (d) the existing participation by the Government in Division 4, 5, and 6 proceedings").

151. *See Colo. River Water Conservation Dist.*, 424 U.S. at 820 (not deciding "whether, despite the McCarran Amendment, dismissal would be warranted if more extensive proceedings had occurred in the District Court prior to dismissal, if the involvement of state water rights were less extensive than it is here, or if the *state proceeding were in some respect inadequate to resolve the federal claims*") (emphasis added).

152. 16 U.S.C.A. § 460xx–1(d) (Westlaw through Pub. L. No. 117-392012).

153. 43 U.S.C.A. § 666(a) (Westlaw through Pub. L. No. 117-39).

154. JUD. BRANCH ARIZ. MARICOPA CNTY., *supra* note 12; *see also* Glennon & Maddock, *supra* note 112, at 569.

and are ongoing.[155] Further, the SPRNCA federal reserved water right was established in 1988, but the state system has not quantified the right in the past 32 years.[156] Therefore, it is arguable that the state proceeding has not progressed substantially with regard to the actual adjudication of water claims, and subsequently, factor one weighs in favor of the federal district court exercising jurisdiction. Also, the second factor (i.e., the convenience of the federal forum) weighs in favor of the federal court exercising jurisdiction because the distance between the District Court for the District of Arizona in Tucson to SPRNCA (~86.5 miles) is closer than the distance between the Maricopa County Superior Court in Phoenix (which has jurisdiction over the Gila River GSA proceedings)[157] and SPRNCA (~194 miles).[158]

Like the factor analysis in the *Colorado River Water Conservation District,* factors three and four weigh against the federal court exercising jurisdiction over a SPRNCA claim. Factor three (i.e., the general judicial bias against piecemeal litigation) weighs against the federal court exercising jurisdiction because there are thousands of claimants in the state GSAs.[159] Courts also weigh this factor more heavily than the other factors, meaning that the court will be more hesitant to exercise jurisdiction over the SPRNCA claim because of the extensive number of claimants in the ongoing Gila River GSA.[160] Lastly, the federal government has been participating in the Gila River GSA proceedings, and with regards to SPRNCA, the Secretary of the Interior filed a claim in the Gila River GSA for its federal reserved water right in SPRNCA in 1989.[161] Therefore, factor four (i.e., the federal government's participation in the state proceedings) also weighs against the federal court exercising jurisdiction.

But because the state court proceeding inadequately protects federal reserved water rights, the federal district court may exercise jurisdiction (despite the other *Colorado River Water Conservation District* factors weighing against the

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155. *Arizona General Stream Adjudication Bulletin*, JUD. BRANCH ARIZ. MARICOPA CNTY., http://www.superiorcourt.maricopa.gov/SuperiorCourt/GeneralStreamAdjudication/AdjudicationBulletin/index.asp [https://perma.cc/3NHT-HN4K] (last visited Dec. 27, 2020) (stating that "[a]ll of the contested cases seeking water rights for irrigation use that can be appropriately initiated at this point in three subwatersheds, Aravaipa, Winkleman, and Redington, have now been initiated"). ADWR has mapped out watersheds and subwatersheds. *See Adjudications,* ARIZ. DEP'T WATER RES., https://new.azwater.gov/adjudications [https://perma.cc/B3R7-3XZE] (last visited Dec. 27, 2020).

156. *See* 16 U.S.C.A § 460xx–1(d); Larson & Payne, *supra* note 7, at 489.

157. *Arizona's General Stream Adjudications*, JUD. BRANCH ARIZ. MARICOPA CNTY., http://www.superiorcourt.maricopa.gov/SuperiorCourt/GeneralStreamAdjudication/Index.asp [https://perma.cc/3NHT-HN4K] (last visited Dec. 26, 2020).

158. *See* GOOGLE MAPS, https://www.google.com/maps [https://perma.cc/Y6LR-J8ZH] (last visited Apr. 9, 2021).

159. *Arizona's General Stream Adjudications*, *supra* note 157.

