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State Water Ownership and the Future of Groundwater Management

ABSTRACT. Climate change—bringing worse drought and more erratic weather—will both increase our need for groundwater and shrink the amount available. Managing dwindling groundwater reserves poses stark legal and policy challenges, which fall largely on the states. But in many states, antiquated legal regimes allow for an unrestricted race to pump aquifers dry. As a result, from the High Plains to the agricultural valleys of California, the nation's aquifers are being depleted. Some will never replenish.

Against this backdrop, this Note addresses a question that the Supreme Court confronted—but failed to clarify—this Term: can states *own* the groundwater within their borders? Many states, particularly in the West, claim to own waters within their territory. Over the course of the twentieth century, the Court settled that these water-ownership claims are largely meaningless beyond states' borders: states cannot rely on these claims to thwart federal supremacy or prevail in water contests with other states or the federal government. However, many scholars, courts, and litigants go one step further. They conclude that, in *any* context, state water-ownership claims cannot mean that the state has a *proprietary* ownership of its water. Instead, they argue, "ownership" is merely a fictive shorthand for the state's authority to regulate a resource that no one really owns.

This Note disagrees. Clarifying a perennially muddied question of water law, it shows why, for state-law purposes, states can own their share of groundwater. More importantly, it demonstrates how denying that fact could imperil sound groundwater management when we need it most.

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NOTE CONTENTS

> "Whence comes this ventriloquism which maketh the constitution say that which it sayeth not? The constitutional provision . . . is made to mean only that water can not be owned by any one because it can not stand still!"[1]

INTRODUCTION

Consider three recent scenes from the drought gripping the American West.[2]

Over the past decade and a half, industrial farming operations have bought up tens of thousands of acres in the Arizona desert for a simple reason: to pump up as much groundwater as they can—and then leave.[3] No law will stop them from sucking the aquifers dry. While no state west of the Hundredth Meridian is more reliant on groundwater,[4] Arizona allows users in these regions to pump

1. Moses Lasky, *From Prior Appropriation to Economic Distribution of Water by the State—Via Irrigation Administration*, 1 ROCKY MTN. L. REV. 161, 179 (1929) (citing Mohl v. Lamar Canal Co., 128 F. 776, 779 (C.C.D. Colo. 1904)) (criticizing a 1904 Colorado circuit court ruling interpreting the Colorado Constitution's declaration that all unappropriated water within the state is "the property of the public," COLO. CONST. art. XVI, § 5).

2. *See* Nathan Rott, *Study Finds Western Megadrought Is Worst in 1,200 Years*, NPR (Feb. 14, 2022, 11:04 AM ET), https://www.npr.org/2022/02/14/1080302434/study-finds-western-megadrought-is-the-worst-in-1-200-years [https://perma.cc/3L8M-NK32]; Thomas Frank, *Drought Spreads to 93% of West. That's Never Happened*, E&E NEWS (July 7, 2021, 6:44 AM EDT), https://www.eenews.net/climatewire/2021/07/07/stories/1063736561 [https://perma.cc/9Z4R-8AME].

3. *See* Noah Gallagher Shannon, *The Water Wars of Arizona*, N.Y. TIMES MAG. (July 19, 2018), https://www.nytimes.com/2018/07/19/magazine/the-water-wars-of-arizona.html [https://perma.cc/W7DM-XBAK]; Ian James & Rob O'Dell, *Megafarms and Deeper Wells Are Draining the Water Beneath Rural Arizona—Quietly, Irreversibly*, ARIZ. REPUBLIC (Dec. 27, 2019, 12:50 PM EST), https://www.azcentral.com/in-depth/news/local/arizona-environment/2019/12/05/unregulated-pumping-arizona-groundwater-dry-wells/2425078001 [https://perma.cc/M2MM-SWRE].

4. *See* REED D. BENSON, BURKE W. GRIGGS & A. DAN TARLOCK, WATER RESOURCE MANAGEMENT: A CASEBOOK IN LAW AND PUBLIC POLICY 398 (8th ed. 2021). First identified as such by John Wesley Powell, the Hundredth Meridian is a hydrologic demarcation that runs north-to-south bisecting Texas and the Dakotas. It divides the wet East (where the average rainfall is twenty inches or more) from the arid West (where rainfall is typically less than twenty inches a year and more sporadic). *See* JAMES RASBAND, JAMES SALZMAN & MARK SQUILLACE, NATURAL RESOURCES LAW AND POLICY 745 (2d ed. 2009). There is evidence, however, that climate change has moved this arid-humid divide eastward, to the ninety-eighth meridian. *See* Joe Wertz, *The Arid West Moves East, with Big Implications for Agriculture*, NPR (Aug. 9, 2018, 8:37 PM ET), https://www.npr.org/2018/08/09/637161725/the-arid-west-moves-east-with-big-implications-for-agriculture [https://perma.cc/6D6U-PNZB].

as much as they can put to "reasonable use," which includes farming.[5] Lured by the lack of regulation and long growing season, Saudi and Emirati dairy companies have turned huge swaths of desert green, raising hay to feed cows back in the Gulf.[6] Pecan and pistachio conglomerates have planted tens of thousands of acres of nut orchards.[7] In regions that follow the "law of the largest pump," these companies brought the biggest.[8] Fearing the aquifers' impending depletion, typically regulation-averse farmers and politicians have sought increased oversight, to no avail.[9] Under the continued strain of climate change, Arizona might yet change course by restricting groundwater pumping, or even revamping the legal regime that governs groundwater property rights. If it did, could the dairy and nut agribusinesses claim that Arizona has effected a taking and so must compensate them for the value of their lost water?

For years in eastern Montana, a Louisiana company allegedly dumped toxic waste generated by oil and fracking operations in the Bakken.[10] During the oil

5. *See* Shannon, *supra* note 3. Arizona's groundwater regime is complicated, and these companies have exploited one of its gaps. Arizona enacted the Groundwater Management Act in 1980, which, among other things, created "Irrigation Non-Expansion Areas," and a handful of "Active Management Areas," where the state can and does impose pumping restrictions. BENSON ET AL., *supra* note 4, at 398-402. These industrial farms have descended on the rural counties that lie outside of these regulated zones. James & O'Dell, *supra* note 3.

6. *See* Shannon, *supra* note 3; Rob O'Dell & Ian James, *These 7 Industrial Farm Operations Are Draining Arizona's Aquifers, and No One Knows Exactly How Much They're Taking*, ARIZ. REPUBLIC (Dec. 20, 2019, 2:57 PM EST), https://www.azcentral.com/in-depth/news/local/arizona-environment/2019/12/05/biggest-water-users-arizona-farms-keep-drilling-deeper/3937582002 [https://perma.cc/RP64-XD5J]. Of course, out-of-state investment in the West's water is hardly new. For example, in the postbellum period, the majority of capital financing the extensive irrigation systems in Colorado came from the East Coast and Europe, stoking anticorporate sentiments among farmers and fueling fears that Old World feudalism would be imported to the American frontier. *See* DAVID SCHORR, THE COLORADO DOCTRINE: WATER RIGHTS, CORPORATIONS, AND DISTRIBUTIVE JUSTICE ON THE AMERICAN FRONTIER 68 fig.8, 70-71, 79 (2012); ELWOOD MEAD, THE OWNERSHIP OF WATER 3, 5-6 (Denver, Times Printing Works 1887) (on file with Beinecke Rare Book and Manuscript Library, Yale University) (complaining that the laws at the time threatened to allow out-of-state irrigation companies to monopolize the supply of water, implanting "aristocracy" and "landlordism").

7. *See* Shannon, *supra* note 3.

8. *Id.* ("In 2017 alone, one farm pumped 22 billion gallons, nearly double the volume of bottled water sold in the United States annually.").

9. *See id.*; James & O'Dell, *supra* note 3.

10. *See* Tom Lutey, *DEQ Orders Bakken Company to Stop Handling Radioactive Waste*, BILLINGS GAZETTE (May 30, 2014), https://billingsgazette.com/news/government-and-politics/deq-orders-bakken-company-to-stop-handling-radioactive-waste/article_ea09bed0-77fb-5cfa-8b72-0a8a243c2b6d.html [https://perma.cc/RFT7-MYGC]; Endurance Am. Specialty Ins. Co. v. Dual Trucking & Transp., LLC, No. CV-18-134-GF, 2019 WL 4394146, at *1 (D. Mont. Sept. 12, 2019); Admiral Ins. Co. v. Dual Trucking, Inc., No. CV-20-53-GF, 2021 WL 1788681, at *2-5 (D. Mont. May 5, 2021).

boom at the time, operations in North Dakota alone produced millions of tons of chemical- and oil-saturated earthen waste, and an untold amount of radioactive material.[11] The Louisiana company dumped the waste near homes, an area with a particularly high water table.[12] Montana sued the company, seeking heavy fines and demanding it pay for cleanup.[13] In turn, the company's insurers went to court to avoid having to cover these costs.[14] If, in a situation like this,[15] the company were found to have polluted groundwater in the area, would its liability insurance policy cover the loss?

And last summer, as California's agricultural valleys buckled under drought, water thieves ran rampant.[16] They sucked water from whatever source would yield it—including groundwater wells.[17] In response, law enforcement tried to use drones and satellite imagery to track trucks carrying conspicuous water tanks in their beds.[18] It was a losing battle. Even as farmers obeyed state orders to cut back, they reported that illegal overpumping of groundwater was "lowering production in their wells."[19] Water theft of this kind has been reported everywhere

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11. Sarah Jane Keller, *North Dakota Wrestles with Radioactive Oilfield Waste*, HIGH COUNTRY NEWS (July 14, 2014), https://www.hcn.org/articles/north-dakota-wrestles-with-radioactive-oilfield-waste [https://perma.cc/G45P-YGYZ].

12. *See* Lutey, *supra* note 10.

13. Complaint for Declaratory Judgment at 7, *Endurance Am.*, 2019 WL 4394146.

14. *See Endurance Am.*, 2019 WL 4394146; *Admiral Ins. Co.*, 2021 WL 1788681.

15. In this specific case, the court had yet to determine whether the company polluted groundwater. *See Endurance Am.*, 2019 WL 4394146, at *4-5. As described later, a key issue in these kinds of groundwater-contamination cases is the "owned-property exclusion." *See infra* Section III.B. In this case, the wording of that exclusion focused on whether the property was owned or controlled by the policy-holder. *See Endurance Am.*, 2019 WL 4394146, at *4. But the federal district court here suggested that *if* groundwater had been contaminated, then the court would follow a Louisiana decision, *see id.* at *5, which looked to the ownership status of groundwater to determine the scope of the owned-property exclusion, *see* Norfolk S. Corp. v. Cal. Union Ins. Co., 859 So. 2d 167, 193 (La. Ct. App. 2003), *writ denied*, 861 So. 2d 579 (La. 2003).

16. *See* Julie Cart, *Thieves Are Stealing California's Scarce Water. Where's It Going? Illegal Marijuana Farms*, CALMATTERS (Jan. 25, 2022), https://calmatters.org/environment/2021/07/illegal-marijuana-growers-steal-california-water [https://perma.cc/6LFN-G5AW]; Brisa Colon, *Thieves in California Are Stealing Scarce Water amid Extreme Drought, 'Devastating' Some Communities*, CNN (Aug. 13, 2021, 12:18 AM ET), https://www.cnn.com/2021/07/22/us/california-water-thieves-drought [https://perma.cc/X94G-X4N3]; Byrhonda Lyons, *California's Desert Becoming a Hotbed for Water Bandits: Watch*, CALMATTERS (Aug. 9, 2021), https://calmatters.org/environment/drought-2021/2021/08/thieves-stealing-california-water-drought [https://perma.cc/8K4Y-MNCL].

17. *See* Cart, *supra* note 16.

18. *See id.*

19. *Id.*

from Colorado to eastern Washington.[20] Perhaps officials in these states will want to rely on their states' criminal codes to prosecute this for what it is: theft. Could they?

In each of these scenarios, this Note contends that the question of whether states can *own* their groundwater is both important and overlooked. In response to this perennially muddied legal question, this Note argues for a crystal-clear doctrine of qualified state ownership.[21] The stakes of this inquiry are high: if states do not own their groundwater, private takings claims would be more likely to succeed, and states would be more hesitant to restrict pumping;[22] insurance companies would have to pay fewer claims;[23] and states would be unable to prosecute groundwater theft under their larceny statutes.[24]

Groundwater is poised to become even more important. In the coming decades, the United States—especially its arid West[25]—stands to become hotter, drier, and more populous.[26] These changes, driven in part by climate change, will continue to strain the country's already stressed water resources.[27] Continuing a trend that has intensified since the mid-twentieth century, the country will have to go underground to satisfy its water needs.[28]

As climate change increases our reliance on groundwater, it will reduce the amount available. Hotter temperatures deprive aquifers of the snowpack they

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20. *See* Luke Runyon, *In a Drying Climate, Colorado's 'Water Cop' Patrols for Water Thieves*, NPR (Oct. 11, 2018, 5:08 AM ET), https://www.npr.org/2018/10/11/654908677/in-a-drying-climate-colorados-water-cop-patrols-for-water-thieves [https://perma.cc/7PZQ-XNBL]; Hal Bernton, *Water Theft Is Symptom of Bigger Troubles in Wapato Irrigation Project*, SEATTLE TIMES (July 13, 2015, 3:06 PM), https://www.seattletimes.com/seattle-news/environment/water-theft-is-symptom-of-bigger-troubles-in-wapato-irrigation-project [https://perma.cc/DP3X-QDTZ].

21. *Cf.* Carol M. Rose, *Crystals and Mud in Property Law*, 40 STAN. L. REV. 577, 577-79 (1988) (drawing a distinction between "crystal" property rules that announce clear-cut "demarcations of entitlements" with those that are "mud," and convey only "fuzzy, ambiguous" rights and obligations).

22. *See infra* Section III.A.

23. *See infra* Section III.B.

24. *See infra* Section III.C.

25. *See generally* MARC REISNER, CADILLAC DESERT: THE AMERICAN WEST AND ITS DISAPPEARING WATER (Penguin Books rev. ed. 1993) (documenting the historical conflict over water in the West and the large-scale efforts to make the region habitable and agriculturally productive).

26. *See* ISAAC M. CASTELLANO, WATER SCARCITY IN THE AMERICAN WEST: UNAUTHORIZED WATER USE AND THE NEW FUTURE OF WATER ACCOUNTABILITY 10-12, 14-17, 53 (2020).

27. *See* BARTON H. THOMPSON, JR., JOHN D. LESHY, ROBERT H. ABRAMS & SANDRA B. ZELLMER, LEGAL CONTROL OF WATER RESOURCES: CASES AND MATERIALS 17-18 (6th ed. 2018).

28. *See id.* at 11-12; MOLLY A. MAUPIN, JOAN F. KENNY, SUSAN S. HUTSON, JOHN K. LOVELACE, NANCY L. BARBER & KRISTIN S. LINSEY, U.S. GEOLOGICAL SURV., CIRCULAR NO. 1405, ESTIMATED USE OF WATER IN THE UNITED STATES IN 2010, at 45 tbl.14 (2014).

need to recharge, and rising seas threaten to poison coastal groundwater with salt.[29] Storms and wildfires leave contaminated wells in their wake.[30] And erratic weather and punishing droughts—like the one that now afflicts ninety percent of the West—exacerbate the overpumping problem, as communities frantically drill wells to replace the vanishing rivers and reservoirs.[31]

For the foreseeable future, the heavy burden of aquifer management will fall primarily on states.[32] Groundwater is notoriously difficult to manage,[33] and the patchwork of often-antiquated state laws that govern private use of groundwater frequently permits overpumping.[34] As a result, from the High Plains to the agricultural valleys of California,[35] groundwater supplies are being depleted at alarming rates.[36] Some—like the Ogallala Aquifer servicing much of the High Plains—will never replenish.[37] The question of whether states can own the water

29. *See* THOMPSON ET AL., *supra* note 27, at 18.

30. *See* Jason R. Masoner et al., *Urban Stormwater: An Overlooked Pathway of Extensive Mixed Contaminants to Surface and Groundwaters in the United States*, 53 ENV'T SCI. & TECH. 10070, 10070-71 (2019); Lynne Peeples, *The Surprising Connection Between West Coast Fires and the Volatile Chemicals Tainting America's Drinking Water*, ENSIA (Nov. 11, 2020), https://ensia.com/features/volatile-chemicals-vocs-drinking-water [https://perma.cc/U8M7-XBSG].

31. *See* Sasha Khokha, *Drought Drives Drilling Frenzy for Groundwater in California*, KQED (June 2, 2014), https://www.kqed.org/science/17873/drought-drives-drilling-frenzy-for-groundwater-in-california [https://perma.cc/U9F5-V94Y]; Sarfaraz Alam, Mekonnen Gebremichael, Zhaoxin Ban, Bridget R. Scanlon, Gabriel Senay & Dennis P. Lettenmaier, *Post-Drought Groundwater Storage Recovery in California's Central Valley*, WATER RES. RSCH., Oct. 2021, at 1, 1 (estimating that in the Central Valley "less than one-third of the groundwater overdraft from the most recent droughts was recovered during post-drought years").

32. While some federal regulations directly or indirectly protect groundwater quality, state law controls the private allocation of water. *See* DAVID H. GETCHES, SANDRA B. ZELLMER & ADELL L. AMOS, WATER LAW IN A NUTSHELL 226-50, 272-73 (5th ed. 2015); *infra* note 243 (discussing the legal regimes for allocating private water rights).

33. *See infra* notes 397-409 and accompanying text; Dave Owen, *Taking Groundwater*, 91 WASH. U. L. REV. 253, 255 (2013) (noting that groundwater's "invisibility begets overuse"); CASTELLANO, *supra* note 26, at 55-56 (noting that groundwater is more difficult—and more expensive—to track than surface water).

34. *See infra* notes 410-422 and accompanying text.

35. Maria L. La Ganga, Gabrielle LaMarr LeMee & Ian James, *A Frenzy of Well Drilling by California Farmers Leaves Taps Running Dry*, L.A. TIMES (Dec. 16, 2021), https://www.latimes.com/projects/california-farms-water-wells-drought [https://perma.cc/DT7H-TE6A].

36. *See* THOMPSON ET AL., *supra* note 27, at 11-13.

37. *See* Burke W. Griggs, *Beyond Drought: Water Rights in the Age of Permanent Depletion*, 62 KAN. L. REV. 1263, 1264-65 (2014) (noting that the depletion of the Ogallala Aquifer "is accelerating," that annually the aquifer is depleted by a "volume" roughly half "the annual flow of the waters of the Colorado River Basin," and that this "depletion is permanent" because "across most of its range, [the aquifer] is effectively non-rechargeable").

within their borders sporadically bubbles to the surface of water law.[38] Foreshadowing a future of increased competition over water above and below ground,[39] the Supreme Court this Term decided the first-ever interstate groundwater dispute.[40] Mississippi sued Tennessee claiming that it was the victim of a "heist."[41] Mississippi alleged that Tennessee and Memphis, through the city's water utility and at the direction of the state, were taking Mississippi's groundwater from wells on the Tennessee side of the border.[42] This claim, and the more than fifteen years of litigation it launched,[43] proceeded from an assertion that the people of Mississippi own all the groundwater within the state's territory.[44] As *Mississippi v. Tennessee* was the first contest between states over an aquifer, commentary on the case understandably focused on how it would shape interstate water disputes in the decades ahead,[45] largely ignoring how the Court's handling of Mississippi's ownership claim might affect water management *within* states. This Note aims to fill that gap.

Like Mississippi, many states, particularly those in the West, declare by constitutional provision or statute that the people of the state or the state itself owns the waters within its territory.[46] Such pronouncements might be read as merely shorthand for individual states' authority to regulate a resource that *no one* owns.

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38. *See infra* notes 196-208 and accompanying text.

39. Ellen M. Gilmer & Jennifer Kay, *Water Wars at the Supreme Court: 'It's Only Going to Get Worse,'* BLOOMBERG (Sept. 17, 2020, 1:16 PM), https://news.bloomberglaw.com/environment-and-energy/water-wars-at-the-supreme-court-its-only-going-to-get-worse [https://perma.cc/A8XP-NCFR].

40. *See* Mississippi v. Tennessee, 142 S. Ct. 31 (2021). The Court decided the first *surface* water dispute between states in 1907. *See* Kansas v. Colorado, 206 U.S. 46 (1907).

41. Report of the Special Master at 4-5, *Mississippi v. Tennessee*, 142 S. Ct. 31 (No. 22O143).

42. *See id.*

43. *See id.* at 2-4.

44. *See id.* at 4-5; *Mississippi v. Tennessee*, 142 S. Ct. at 38, 40-41.

45. *See, e.g.*, Christine A. Klein, *Owning Groundwater: The Example of* Mississippi v. Tennessee, 35 VA. ENV'T L.J. 474, 513-14 (2017); Noah D. Hall & Joseph Regalia, *Interstate Groundwater Law Revisited:* Mississippi v. Tennessee, 34 VA. ENV'T L.J. 152, 192-94 (2016); Joseph Regalia, *Why Mississippi's Plea to the Supreme Court that It "Owns" Its Water and that Tennessee Is "Stealing" It Is Just Wrong*, U. CHI. L. REV. ONLINE (Oct. 8, 2019), https://lawreviewblog.uchicago.edu/2019/10/08/why-mississippis-plea-to-the-supreme-court-that-it-owns-its-water-and-that-tennessee-is-stealing-it-is-just-wrong-by-joseph-regalia [https://perma.cc/TK2V-3MH7].

46. *See, e.g.*, WYO. CONST. art. VIII, § 1 ("The water of all natural streams, springs, lakes or other collections of still water, within the boundaries of the state, are hereby declared to be the property of the state."); NEV. REV. STAT. § 533.025 (2020) ("The water of all sources of water supply within the boundaries of the State whether above or beneath the surface of the ground, belongs to the public."). These pronouncements are discussed *infra* Section I.A.

Or they might mean what they say: the people of a particular state have a proprietary interest in its water, including its uncaptured groundwater.[47] To endorse this second option is to affirm "state ownership."