160. *See, e.g.*, Colo. River Water Conservation Dist. v. United States, 424 U.S. 800, 819 (1976).

161. *See* Larson & Payne, *supra* note 7, at 489.

federal district court exercising jurisdiction).[162] Again, the combination of the following conditions makes the state system inadequate to protect the federal reserved water right in SPRNCA: (i) the Court's holding in *Silver*; (ii) the geographic proximity of groundwater pumping to SPRNCA; (iii) the pace of the GSA; and (iv) Arizona's bifurcated system for water rights.[163] First, after the *Silver* decision, ADWR may permit groundwater pumping outside of AMAs without considering the federal reserved water right in SPRNCA,[164] which extends to groundwater.[165] Second, because of the proximity of the proposed groundwater pumping to SPRNCA,[166] it is likely that the water reserved for the purposes of SPRNCA would be affected by Pueblo Del Sol Water Company's planned groundwater pumping for the proposed development of Tribute.[167] Namely, these groundwater withdrawals (i.e., capture) could result in a "reduction of water available to connected streams, springs, and riparian trees dependent on ground water."[168] Third, because of the slow pace of the GSA, it is likely that SPRNCA will be physically impacted by capture before the Special Master is able to quantify the claim and ADWR is able to enforce the judicial decree against groundwater pumpers depleting surface and groundwater from SPRNCA.[169] Finally, because of the bifurcated water system in Arizona, proposed developments outside of AMAs can

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162. *See Colo. River Water Conservation Dist.*, 424 U.S. at 820 (not deciding "whether, despite the McCarran Amendment, dismissal would be warranted if more extensive proceedings had occurred in the District Court prior to dismissal, if the involvement of state water rights were less extensive than it is here, or if the *state proceeding were in some respect inadequate to resolve the federal claims*") (emphasis added). Also, the Supreme Court can review the merits of a state proceeding with regards to whether federal reserved water rights are respected. *See, e.g.*, United States v. Oregon, 44 F.3d 758, 770 (9th Cir. 1994) (explaining that "in administering water rights the State is compelled to respect federal law regarding federal reserved rights and to the extent it does not, its judgments are reviewable by the Supreme Court"); United States v. Dist. Ct. in & for the Cnty. of Eagle, 401 U.S. 520, 525–26 (1971) (noting that in the supplemental water adjudication if federal reserved rights are conflicted by "previously decreed rights" absent from the adjudication, the state court judgement is reviewable by the Supreme Court); Arizona v. San Carlos Apache Tribe of Ariz., 463 U.S. 545, 570–71 (1983) (explaining that "any state court decision alleged to abridge Indian water rights protected by federal law can expect to receive, if brought for review before this Court, a particularized and exacting scrutiny commensurate with the powerful federal interest in safeguarding those rights from state encroachment"). For example, while the McCarran Amendment does not require GSAs to adjudicate groundwater rights to be comprehensive, if federal reserved water rights are infringed on as a result of groundwater claims being omitted from the proceedings, then water rights administered by the state court are reviewable by the Supreme Court. *Oregon*, 44 F.3d at 770.

163. *See* Gila IV, 9 P.3d 1069, 1073 (Ariz. 2000).

164. *See* Silver v. Pueblo Del Sol Water Co., 423 P.3d 348, 361 (Ariz. 2018).

165. *See* Gila III, 989 P.2d 739, 750 (Ariz. 1999).

166. *Silver*, 423 P.3d at 351 (describing that "[t]he proposed development site is located approximately five miles from the San Pedro River and is outside a statutory active management area").

167. *Id.*

168. LEAKE ET AL., supra note 140, at 14.

169. *See supra* text accompanying notes 117–119.

pump groundwater only subject to the minimal limits of the reasonable use doctrine.[170]

For these reasons, the state proceeding is inadequate to protect the federal reserved water right, and the federal district court should exercise jurisdiction over a claim. Therefore, the United States should file a suit in federal court to protect its federal reserved water right in SPRNCA.