One thing is clearly settled: claims of *absolute* state water ownership—good against all comers and in all legal contexts—are invalid. Most importantly, this means that a state's claim to own its water is largely meaningless beyond its borders. Although state ownership claims originated as inward-looking attempts by new states to assert control over their surface water, states soon turned these claims outward in disputes with other states and with the federal government.[48] However, early in the twentieth century, the Supreme Court held that state ownership claims are irrelevant when it comes to surface-water contests.[49] When it rejected Mississippi's ownership argument in *Mississippi v. Tennessee* this Term,[50] the Supreme Court harmonized groundwater and surface-water doctrine.[51] Further, it is similarly clear that states may not rely on their purported ownership of surface water or groundwater to thwart federal supremacy.[52]

But if a state cannot use a claim of absolute ownership to shield its water from federal regulation or as a trump card in interstate water disputes, what—if anything—remains of state ownership? And does that remnant matter? This Note responds to these questions in turn: first, the *state-law* portion of the state-ownership doctrine remains intact, and, second, denying the integrity of that doctrine could have dramatic practical consequences, potentially imperiling states' ability to enforce sound groundwater management in a climate-changed future.

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47. Like many states, I use "natural" and "uncaptured" as synonyms for groundwater "that exists in underground storage owing wholly to natural processes" and has not yet been reduced to possession. WASH. REV. CODE §§ 90.44.035, 90.44.040 (2021). Typically, groundwater exists in the spaces within sand, gravel, and rock underneath the earth, after percolating down from the surface. When these porous subsurface water-bearing formations consistently provide a source of water, they are known as unconfined aquifers. The water table marks the upper limit below which the formation is saturated with groundwater. *See* THOMPSON ET AL., *supra* note 27, at 451. Confined aquifers, by contrast, exist beneath an impermeable layer of sediment, creating something like "a saucer embedded in the bowl of sand." *Id.* at 452.

48. *See infra* Section I.A.

49. *See infra* Section I.B.

50. *See* Mississippi v. Tennessee, 142 S. Ct. 31, 40-42 (2021).

51. *See infra* Section IV.C.

52. *See* Sporhase v. Nebraska *ex rel.* Douglas, 458 U.S. 941 (1982); *infra* Section II.B. That said, a state's claim to own water is not *entirely* irrelevant beyond its borders: while such a claim cannot remove water from Commerce Clause analysis, it is a relevant factor in that analysis. *See infra* notes 303-307 and accompanying text.

To elaborate, the first part of this Note's answer attempts to resolve the doctrinal puzzle of state water ownership in the modern era.[53] It argues that a state can have nonabsolute — or what this Note calls *qualified* — possessory ownership. This ownership extends only to the state's share of groundwater, arises from the state's authority to define the property character of that water, and is valid for state-law purposes. A state's share is the water it can use and allocate to private citizens — which may not encompass all the water within a state's borders.[54] Where state ownership exists, it derives from the state's ability to allocate public and private property interests in its share. As such, if they so choose, the people of a state can give themselves — that is, the state — possessory ownership of that water.[55] But, as state property law, that ownership is subject to federal supremacy.

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53. *See infra* Part II.

54. *See infra* notes 247-251 and accompanying text. In this Note, I use "control" and "regulate" to mean different things, and these authorities are not necessarily coextensive. The water the state "controls" is its "share": this is the amount of water the state has a right to use or allocate for private use, and thus is the water whose property character the state can define. Thus, a state's ownership can only extend to its share. *See infra* Section II.A. However, the state may have the power to regulate more than its share, which would be water within its borders whose ultimate *use* it does not control. For example, an environmental statute might empower the state to regulate the pollutant levels of all water within its borders, but some of that water may be allocated to a different state or to a tribe. This would mean the state controls less water than it has authority to regulate. *See infra* Section II.C.3.

55. Like others, I agree that "public ownership" and "state ownership" are essentially synonymous: the water is owned (for state-law purposes) by the people of the state as a collective political body, and the state exercises control as the sovereign representative of the owner, allowing private usufructuary rights to the extent the people decide. *See* Farm Inv. Co. v. Carpenter, 61 P. 258, 265 (Wyo. 1900) ("There is . . . no appreciable distinction . . . between a declaration that the water is the property of the public, and that it is the property of the state. . . . '[T]he ownership is that of the people in their united sovereignty.'" (quoting McCready v. Virginia, 94 U.S. 391, 394 (1876))); Lasky, *supra* note 1, at 176 (reading Colorado's provision to mean water "belong[s] to the people in their socially organized capacity and [is] capable of being reduced to private property on terms set by the state as the representative of that social organization").

However, I use "state ownership" because (like Elwood Mead) I think it avoids implying water is the sort of public property freely accessible to anyone without constraints, *see infra* note 84, and because "state" rightly conveys that the owner is, in Carol Rose's framing, the "governmentally-organized public" rather than the more diffuse "public-at-large." Carol Rose, *The Comedy of the Commons: Custom, Commerce, and Inherently Public Property*, 53 U. CHI. L. REV. 711, 717 n.26, 721 (1986); *see id.* at 717 & n.26 (noting the "distinction between a corporately organized governmental 'public' and the unorganized public-at-large" and how the former can exercise property rights in ways the latter cannot).

This conception of state ownership is a modest one compared to states' historical claims of absolute ownership of all water within their borders.[56] Some state courts would find it unremarkable.[57] Nevertheless, justifying the basis and limits of this qualified ownership is particularly important for two reasons. First, doing so clarifies a chronically confused area of water law.[58] This more modest conception of ownership is ill-defined even when state courts recognize it[59] and other commentators gesture toward it.[60] By defining state ownership's nature and extent in the modern era, this Note clarifies the difference between states' police power and their proprietorship, and corrects legal positions from opposing sides. On the one hand, it disagrees with scholars, courts, and litigants who argue that even for intrastate purposes state ownership can only be fictive. Contrary to what this group often concludes, this Note shows that the Supreme Court has not abrogated (and could not abrogate, absent a specific conflict of federal and state law) the power of a state to define for purposes of state law the property character of the water that it controls.[61] On the other hand, this Note also refutes the assertion states have continued to make — often to the detriment of Native American tribes — that they can own all water *within their territory*, not

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56. Indeed, even those who are otherwise opposed to the introduction of "ownership" talk in state-federal water doctrine might be receptive to the inward-looking, state-law-based ownership this Note advances. *See* Amy K. Kelley, *"Ownership" of Water*, *in* 2 WATERS AND WATER RIGHTS § 36.02 & n.17 (Amy K. Kelley ed., 3d ed. 2021) (discussing, specifically, the role of ownership in state-federal relations, and noting "the futility of debating 'ownership,' when the real issue is the right to the control or use of water," but also entertaining the idea that once a "set amount of water has been allocated to a state . . . then to a certain extent one may discuss the notion of state 'ownership' more legitimately").

57. *See infra* Section I.B.2.c.

58. As one commentator in 1964 noted, "although . . . the assertion of state ownership became a commonplace of western water law" by "the turn of the century," "the basis for and consequences of" that claim "are obscure." B. Abbott Goldberg, *Interposition — Wild West Water Style*, 17 STAN. L. REV. 1, 9 (1964). This confusion persists today. *See infra* Section I.B.

59. Some courts invoke the state's constitutional or statutory pronouncement, but do not elaborate further on the authority for the state to make such a pronouncement. *See infra* notes 212-222 and accompanying text.

60. *See* Charles T. DuMars & Stephen Curtice, *Interstate Compacts Establishing State Entitlements to Water: An Essential Part of the Water Planning Process*, 64 OKLA. L. REV. 515, 532-33 (2012) (noting that "once the water is apportioned to a state," the "compact or equitable apportionment decree" makes "the state . . . owner of the water in trust for the users within the boundaries"). In this Note's view, all that a congressionally approved compact or Supreme Court decree does is determine the state's share of water; neither *automatically* makes the state the owner of that water for purposes of the state's property law. Doing so requires additional action: a state can, through its property-law-defining power, give itself ownership of that share for state-law purposes, but if the state fails to do so, no such ownership exists. See *infra* Sections II.A, II.C.1.

61. *See infra* Section II.B.

just the water that is theirs to use.[62] This Note clarifies why state groundwater-ownership claims are rendered void when the water at issue is the object of federal and Indian reserved water rights.[63]

This Note builds upon this articulation of state ownership to explain the second reason why clarifying state groundwater ownership is important: doing so impacts states' practical ability to manage this critical resource.[64] Treating state ownership as a complete fiction — as opponents suggest — creates serious and often unappreciated ramifications that hinder sound groundwater policy. Returning to the scenes above, this Note explores three examples — takings challenges, insurance coverage, and water theft — where denying the validity of state ownership jeopardizes states' ability to manage their groundwater. This inquiry comes at a time when many states have recently begun or are poised to exert greater control over their groundwater, transitioning the property laws and the regulations that govern its use.

Facilitating groundwater management is singularly important. A large common-pool resource hidden below ground and accessible to anyone with a big enough pump, groundwater invites overuse.[65] State-imposed limits are necessary to prevent a race to suck it up. Chronic overdraft — consistently drawing water from an aquifer faster than it can recharge — has profound economic, legal, and environmental consequences.[66] Among other ills, permitting a free-for-all empowers big pumps to the detriment of small ones. Lowering the water table makes it more expensive for every pumper and can displace other users. From Arizona to California, megafarms' voracious pumping has ejected homeowners and driven smaller farmers out of business.[67] Not long after the agribusinesses

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62. *See infra* Section IV.B.

63. This doctrinal discussion has ramifications beyond groundwater. This Note focuses on groundwater because of its practical importance and because states appear poised to further regulate groundwater or even fundamentally alter the legal regimes governing its use, which makes clarifying the public's rights in that water all the more valuable. *See, e.g.*, *infra* Section III.A (discussing the importance of state ownership in takings challenges at a time when state groundwater laws are transitioning). But this Note's conception of state water ownership applies to surface water as well. And its analysis informs natural resource ownership more broadly by clarifying the difference between state ownership of water or wildlife in the modern era from other (historical and current) forms of state resource ownership. *See infra* Section II.C.2.

64. *See infra* Part III.

65. *See infra* notes 397-405 and accompanying text.

66. *See infra* notes 406-412 and accompanying text.

67. *See* Shannon, *supra* note 3; Lois Henry, *Where Is Central California's Water Going?*, HIGH COUNTRY NEWS (Dec. 7, 2021), https://www.hcn.org/articles/water-where-is-central-californias-water-going [https://perma.cc/6XWZ-95PR] (describing the difficulty of tracking

moved into the desert, nearby residents in Arizona suddenly found that their home wells were too shallow to reach water, spitting out sand instead; "chas[ing] the water downward" would have required money that these families did not have, so they were forced to move elsewhere.[68] Designating groundwater as a state-owned resource, this Note argues, gives states greater ability to impose restrictions that avoid these unjust outcomes, protect property rights, and conserve groundwater reserves.[69]

While many scholars are concerned that allowing ownership to seep into water law creates doctrinal confusion,[70] these three examples demonstrate the practical effects of rejecting the concept entirely.[71] Further, making water state-owned carries important rhetorical force, inserting the public into the conversation about management and shaping the expectations of rightsholders.[72] That water is the people's property in a literal sense means that the regulatory interaction between the state and users is not a matter of private rights versus nothing or versus a vaguer "public interest," but rather comprises an effort to balance private property rights on one side with the public's equally concrete property right on the other.

This Note proceeds in four parts. Part I explains the history of state claims to own water and presents an important unresolved issue in water doctrine: is state ownership still valid for internal, state-law purposes? Yes, argues Part II. Articulating the first part of this Note's thesis, Part II establishes the foundational point that states have broad authority to define property—including water—within their jurisdictions. And it shows that the Supreme Court has not rejected

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groundwater pumping and how large agricultural operations' extensive groundwater pumping in the Central Valley have driven smaller family farms out of business).

68. Shannon, *supra* note 3 (noting that to sink these residents' wells deeper by "a few hundred feet" would have cost "$15,000 to $30,000—as much as half the value of some homes in the" area).

69. *See infra* Part III.

70. *See infra* Section IV.A.

71. There are bound to be other instances when state ownership significantly impacts groundwater management. For example, while this Note discusses how state water ownership has influenced the determination of who owns the water-bearing space in the earth beneath private land, *see infra* notes 216-219 and accompanying text, it does not address how state ownership might come into play when an entity prevents water from reentering and recharging an aquifer, thereby diminishing its capacity. *See generally* Dave Owen, *Law, Land Use, and Groundwater Recharge*, 73 STAN. L. REV. 1163 (2021) (analyzing how land-use decisions affect groundwater recharge, examining the "underdeveloped" body of law that governs recharge, and recommending ways to make that law more effective).

72. *See infra* notes 145-146 and accompanying text (discussing the rhetorical importance of state ownership during Wyoming's founding era); *see also* Carol M. Rose, *Left Brain, Right Brain and History in the New Law and Economics of Property*, 79 OR. L. REV. 479, 488 (2000) (noting that "our emotional responses to property derive from our expectations of entitlement").

that fundamental principle. The Note then provides an account of state ownership's basis and limits in the modern era. Parts III and IV address the stakes of recognizing—and denying—the qualified state ownership articulated in Part II. Part III sets forth the second part of this Note's thesis, and provides three real-world examples in which state ownership enables greater state management of its groundwater. Part IV responds to concerns that recognizing qualified state ownership would confuse water doctrine or impede sound water policy in other ways. It also returns to *Mississippi v. Tennessee*: having shown the practical stakes that arise when courts, commentators, and litigants misapply the Court's less-than-tidy holdings on state ownership, the Note argues that the Court missed an important opportunity to clarify the doctrine.

I. THE DOCTRINE OF STATE WATER OWNERSHIP IS UNSETTLED AND CONFUSED

State ownership claims largely emerged in the West as inward-focused efforts to bolster state control over water. As Colorado, Wyoming, and other Western states entered the union, they codified a custom of surface-water allocation that diverged from the common law. To confront the management challenges that this new scheme and the arid terrain created, states asserted a novel form of state ownership. Thus, in these states, state ownership was part of a broader recharacterization of the public and private property rights in water. In time, states repurposed these claims: they turned them outward, both in surface-water contests with other states and in efforts to ward off federal control or constitutional scrutiny. First in interstate disputes, then in state-federal regulatory conflicts, the Supreme Court rejected the validity of these outward-facing ownership claims. Some courts and commentators would go a step further, and dispatch with the state-ownership doctrine entirely. By arguing that the intrastate portion of that doctrine remains viable—even if we have a different understanding of its source and limits today—this Note seeks to prevent a doctrinal overcorrection, thereby ensuring that state ownership can, as originally intended, underpin states' ability to manage their water.

This Part explains where the doctrine on state water ownership is settled, and where the controversy begins. It first provides a brief history of state water ownership, and then outlines the clear limits that the Supreme Court has imposed on state ownership in the context of interstate or state-federal relations. With these limits established, it describes an unresolved question about state ownership—to what extent, if at all, it is still valid for *intra*state purposes—and describes the divergent views on this question.

A. State Ownership Claims Originated as Inward-Facing Attempts to Bolster State Control of Water

Today, states' claims of water ownership come in various forms. These statutory or constitutional pronouncements differ in the degree to which they speak in property terms and in whether they assign the ostensible ownership to the "people," the "public," or the "state." In some cases, state courts elide these differences in terminology, while in others they make much of them.[73] On one end, states like Montana, Tennessee, Texas, and Wyoming appear to grant the state a proprietary form of ownership: they declare that all natural water is the "the property of the state."[74] Meanwhile, some states also use the word "property," but assign ownership more abstractly to "the people"[75] or "the public"[76] of the state. Finally, some states assert a public ownership without explicitly using words like "property" or "title"; these states declare that the water "belongs" to the people[77] or to the public.[78] The amount and type of water deemed state-owned varies as well. Some states extend their ownership claims only to surface water of a certain minimum acreage.[79] Others claim to own every molecule of water, from drops percolating below ground to vapor in the air.[80]

Before explaining the origins of these state ownership claims, two points merit clarification. First, none of these claims purport to preclude private parties from obtaining a property right in water. Instead, they merely limit the scope of private property rights in water to usufructuary rights—rights to *use* the water,

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73. *See infra* note 84. *Compare, e.g.*, State v. Superior Ct. (*Underwriters at Lloyd's of London*), 93 Cal. Rptr. 2d 276, 281-82 (Ct. App. 2000) (relying on the fact that California's water code assigns ownership to the "people" as opposed to the "state" to support its conclusion that there was no state ownership (citing CAL. WATER CODE § 102 (West 2021))), *with* Olds-Olympic, Inc. v. Com. Union Ins. Co., 918 P.2d 923, 929-31 & n.15 (Wash. 1996) (describing groundwater as property of the state despite the fact that the water code assigns ownership to "the public" (citing WASH. REV. CODE § 90.44.040 (2021))).

74. MONT. CONST. art. IX, § 3; TENN. CODE ANN. § 69-3-102 (2021); TEX. WATER CODE ANN. § 11.021(a) (West 2021); WYO. CONST. art. 8, § 1.

75. CAL. WATER CODE § 102 (West 2021).

76. COLO. CONST. art. XVI, § 5.

77. MISS. CODE ANN. § 51-3-1 (2021).

78. NEV. REV. STAT. § 533.025 (2020); OR. REV. STAT. § 537.110 (2021); *see* WASH. REV. CODE § 90.44.040 (2021).

79. N.H. REV. STAT. ANN. § 271:20 (2021).

80. MONT. CONST. art. IX, § 3.

not own it outright.[81] Second, state ownership, at least as this Note conceives of it, is a different species of property ownership than any water right a state government might hold under state law. A state governmental entity could obtain or assert a usufructuary interest in water like any other private user. In doing so, however, the governmental entity could only use the water pursuant to the same laws and regulations binding any private user. Accordingly, that entity's concrete right to use a certain amount of water is a different type of property right than state ownership. The latter is a more generalized possessory ownership vested in the people of the state over the state's share of water.[82] The governmental entity thus obtains a usufruct in water owned by the people.[83]

States' practice of announcing via statute or constitution this kind of sovereign water ownership originated on the Front Range in the context of surface water. As Colorado and Wyoming entered the Union, they enacted constitutional provisions claiming the waters in the state to be state-owned.[84] As

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81. For example, as later articulated by the Colorado Supreme Court, the state's assertion was understood to mean "that, after appropriation, the title to this water . . . remains in the general public, while the paramount right to its use, unless forfeited," resides "in the appropriator." Wheeler v. N. Colo. Irrigation Co., 17 P. 487, 489 (Colo. 1888). For more on private rights to state-owned water, see *infra* Section II.C.

82. See *supra* note 55 for why I choose to use the term "state ownership" rather than "public ownership." For a fuller articulation of the basis of and limits to state ownership, see *infra* Section II.C.

83. Confusion over state ownership of water and a state entity's concrete water right leads courts astray. *See infra* note 494.

84. *See* COLO. CONST. art. XVI, § 5 (ratified 1876) ("The water of every natural stream, not heretofore appropriated, within the state of Colorado, is hereby declared to be *the property of the public*, and the same is dedicated to the use of the people of the state, subject to appropriation as hereinafter provided." (emphasis added)); WYO. CONST. art. VIII, § 1 (ratified 1889) ("The water of all natural streams, springs, lakes or other collections of still water, within the boundaries of the state, are hereby declared to be *the property of the state*." (emphasis added)).

The semantic differences between Colorado and Wyoming's pronouncements point to the confusion over state water ownership (and public property more generally) from its inception. Delegates in Colorado feared that making its water owned by the *state* (as was originally proposed) rather than by the *public* would give the easily captured state legislature too much power over the resource—safer, then, to lodge the title firmly with the *public*. *See* SCHORR, *supra* note 6, at 41-42; *see also* OFF. OF THE SEC'Y STATE, STATE OF COLO., PROCEEDINGS OF THE CONSTITUTIONAL CONVENTION HELD IN DENVER, DECEMBER 20, 1875 TO FRAME A CONSTITUTION FOR THE STATE OF COLORADO 44, 296, 615 (1907) (showing various iterations of the ownership declaration). Wyoming's contrasting declaration was the brainchild of Elwood Mead. *See infra* notes 117-132 and accompanying text. In an annual report he filed as the territory's state engineer shortly after the state's constitutional convention, *see* ELWOOD MEAD, SECOND ANNUAL REPORT OF THE TERRITORIAL ENGINEER TO THE GOVERNOR OF WYOMING FOR THE YEAR 1889, at 92 (Cheyenne, Bristol & Knabe Printing Co. 1890), Mead referred *passim* to Wyoming's "public waters," but contrasted the "inherited idea" (brought out West by

copycats soon did the same,[85] Colorado and Wyoming's ownership claims—and the substantive and procedural law that they influenced—had a significant impact on Western water law. It is worth examining these early episodes, which, for a few reasons, should inform our understanding of state ownership today. As intended, these declarations were a legal innovation that enabled young state governments to exercise firm control over their water resources at a time when the newly adopted regimes in both Colorado and Wyoming created particularly strong private property rights and expectations in water, and threatened to abet speculation and corporate monopoly. Making the water state-owned had real legal and rhetorical influence as the property character of water was in flux. The understanding of state ownership that emerged at this time may not be wholly valid today, in part because drafters and courts typically conceived it to be *absolute* ownership. But the original motivation for these state ownership claims—fortifying public control and shaping perceptions of water by securing the public a true property right in it—argues for the concept's continued force in state property law.

To contextualize all of this, a brief detour into surface-water rights is necessary. In both the Colorado and Wyoming territories, as throughout the West, a custom of allocating surface-water rights—known as "prior appropriation"—had taken root among Anglo-European settlers.[86] Born in the mining camps of

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Easterners) "that water was public property" that could "be seized and used in any manner or at any place," *id.* at 3-4, with the "theory of state ownership" that necessarily entailed extensive "supervision" of "claims" to water, *id.* at 96-97. Regardless, almost from the start, courts treated "property of the State" and "property of the public" as "synonymous." 1 SAMUEL C. WIEL, WATER RIGHTS IN THE WESTERN STATES § 172, at 196 (3d ed. 1911); *accord* Frank J. Trelease, *Government Ownership and Trusteeship of Water*, 45 CALIF. L. REV. 638, 642 (1957); *see, e.g.*, Farm Inv. Co. v. Carpenter, 61 P. 258, 265 (Wyo. 1900).