CONCLUSION

The San Pedro River supports a diverse riparian system including 84 mammal species, 14 fish species, and 41 reptiles and amphibian species.[171] The San Pedro is a critical stopover for migrating birds.[172] It is the home of endangered species, including the jaguar.[173] The river supports cottonwoods and other marshland vegetation along the banks of the river.[174] Because Congress recognized the importance of the river, it created SPRNCA and expressly reserved water "to protect the riparian area and the aquatic, wildlife, archeological, paleontological, scientific, cultural, educational, and recreational resources of the public lands surrounding the San Pedro River."[175]

Population growth in Cochise County has increased the demand on groundwater and has reduced groundwater discharge to and flows in the San Pedro River.[176] The long-term impacts of reduced flows in the San Pedro River include a loss of the riparian-plant community and a decline in the bird, mammal, reptile, and amphibian species that rely on that water.[177]

Notably, Cochise County has opted into the optional state requirement that developers receive an adequate-water-supply designation from ADWR before a development is approved.[178] By Arizona statute, an adequate water supply requires that "sufficient groundwater, surface water or effluent of adequate quality will be continuously, *legally* and *physically* available to satisfy the water needs of the proposed use for at least one hundred years."[179] However, the Arizona Supreme Court held that ADWR does not need to consider the unquantified federal reserved

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170. Gila IV, 9 P.3d 1069, 1073 (Ariz. 2000).

171. GLENNON, *supra* note 2, at 52–53; *Places We Protect*, THE NATURE CONSERVANCY, https://www.nature.org/en-us/get-involved/how-to-help/places-we-protect/san-pedro-river/ [https://perma.cc/H2NF-9PCM] (last visited Jan. 17, 2021).

172. GLENNON, *supra* note 2, at 53; THE NATURE CONSERVANCY, *supra* note 171.

173. GLENNON, *supra* note 2, at 53; THE NATURE CONSERVANCY, *supra* note 171.

174. GLENNON, *supra* note 2, at 53; THE NATURE CONSERVANCY, *supra* note 171.

175. 16 U.S.C.A. § 460xx(a) (Westlaw through Pub. L. No. 117-39).

176. *See, e.g.*, GLENNON, *supra* note 2, at 58, 60; THE NATURE CONSERVANCY, *supra* note 171; Shannon, *supra* note 7 (describing that "[a]s the small city's [Sierra Vista's] population has exploded, nearly doubling to more than 40,000 since 1980, so has its water consumption, damaging the aquifer that supports the river").

177. GLENNON, *supra* note 2, at 60; *see* THE NATURE CONSERVANCY, *supra* note 171.

178. ARIZ. REV. STAT. ANN. § 11–823(a) (Westlaw through 1st Spec. Sess. of 55th Leg.); *see also* Larson & Payne, *supra* note 7, at 487.

179. ARIZ. REV. STAT. ANN. § 45–108(I)(1)–(2) (Westlaw through 1st Spec. Sess. of 55th Leg.) (emphasis added).

water right in SPRNCA in making an adequate-water-supply designation.[180] The United States has filed a claim in the Gila River GSA for its federal reserved water right, but the water right has not yet been quantified (i.e., the Special Master has not decided the amount of water associated with the federal reserved water right).[181]

The federal district court should exercise jurisdiction over a water right claim in SPRNCA because the state proceedings are inadequate to protect the federal reserved water right as a result of the following conditions: (i) the ability of ADWR to make adequate-water-supply designations without considering federal reserved water rights; (ii) the proximity of proposed future groundwater pumping to SPRNCA; (iii) the slow pace of the Gila River GSA and resulting unquantified federal reserved water right in SPRNCA; and (iv) Arizona's bifurcated system for water rights (where groundwater pumping is only limited by the reasonable use doctrine outside of AMAs[182]). Thus, the United States should protect its federal reserved water right in SPRNCA by asserting a claim in federal court.

180. Silver v. Pueblo Del Sol Water Co., 423 P.3d 348, 361 (Ariz. 2018).
181. Larson & Payne, *supra* note 7, at 489.
182. Gila IV, 9 P.3d 1069, 1073 (2000).