85. By 1911, Arizona, California, Idaho, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Texas, and Utah had also asserted some version of state ownership. *See* 1 WIEL, *supra* note 84, § 170, at 194.

86. *See* CHARLES F. WILKINSON, CROSSING THE NEXT MERIDIAN: LAND, WATER, AND THE FUTURE OF THE WEST 231-35 (1992); *see also* Griggs, *supra* note 37, at 1270-73 (describing this history and noting that before the miners' custom of prior appropriation reached Colorado, Mormon settlers as well as Spanish and Spanish-American settlers practiced "other earlier customs" of water law). Prior appropriation's origins and transition into law have attained something of a myth in property law. SCHORR, *supra* note 6, at 5. Prior appropriation's boosters and detractors both tend to agree that the system arose out of a desire for wealth maximization, *id.* at 5-7, or an "aversion to the inefficiencies associated with common property, a preference for the perceived efficiency of privatization, and a devotion to market preferences," Michael C. Blumm, *Antimonopoly and the Radical Lockean Origins of Western Water Law*, 20 HASTINGS W.-NW. J. ENV'T L. & POL'Y 377, 377 (2014) (reviewing SCHORR, *supra* note 6). But in his reassessment, David Schorr argues that this standard account overlooks the various ways in which concerns about "distributive justice" shaped prior appropriation, both in its nascent form (in mountain mining camps) and in its later iterations (as codified in laws in the Western states). *See* SCHORR, *supra* note 6, at 5.

the Sierra Nevada and Rockies,[87] prior appropriation diverged from the common law of the Eastern states and of England—known as "riparianism"—in two important ways. First, it cleaved water rights from land ownership: owning riverside property did not itself give the landowner a right to the river water, and a Westerner could obtain a right to use water drawn from that river even if she did not own any of the tracts that touched its banks.[88] Second, prior appropriation set up a seniority-based hierarchy of claims to water.[89] Each user's right was pegged to the moment he put the water to beneficial use.[90] Appropriation dates became especially important in dry spells.[91] When water was scarce, rather than cut back in equal proportion on each user's share as they did under the East's riparian system, "senior" users were typically entitled to all of their water, even if that meant the later-comers—the "junior" users—were left without a drop.[92] Colorado made the miners' custom the law of the state by adopting prior appropriation in its 1876 constitution.[93]

State ownership operated at two levels in Colorado's early years. At a basic level, Colorado's assertion of state ownership helped to eliminate riparianism—breaking the link between land ownership and water rights.[94] As it would be for every state that "successfully . . . transition[ed] from a riparian regime to a regime of regulated prior appropriation," "[t]he critical step . . . was to effectively assert state ownership over surface waters in a way that avoided liability for any reduced value that accompanied the elimination of riparian rights."[95] However, state ownership played a larger role than this. In the eyes of its proponents in

87. *See* SCHORR, *supra* note 6, at 5; *id*. at 9-31 (analyzing mining-camp laws).

88. *Id.* at 1-2.

89. *See id.* at 2.

90. *See id*.

91. *See id*. at 18.

92. *See id.* at 2. The hierarchy was slightly more complicated: the priority system sorted claimants who were using water for the *same* purpose. *See id.* at 46-48. The Colorado Constitution, in turn, created its own hierarchy among purposes: "domestic purposes" take "preference" over "any other purpose," and "agricultural purposes" outrank "manufacturing" ones. COLO. CONST. art. XVI, § 6.

93. *See* COLO. CONST. art. XVI, §§ 5-6.

94. *See* SCHORR, *supra* note 6, at 40-41. The Colorado Supreme Court sealed this transition when it soon (somewhat dubiously) held that prior appropriation had always been dominant in the state, *see* Coffin v. Left Hand Ditch Co., 6 Colo. 443, 446 (1882), despite evidence that territorial legislation in the early 1860s had recognized and only slightly altered riparian rights, *see* SCHORR, *supra* note 6, at 60-61; *see also* Joseph L. Sax, *The Constitution, Property Rights and the Future of Water Law*, 61 U. COLO. L. REV. 257, 268 & n.34 (1990) (accusing the *Coffin* court of "judicial revisionism").

95. Gerald Torres, *Liquid Assets: Groundwater in Texas*, 122 YALE L.J. ONLINE 143, 150 (2012).

Colorado and Wyoming, giving the state actual ownership of surface water was meant to empower the state under the *new* regime of prior appropriation.

Indeed, although it avoided the inequities of transplanting riparianism to the West,[96] prior appropriation created other obstacles to state supervision. First, it encouraged a Westerner to see her water right as unencumbered by a public interest: the priority system, and the license to use as much water as she could put to "beneficial" use (rather than "reasonable use"), led her to think of her water right as absolute over anyone junior, incapable of limitation for communal benefit.[97] So too did the consumptive way that water was typically used.[98] The law and terrain also fueled speculation and monopolization. Agriculture was infeasible without irrigation.[99] Building the extensive ditch systems needed to transfer water the long distances between rivers and fields required extensive capital—and promised huge profits. In response, ditch-building corporations emerged, charging farmers for the water their ditches delivered.[100]

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96. Many feared that in the desert states of the West, riparianism would be a "tool of monopoly and oppression." SCHORR, *supra* note 6, at 47. Back East, it was both easier and less important to own riparian property: the landscape was a thicker web of streams and rivers, and access to these running waters was less necessary for farming because of the relatively heavy rainfall; by contrast, in the West, which received far less rain and where far fewer rivers and streams bisected irrigable land, owning a "few choice riverfront parcels" would have given a rancher or farmer de facto ownership of the hundreds or thousands of acres adjacent to those parcels. *Id*. Without access to the river's water, no one else would be able to farm that land.

97. *See, e.g.*, ANNE MACKINNON, PUBLIC WATERS: LESSONS FROM WYOMING FOR THE AMERICAN WEST 50-51 (2021). That under certain regimes senior users could wipe out junior users' share of water is one aspect of prior appropriation that led people then and now to view it as enshrining a particularly strong form of a private-property right. *See* Burke W. Griggs, *The Political Cultures of Irrigation and the Proxy Battles of Interstate Water Litigation*, 57 NAT. RES. J. 1, 13-15 (2017) (describing how "a powerful justification for the doctrine" at the time of its codification throughout the West "was that of reliance," particularly because of the capital investment required to build the necessary irrigation infrastructure). Professor Schorr persuasively argues that this "principle of priority . . . was not the cornerstone of Colorado water law at is foundation," but he recognizes that "in practice it may have become dominant in later years." SCHORR, *supra* note 6, at 52.

98. *Cf.* Carol M. Rose, *Energy and Efficiency in the Realignment of Common-Law Water Rights*, 19 J. LEGAL STUDS. 261, 290-91 (1990) (noting that in contrast to the East, where using water—for example, for hydropower—allowed it to stay in the river, most water usage in the West—including mining and irrigation—was "essentially consumptive," meaning each new Western "claimant" took water as part of a "zero-sum game: the miner who transports water from the stream in the foothills does so at the expense of the farmer" downstream).

99. Griggs, *supra* note 97, at 10-11.

100. *See* ELWOOD MEAD, IRRIGATION INSTITUTIONS: A DISCUSSION OF THE ECONOMIC AND LEGAL QUESTIONS CREATED BY THE GROWTH OF IRRIGATED AGRICULTURE IN THE WEST 57-59 (1910) (describing this phenomenon); MEAD, *supra* note 6, at 5-6 (reporting that the legal regime made "speculative canal-building" so profitable that "one company began a canal in the dead

A desire to blunt these corporations' power—and water speculation more broadly—was likely a central motivation behind Colorado's constitutional declaration. Reflecting farmers' and politicians' widespread apprehension of water monopolies,[101] delegates saw the state constitution as a way to empower the state in the face of runaway corporate control of water.[102] The constitution's ownership provision was championed and probably orchestrated by members of the Grange, a populist movement of farmers opposed to corporate power.[103] Though they cheered the elimination of riparianism,[104] the Grangers also feared that by adopting prior appropriation, they would exchange "monopoly by riparian owners with monopoly by speculating appropriators."[105] Other drafters mindful of the common law recognized that the ownership claim represented something "new and difficult,"[106] and not all agreed that the claim could be valid or would have its intended effect. Another member of the Irrigation Committee, and a future state supreme court justice, objected that the ownership claim was

of winter, blasting with dynamite thousands of yards of earth that three months later could have been moved at one-tenth the cost"); Golden Canal Co. v. Bright, 6 P. 142, 144 (Colo. 1885) ("[I]t is only by the outlay of large sums of money in constructing and maintaining canals or ditches that the business of agriculture, in portions of the state, can be extensively and successfully carried on.").

101. *See* SCHORR, *supra* note 6, at 68-73.

102. Donald Wayne Hensel, A History of the Colorado Constitution in the Nineteenth Century 168 (1957) (Ph.D. dissertation, University of Colorado) (on file with author) ("[T]he delegates knew that safeguards had to be erected to prevent monopolization of such an indispensable resource."). In addition, Mead recounted that the conflicts brought on by drought in the summer of 1874 had "created a sentiment in favor of public supervision." MEAD, *supra* note 100, at 145.

103. *See* SCHORR, *supra* note 6, at 41, 183 n.37; Hensel, *supra* note 102, at 169-70 (pointing to the fact that a member of the Grange, S. J. Plumb, chaired the Irrigation Committee, which produced the ratified version of the constitution's ownership pronouncement); *Constitutional Convention*, DENV. DAILY TRIB., Feb. 19, 1876 (on file with author) (reporting that when the Irrigation Committee presented its report to the convention, Plumb advocated for the ownership provision, which he said "had been drawn" to ensure that the water "be under the control of the people for the purposes of irrigation" and "not subject to the management and manipulations of the Legislature").

104. Hensel, *supra* note 102, at 171 (noting that Plumb's "main concern was to eliminate all grounds for future riparian ownership").

105. SCHORR, *supra* note 6, at 41, 47.

106. *Constitutional Convention*, *supra* note 103 (reporting the view of H. P. H. Bromwell who "urged that care should be exercised" writing the ownership provision because it implicated "certain common law proprietary rights"); *see* SCHORR, *supra* note 6, at 184 n.40 (noting the contemporary view of Bromwell as the "Orthodox Blackstone of the convention"); *see also Constitutional Convention*, *supra* note 103 (reporting confusion among drafters as to what it meant for the people to own the water in their collective "sovereign" capacity).

simply "untrue" because the waters "were *not* the property of the people,"[107] and suggested that the words would either be "a nullity" or would backfire, harming farmers[108] and empowering corporations.[109]

For a time, these phrases proved well-chosen. As David Schorr has recounted, in the 1880s and early 1890s, the ownership status of water was an important background principle bolstering the state's efforts to assert government control over water in the face of corporate resistance to price controls.[110] In addition to making water state-owned, Colorado's new constitution empowered county commissioners to set "maximum rates" that "individuals or corporations" could charge for the "use of water."[111] This sparked a "bitter battle" between farmers and the ditch companies that sought to "evade price controls."[112] In a trio of early cases, the Colorado Supreme Court invoked the fact that the state owned the water at issue when ruling against the companies.[113] In the final case, the state supreme court relied solely on the state constitution's water provisions—including the ownership provision—to invalidate the canal company's effort to sidestep price controls.[114] In these decisions, the state's ownership claim

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107. *Constitutional Convention*, *supra* note 103 (emphasis added) (reporting the view of Ebenezer T. Wells, who added that "[m]any of [the state's streams] were" instead "the property of individuals").

108. *See id.* (reporting the view of Wells).

109. *See* Hensel, *supra* note 102, at 170 (describing the view of Wells). This exchange focused on a proposed constitutional provision broader than the one ultimately adopted; the adopted provision included a carve-out, such that the state did not own the water already appropriated. *See id*. at 169-70; COLO. CONST. art. XVI, § 5.

110. *See* SCHORR, *supra* note 6, at 75-89.

111. COLO. CONST. art. XVI, § 8; *see also* SCHORR, *supra* note 6, at 54-55 (discussing this constitutional provision).

112. SCHORR, *supra* note 6, at 75.

113. *See id*. ("In several of the highest-profile American water-law cases of the period, the state's high court sided with the farmers, applying the principles of public ownership and beneficial use . . . to limit the power of canal corporations over the water they diverted."). In the first case (in which the authority of the legislature to enact a price-control statute was not itself challenged), the high court framed the price-control provision of the constitution as preventing the "injustice and trouble" that would "follow" if corporations were "allowed to speculate" in the water that "is properly a part of the public domain." *See* Golden Canal Co. v. Bright, 6 P. 142, 143, 144-45 (Colo. 1885); *see also* SCHORR, *supra* note 6, at 77-78, 197 n.56 (discussing this case).

114. *See* Combs v. Agric. Ditch Co., 28 P. 966, 966, 967-68 (Colo. 1892); SCHORR, *supra* note 6, at 87-89. In doing so, *Combs* relied on dicta from *Wheeler v. Northern Colorado Irrigation Co.*, 17 P. 487 (Colo. 1888), the second and most important case, which arose after corporations sought to impose a separate annual fee (that fluctuated according to the profitability of the farmland) on top of the price-controlled rate for water delivery. *See* SCHORR, *supra* note 6, at 78-82. In *Wheeler*, the state supreme court invalidated the practice based on a state statute,

allowed the court to treat the canal companies as common carriers rather than as rightsholders of the water they delivered[115]—a controversial holding at the time.[116]

This pitched conflict between farmers and ditch companies influenced Wyoming's subsequent state ownership pronouncement through its draftsman, Elwood Mead. A central figure in Western water history,[117] and probably the most zealous and articulate advocate of state water ownership, Mead de facto wrote the Wyoming constitution's ownership provision—and spearheaded the laws and administrative apparatus meant to give it meaning.[118]

In spite of Colorado's relative success avoiding monopolization by this point,[119] Mead came to Wyoming convinced that the state needed to implement firm, centralized state control over its water.[120] Sympathetic to the Grangers, fiercely opposed to water monopolies, and a prolific preacher of the irrigation

which, it said, "harmonize[d]" with the crucial fact that that canal companies were "in the business of transporting . . . water *owned* by the *public*[] to the *people* owning the right to its *use*." *Wheeler*, 17 P. at 490, 493 (emphasis added). The court went a step further, however, suggesting that reading the constitution's water "provisions . . . *in pari materia*" would alone invalidate any "unreasonable and oppressive" demands made by a canal company or even any legislative regulations that denied someone "the right secured them" to use Colorado water. *Id*. at 490-92.

115. Schorr suggests that the court in this period in fact articulated a slightly different version of regulation than the public-utility theory developing in Supreme Court cases. *See* SCHORR, *supra* note 6, at 83-85, 100-03. *But see* 2 WIEL, *supra* note 84, §§ 1338, 1340, at 1235, 1238-41 (noting that the import of *Wheeler*, 17 P. 487, and subsequent cases was that in Colorado a canal company was "literally a common carrier of water," such that it was as if "the consumer had himself diverted the water from its natural source").

116. *See* MEAD, *supra* note 6, at 2-3, 5-7 (lamenting that the law fueled speculation because it allowed the ditch companies, which should be regarded as "common carriers," to hold the right to the water they diverted, a right that should be held by the farmer who puts the water to "beneficial use" and "converts the barren plain into productive fields," thus providing the "benefit which the State and public receives"); JOHN WESLEY POWELL, REPORT ON THE LANDS OF THE ARID REGION OF THE UNITED STATES 40 (Washington, Gov't Printing Off. 1879) ("If the water rights fall into the hands of irrigating companies and the lands into the hands of individual farmers, the farmers then will be dependent upon the stock companies, and eventually the monopoly of water rights will be an intolerable burden to the people. The magnitude of the interests involved must not be overlooked.").

117. *See* WILKINSON, *supra* note 86, at 255, 258 (describing Mead's legacy as the director of the Bureau of Reclamation).

118. *See id*. at 238-39. For a rich account of Mead's role during Wyoming's founding and his impact on the state's water law and management, see MACKINNON, *supra* note 97, at 13-56.

119. *See* SCHORR, *supra* note 6, at 100-01.

120. MACKINNON, *supra* note 97, at 22-24.

movement, Mead felt the West's economic development and its democratic social fabric hinged on sound water management.[121] For Mead, this required secure, clearly defined private water rights,[122] which, in turn, called for state power to limit the size and duration of the water right and define permissible uses.[123] Making Wyoming the true proprietor of the state's surface waters was central to Mead's effort.[124]

But, as Mead complained at the time, the existing system of water management made Wyoming's recent proclamation of state ownership "simply a fiction": in day-to-day water management, the state was essentially absent.[125] Lack of administrative oversight allowed users to claim "extravagant" rights unconnected to how much water was or even could be put to beneficial use.[126] Based on self-reporting and crude measures of an irrigation ditch's size, credulous courts blessed these claimed rights.[127] Importantly, this scheme led the "citizen" to view water rights as a matter beyond the purview of state management.[128]

Mead and his allies ushered in laws and a bureaucracy meant to make state ownership more than "nominal."[129] A state permit became required to use any water. Employing measurements of actual water use and irrigable acreage, the state set limits on "how much water could be used and where," and cancelled rights it deemed abandoned.[130] This expert work was not left to lawyers and judges. Instead, "Mead invented the general stream adjudication": the state agency summoned everyone with a claim to a certain watershed and, in an administrative hearing, settled and recorded all competing claims.[131] The state administrators canvassed the state, repeating the process stream by stream.[132]

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121. *See* WILKINSON, *supra* note 86, at 238, 243-44; MACKINNON, *supra* note 97, at 23.

122. *See* MEAD, *supra* note 84, at 87-88 (arguing that water rights should be as clear and secure as land title); *id*. at 90-91 (asserting that usufructuary rights should be "fully guaranteed and protected"). For more prosaic reasons, Mead's "stockmen backers" agreed. MACKINNON, *supra* note 97, at 23.

123. *See* MEAD, *supra* note 84, at 87-88, 97-98.

124. *See* MACKINNON, *supra* note 97, at 25, 29, 33, 51.

125. MEAD, *supra* note 84, at 96-97.

126. *Id*. at 96; *see* WILKINSON, *supra* note 86, at 238-39.

127. MEAD, *supra* note 84, at 89 (noting that one decree gave the user enough water to "cover the ground to a depth of 147 feet").

128. *Id.* at 96.

129. *Id*. at 97; *see* WILKINSON, *supra* note 86, at 238-39.

130. MACKINNON, *supra* note 97, at 31-32.

131. WILKINSON, *supra* note 86, at 238-39.

132. *See* MACKINNON, *supra* note 97, at 43.

Like in Colorado, Wyoming's ownership pronouncement soon proved important to overcoming resistance to what were "revolutionary"[133] changes in the state's substantive and procedural water law. Many farmers and ranchers begrudgingly accepted the new state-imposed limits, recognizing the value of accuracy.[134] But a Colorado company that had secured a water right before the constitution's enactment challenged the state agency's authority to adjudicate private water rights.[135] In *Farm Investment Co. v. Carpenter*, the company claimed that Mead's agency was unlawfully exercising judicial power: determining which party had the more senior water right was strictly a dispute among private parties, which, under the state constitution, could be resolved only by a court.[136] The Wyoming Supreme Court disagreed, reasoning that the constitutional declaration meant that the water was state-owned, such that the adjudications concerned "the public waters of the state" and settled each claimant's "relative standing among other claimants" in her right to that public resource.[137] It also held that because the "water itself belong[ed] to the public," the legislature could require even those holding pre-statehood water rights to submit themselves to the administrative process that determined those rights.[138]

Thus, like in Colorado, Wyoming's state ownership declaration, as interpreted by the state's high court, helped change the state's substantive property law, which fixed the extent, duration, and means of obtaining a water right. It also underpinned a new permitting regime and an administrative agency to implement it. As other states imitated the Wyoming model, these agencies became commonplace throughout the West – decades before the growth of the administrative state at the federal level.[139] Mead's state ownership vision thus indirectly

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133. WILKINSON, *supra* note 86, at 239; *accord* MACKINNON, *supra* note 97, at 39 (quoting an ally of Mead calling the new Wyoming "system" "[r]adical").

134. MACKINNON, *supra* note 97, at 43-46.

135. *See* Farm Inv. Co. v. Carpenter, 61 P. 258 (Wyo. 1900); MACKINNON, *supra* note 97, at 47-52 (contextualizing and analyzing this case).

136. *Farm Inv. Co.*, 61 P. at 259, 263-64.

137. *Id.* at 263-64; *see also id.* at 267 (noting that it is a "proceeding" to secure "a right to use a peculiar public commodity"). The court also said that it was "essential" to the logic of prior appropriation itself "that the property in waters affected by that doctrine should reside in the public, rather than constitute an incident to the ownership of adjacent lands." *Id.* at 264; *see* MACKINNON, *supra* note 97, at 54 (expressing skepticism on this point).

138. *Farm Inv. Co.*, 61 P. at 267-68 (leaving open the question of whether the company's refusal to participate in the adjudication meant its right would be lost).

139. *See* WILKINSON, *supra* note 86, at 239-40; Lasky, *supra* note 1, at 162 (noting in 1929 that the significant development in Western water law in previous decades was the transition from unregulated prior appropriation to the "economic distribution of state-owned water by the state administrative machinery thr[ough] state-granted conditional privileges of use").

changed—even if not at first, and even if not as fully as hoped[140]—the substantive and procedural water law of the West.

These episodes and cases from Colorado and Wyoming yield five important points. First, they are relevant not because the courts' or drafters' understanding of state ownership necessarily applies today. To the extent that states felt that their right to regulate and control water derived from their proprietary ownership,[141] the Supreme Court ultimately concluded that this logic confused the order in which authority flowed.[142] But, as I argue below, these declarations are today a crucial background principle in the context of takings.[143]

Second, in the minds of their authors, the Colorado and Wyoming constitutions' state ownership provisions were not intended to be arid pronouncements, nor were they initially treated as legal nullities by the state courts.[144] Third, state ownership had rhetorical importance. These claims—and the effort to give them meaning—purported to change the common conception of a private water right. Most basically, by lodging ultimate ownership of water in the state, these declarations limited private rights to usufructs.[145] More importantly, state ownership

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140. *See* WILKINSON, *supra* note 86, at 239-41 (noting that during this period state water agencies, often captured by industry, largely "rubber-stamped" the profligate use of water so that "Mead's veneration for the public interest and active government water management never took").

141. *See, e.g.*, JOURNAL AND DEBATES OF THE CONSTITUTIONAL CONVENTION OF THE STATE OF WYOMING 289 (Cheyenne, Daily Sun, Book & Job Printing 1893) [hereinafter WYOMING DEBATES] ("It is only by the declaration that we are able to be the absolute owners of all the water that we may be enabled to control unreservedly the uses to which it may be put." (statement of a delegate debating whether an early version of the state ownership section would impliedly carve out water already appropriated)); Lasky, *supra* note 1, at 175 ("The state controls because the state owns; so a questioned western lawyer today would venture.").

142. *Cf.* Sporhase v. Nebraska *ex rel.* Douglas, 458 U.S. 941, 952 (1982) ("A State's power to regulate prices or rates has never been thought to depend on public ownership of the controlled commodity."). This point is discussed *infra* Section II.C.

143. *See infra* Section III.A.

144. However, by 1911, when California joined the rest of Western states in making some sort of ownership declaration, a leading treatise reported that while these pronouncements were effective at preventing water delivery companies from obtaining the water right, there was significant confusion; many courts read them to mean *no one* owned the water. *See* 1 WIEL, *supra* note 84, § 172, at 194, 196-97; *id.* at 199 (noting confusion in Colorado courts).

145. *See, e.g.*, SCHORR, *supra* note 6, at 41 (noting that under Colorado's constitution, "[o]nly the right to use could be acquired, and then only under conditions stipulated by the owner (through its agent, the state)").

aimed to insert the public interest into what were previously only private disputes between one appropriator and another to determine who was senior.[146]

Fourth, there was something novel in the theory and practice of state ownership that emerged from Colorado and Wyoming. That water is a form of public property has deep roots in English and Roman law.[147] But to advocates of state ownership, the concreteness of the state's property right — and the governmental involvement reflecting as much — distinguished state ownership from these inherited notions.[148] Commentators reacted variously to this property-law development. Writing in 1911, Samuel Wiel found that states "undoubtedly intended" to break ground by claiming ownership over the water as a proprietor,[149] but concluded that these declarations merely amounted to a different way of "stating" an ancient idea: that water was part of the "negative community" ownable by no one, not even a sovereign.[150] Other commentators disagreed. Recasting these affirmative grants of state ownership to mean negation of all ownership —

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146. In the context of California (at that time without state ownership, *see supra* note 144), Mead complained the process of settling private rights to water without any state supervision

> is wrong in principle as well as faulty in procedure. It assumes that the establishment of titles to the [water] . . . the use of which the development of the state in a great measure depends, is a private matter. It ignores public interests in a resource upon which the enduring prosperity of the community must rest. It is like A suing B for control of property which belongs to C . . . [but] the public, the real owner of the property, did not have its day in court.

MEAD, *supra* note 100, at 207; *cf.* SCHORR, *supra* note 6, at 41 (concluding that simply doing away with riparianism fails to explain why states adopted a "communitarian public-property rhetoric so at odds with the supposed frontier ethic of individualism and private property").

147. *See* Carol M. Rose, *Romans, Roads, and Romantic Creators: Traditions of Public Property in the Information Age*, 66 L. & CONTEMP. PROBLEMS 89, 93-94 (2003) (discussing English innovations of Roman concepts with regard to water); *see also* Rose, *supra* note 84, at 713, 720 (discussing Roman and Anglo-American common-law concepts of public property).

148. *See* SCHORR, *supra* note 6, at 40-41 (calling it an "innovation"); *cf.* MACKINNON, *supra* note 97, at 25, 29-30 (describing Mead's "[g]iving new life to the tired old language of public ownership of water" by pursuing the "idea" of "*active* public ownership . . . through state supervision").

149. 1 WIEL, *supra* note 84, § 172, at 196 & n.20.

150. *Id.* § 171, at 195. The terms for such unownable property vary. For example, during this period, some commentators and courts called it *publici juris*, *see, e.g.*, *id.*, while others invoked the Roman concept of *res communes*, *see, e.g.*, Roscoe Pound, *The End of Law as Developed in Legal Rules and Doctrines*, 27 HARV. L. REV. 195, 233-34 (1914). One reason I avoid these Roman terms is because the categories are often "rather fluid" at best and "very confused" at worst, even for experts, *see* Rose, *supra* note 147, at 91 & n.11 (quoting scholars of Roman law), and so are frequently used to mean different or even opposite things, s*ee, e.g.*, Lasky, *supra* note 1, at 176 (describing "*res publici*" not as unownable property but as water "belonging to the people in their socially organized capacity and capable of being reduced to private property on terms set by the state as the representative of that social organization").

private or sovereign—was the sort of "ventriloquism" that offended other members of the water bar like Moses Lasky.[151] Disagreeing with Wiel but less enthusiastic than Lasky, Roscoe Pound implied that these Western declarations really were reclassifying "running water" from something unownable to something "owned by the state," an "asset of society" not subject to "private . . . ownership except under regulations that protect the general social interest."[152] This trend, he said, was "changing the whole water law of the western states."[153] Thus, the allocation of private rights, via prior appropriation, was not the only legal innovation prompted by the peculiarity of the West—so too was the allocation of public rights via state ownership.

Finally, then as now, there was significant confusion over the nature of state ownership, and how it differed from sovereignty[154]—something this Note seeks to clarify.[155] Importantly, state ownership was only ever understood to be *absolute* ownership that had to be valid for both state- and federal-law purposes. The antiquated conception of absolute ownership meant that if the state owned the water, others—most notably, the federal government—could not.[156] States were thus forced to make various and often quite dubious arguments for why the federal government ceded its proprietary and/or sovereign control to the states, such that the latter could have absolute ownership. Wyoming's high court

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151. *See supra* note 1 and accompanying text.

152. Pound, *supra* note 150, at 233-34 (contrasting *res communes*, *res nullius*, and *res publicae*).

153. *Id*.

154. *See* SCHORR, *supra* note 6, at 101-03 ("In early Colorado water law the formal distinctions among private, common, corporate, and public property were . . . far less clear than they seem to be today."); 1 WIEL, *supra* note 84, § 172, at 196 (noting, in 1911, the "confusion between sovereignty and proprietorship"); Lasky, *supra* note 1, at 175 (noting, in 1929, that "[t]he attitude of the bar today is to consider the Colorado Constitution as asserting state ownership, though without any clear conception of what that is, nor of how it differs from sovereignty alone").

155. In short, while all states have police power over water, only some have used that power and their property-law-defining authority to give the state (i.e., the people) ownership over the water it controls. *See infra* Section II.A. But state ownership and the state's police power are not coextensive or equivalent. The police power is a sovereign authority that enables the state to act as *regulator*; state ownership confers property status on the state, making it *property owner* of its water. And, because the state's police power may extend to water it does not own, the two may differ in scope. *See infra* Section II.C.3. Moses Lasky keyed into this distinction: "The state controls because the state owns; so a questioned western lawyer today in likelihood would venture. But originally it was not so. In the [1870s and 1880s] the state controlled as sovereign; today it controls as sovereign plus (almost) proprietor." Lasky, *supra* note 1, at 175.

156. *See, e.g.*, 1 WIEL, *supra* note 84, §§ 170, 172-173, at 194-95, 199-200 (noting that unlike in California, with no state ownership, Colorado's position that it owned the surface water in the state was interpreted to mean, among other things, that it divested the United States of its "proprietary rights . . . as [riparian] landowner").

claimed that the federal government acquiesced to the state's claim to own all water contained in the state, in part because Congress ratified Wyoming's constitution, which contained an ownership provision.[157] Because its constitution was not ratified by Congress, Colorado resorted to arguing (incorrectly) that the Desert Land Act meant that the federal government transferred its proprietary right in that water to the states.[158]

The need to fashion a theory of *absolute* ownership — and the attendant confusion — perhaps arose because states soon repurposed these ownership claims for interstate and state-federal contests. As this Section has described, state ownership originated as part of inward-looking efforts to (re)define the property character of water and order the relationships between citizens, water, and the state. But states eventually turned the ownership claims outward.[159] Doing so did not get them far.

B. As Water Ownership Claims Were Turned Outward, the Supreme Court Limited Their Reach — But a Key Question Remains

1. The Settled Limits of State Water Ownership

As soon as the first decade of the twentieth century, the Supreme Court concluded that in interstate disputes over rivers and streams, a state could not rely on ownership claims as a trump against its neighbor.[160] In 1907, the Court held that an upstream state's purported "ownership or control of" a stream or river does not "entitle[]" it to divert as much of the water as it likes "regardless of any injury or prejudice to the" downstream state.[161] Since then, the Court's federal common-law remedy for interstate disputes — equitably apportioning the water among the feuding states — rejects any reliance on where the waters originate.[162]

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157. *See* Farm Inv. Co. v. Carpenter, 61 P. 258, 264 (Wyo. 1900); Goldberg, *supra* note 58, at 11-12.

158. *See* 1 WIEL, *supra* note 84, § 176, at 207-08; Goldberg, *supra* note 58, at 13-14, 16-19. On the Desert Land Act and federal reserved water rights, see *infra* Section IV.B.

159. *See* Kansas v. Colorado, 206 U.S. 46, 57 (1907) (describing Colorado's contention in a dispute over the Arkansas River that its constitutional enactment entitled it to ownership of all water within the state).

160. *See id.* at 95 (noting that Colorado follows a "doctrine of . . . public ownership of flowing water" but concluding that "[n]either state can legislate for or impose its own policy upon the other").

161. Wyoming v. Colorado, 259 U.S. 419, 464 (1922) (summarizing the holding of *Kansas v. Colorado*, 206 U.S. 46); *see also* Hinderlider v. La Plata River & Cherry Creek Ditch Co., 304 U.S. 92, 102, 110 (1938) (reiterating this proposition and noting that equitable apportionment "is a question of 'federal common law'").

162. *See, e.g.*, Colorado v. New Mexico, 467 U.S. 310, 323 (1984); *Wyoming v. Colorado*, 259 U.S. at 466.

For a time, however, in an adjacent but distinct context—state-federal regulatory conflicts—assertions of state ownership carried the day in the Supreme Court. In the late nineteenth and early twentieth centuries, states successfully advanced the "state ownership theory," a close cousin to the contemporaneous Western declarations of territorial ownership.[163] The state ownership theory was a two-part argument. States not only claimed absolute ownership of various natural resources[164] within their territory; they also asserted that this ownership shielded those resources from federal regulation and insulated state decisions that concerned them from federal constitutional scrutiny.

States relied on the state ownership theory to defend protectionist measures that restricted the out-of-state sale or transport of their natural resources or limited the rights of nonresidents to extract those resources.[165] And in highly "formalistic" opinions,[166] the Supreme Court allowed states to use a thick conception of state or public ownership[167] as a bulwark against federal regulation or constitutional scrutiny. States placed natural resources beyond the reach of the Commerce Clause by asserting that their people owned a resource so completely—even after private capture—that it remained a publicly owned good that never became a commercial item nor entered interstate commerce.[168] Relatedly, states carved out an exception to the Privileges and Immunities Clause: their citizens' common but absolute and title-like ownership of the state's resources meant that nonresidents were not discriminated against because they had no right to benefit

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163. *See* Pound, *supra* note 150, at 233-34 (framing both kinds of assertions as part of the same trend).

164. Unless otherwise indicated, when this Note refers to "natural resources," it means those *not* granted to states through statehood. Section II.C, *infra*, explains the difference.

165. *See, e.g.*, Hughes v. Oklahoma, 441 U.S. 322 (1979) (minnows); Douglas v. Seacoast Prods., Inc., 431 U.S. 265 (1977) (menhaden); Toomer v. Witsell, 334 U.S. 385 (1948) (shrimp); West v. Kan. Nat. Gas Co., 221 U.S. 229 (1911) (natural gas); Hudson Cnty. Water Co. v. McCarter, 209 U.S. 349 (1908) (water); Geer v. Connecticut, 161 U.S. 519 (1896) (game birds), *overruled by Hughes*, 441 U.S. 322; *see also* Patsone v. Pennsylvania, 232 U.S. 138 (1914) (prohibiting foreign-born residents from hunting wild game); McCready v. Virginia, 94 U.S. 391 (1876) (imposing restrictions on noncitizens' ability to plant oysters in state waters); Clason v. Indiana, 306 U.S. 439 (1939) (upholding a state prohibition on the export of dead horses as a legitimate sanitary measure).

166. *Hughes*, 441 U.S. at 328, 333 (tracing the history of the Court's past "formalistic 'ownership' analysis").

167. As the Supreme Court later explained when finally debunking it, the theory asserted that the state—"as representative for its citizens, who 'owned' in common all" natural resources "within the State"—"had the power" to "qualify" any private "ownership of" its resources, including by "prohibiting" their "removal" from the state. *Id.* at 327.

168. *See, e.g.*, *Geer*, 161 U.S. at 529-30.

from property that was not theirs.[169] The foundational case for this theory was *Geer v. Connecticut*, in which Connecticut made it unlawful to export (or kill with the purpose of exporting) any of the state's quail, woodcock, ruffled grouse, or gray squirrels.[170]

The theory's infirmity was apparent by the time the Supreme Court addressed state water-ownership claims in 1908. In *Hudson County Water Co. v. McCarter*, the Court upheld against constitutional attack a state statute banning the export of its surface water.[171] While the lower court relied solely on the state's ownership claim to uphold the law, the Court did not.[172] Instead, the Court emphasized that the "public interest" in the water and the state's attendant "police power" – "not merely" its state ownership – shielded the state decision from constitutional scrutiny.[173] Four decades later, the Court decisively undercut the theory[174] and finally interred it in 1979, such that ownership claims could no longer defeat federal supremacy.[175]

In 1982, the Court clarified that this applied to water as well. In *Sporhase v. Nebraska ex rel. Douglas*,[176] discussed at length in the next Part, the Court held that in spite of Congress's historical deference to states on water law and states' especially strong interests in conserving their water resources, a state claim to own groundwater could not alone remove that water from Commerce Clause analysis.[177]

To summarize, it is now well settled that in the context of relations between states or between a state and the federal government, state ownership claims over water are not dispositive. Ownership claims over both groundwater and surface water are subject to federal preemption and federal constitutional limits. Further,

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169. *See, e.g.*, *McCready*, 94 U.S. at 395-96 ("[T]he citizens of one State are not invested by this clause of the Constitution with any interest in the common property of the citizens of another State.").

170. Although the majority in *Geer* paid lip service to the idea that state regulation of wild animals would be invalid to the degree it was "incompatible" with the "rights" of the federal government under the Constitution, *Geer*, 151 U.S. at 528, it relied on a thick conception of state ownership to find that the regulation did not violate the Commerce Clause, *see id.* at 529-30, 534.

171. 209 U.S. 349, 355-56 (1908). The water company that sought to export the water alleged a host of constitutional violations, including that the ban violated the Commerce and Privileges and Immunities Clauses and took property without just compensation. *Id.* at 353-54.

172. *Id.* at 354-56.

173. *Id.* at 356.

174. Toomer v. Witsell, 334 U.S. 385, 400 (1948).

175. Hughes v. Oklahoma, 441 U.S. 322, 334-37 (1979).

176. Sporhase v. Nebraska *ex rel*. Douglas, 458 U.S. 941 (1982).

177. *Id.* at 951.

state ownership claims over surface water have no legal relevance in interstate disputes. *Mississippi v. Tennessee* held that this last proposition is also true for groundwater resources that span state lines.[178]

2. The Unresolved Confusion Over State Ownership

If these doctrinal limits on state ownership are clear, what—if anything—is left of state ownership? On this question, this Note seeks to challenge the views of two groups, and to justify and clarify the view adopted by a third group.

The first group comprises litigants, state governments, and state courts who contend that state ownership remains valid for intrastate purposes—but misunderstand the basis and limits of that ownership. In spite of the Supreme Court's precedents limiting the relevance of state ownership claims in interstate disputes and state-federal water conflicts, they continue to rely on a *territorial* understanding of ownership. In doing so, they extend the state's ownership interest to all water within the state's borders, not just the share of water it has a right to use and control.[179] Importantly, their approach can be particularly detrimental to Native American tribes.[180] Part IV draws on the Note's preceding analysis to show why their claims are faulty.[181]

From the opposite end of the spectrum, a second group—which this Note calls state ownership "opponents"—concludes that nothing is or should be left

178. See *Mississippi v. Tennessee*, 142 S. Ct. 31, 39-41 (2021), and the discussion of this case *infra* Section IV.C.

179. See, for example, the Wyoming Supreme Court's decision in *Big Horn III*, *In re* Gen. Adjudication of All Rts. to Use Water in Big Horn River Sys., 835 P.2d 273, 276-83 (Wyo. 1992), which is discussed at length *infra* Section IV.B.

180. See *infra* notes 598-605 and accompanying text. *Cf.* Gerald Torres, *Who Owns the Sky?*, 18 PACE ENV'T L. REV. 227, 229-30 n.3 (2001) (noting that resurgent claims of state resource ownership based on the equal-footing doctrine have "put state ownership of various natural resources into conflict with the claims of Indian tribes"). For a discussion on the difference between state ownership based on constitutional equal footing and that based on state property law, see *infra* Section II.C.2.

181. See *infra* Section IV.B.

of state ownership in any context.[182] Some industry groups,[183] academics,[184] litigants,[185] and courts[186] appear to assert that even absent a federal conflict, states

182. It is worth noting that it is not always clear whether scholars, courts, or litigants would disagree with this Note's thesis. If their position is that states' ownership claims are meaningless in interstate or state-federal water disputes and mostly irrelevant for any kind of state-federal regulatory conflict, this Note does not disagree. However, it is often ambiguous whether they adopt only this position — or whether they would go one step further to argue that state ownership has no validity even for state-law purposes.

For example, Christine Klein critiques state ownership against the backdrop of *Mississippi v. Tennessee*, indicating she may only oppose the kind of groundwater-ownership claim that Mississippi made: an outward-facing assertion of sovereign ownership that is not subject to federal supremacy. Thus, her conclusion that "claims of water ownership by the states . . . are better recognized as overblown references to the states' ability to *regulate the use* of water within their borders," Klein, *supra* note 45, at 508, may only refer to these outward-facing ownership claims. But at points she also appears to reject that such ownership claims can or should be valid for inward-looking, state-law-only purposes. *See id.* at 478-79 (opposing "cloaking interstate water disputes in the language of ownership" and noting that "[t]he substitution of 'ownership' for 'use' could taint the analysis in [*Mississippi v. Tennessee*], *and* distort future litigation in areas including . . . the regulatory takings doctrine[] and state water law" (emphasis added)). Elsewhere, she suggests that state ownership talk is unnecessary to the resolution of legal matters between states and their citizens. *See id.* at 511. And she addresses the influence of ownership on regulatory takings, which relies on state definitions of property. *See id.* at 518-19.

There are similar examples where other scholars, litigants, and courts seem to reject both an outward- and inward-looking state ownership. *See infra* notes 184-187, 193, 494, 526.

183. *See, e.g.*, *Who Owns the Water?*, WATER SYS. COUNCIL 7 (Aug. 2016), https://www.watersystemscouncil.org/download/3436 [https://perma.cc/WJJ3-5YCX] ("Does the State [o]wn the [w]ater? . . . The short answer to this question is 'NO!'").

184. *See, e.g.*, Brief of Amici Curiae Law Professors in Support of Defendants at 4, Mississippi v. Tennessee, 142 S. Ct. 31 (2021) (No. 22O143) [hereinafter Law Professors' Amicus Brief] (arguing that in addition to exacerbating *inter*state water conflict, "Mississippi's legal theory would also upend our nation's water law jurisprudence generally, from private disputes to regulatory takings claims").

185. *See, e.g.*, Reply of the City of Memphis, Tennessee, and Memphis Light, Gas & Water Division to the Exceptions of the State of Mississippi at 23, *Mississippi v. Tennessee*, 142 S. Ct. 31 (No. 22O143) [hereinafter Memphis and MLGW Reply] ("The [Supreme] Court has already rejected the notion of a state's proprietary ownership of natural resources. In a series of cases culminating in *Sporhase v. Nebraska*, the Court held that States do not hold absolute title to groundwater." (internal citations omitted)); Reply of Defendant State of Tennessee to the Exceptions of Plaintiff State of Mississippi to Report of the Special Master at 30, *Mississippi v. Tennessee*, 142 S. Ct. 31 (No. 22O143) [hereinafter Tennessee Reply] ("In fact, the Court explicitly rejected 'the legal fiction of state ownership' of 'ground water' in *Sporhase v. Nebraska ex rel. Douglas*, which Mississippi does not address." (internal citations omitted) (quoting Sporhase v. Nebraska *ex rel*. Douglas, 458 U.S. 941, 951 (1982))).

186. *See e.g.*, Sturgeon v. Frost, 872 F.3d 927, 935-36 (9th Cir. 2017) (stating flatly in a state-federal regulatory conflict that "[w]ater cannot be owned" by the state or federal government, who

cannot own groundwater for purposes of state law and intrastate relations. They argue that any "ownership" language is, at most, a fiction expressing merely the state's regulatory authority.[187]

State ownership opponents present several arguments in support of the position that ownership is invalid even for internal state-law purposes. Some of those arguments are grounded in a belief that recognizing state ownership will impede or distract from crafting a coherent water doctrine,[188] that it will empower states to deprive Native American tribes of water rights,[189] or that it will exacerbate interstate conflicts.[190] These concerns boil down to whether we *should* recognize state ownership for doctrinal and policy reasons.[191]

However, opponents also assert that state ownership *cannot* be valid as a matter of law: scholars and courts contend that the Supreme Court's precedents mean that there is nothing left of state water ownership, even for state-law purposes. In particular, they draw on language from a line of cases culminating in *Sporhase*, which described "the legal fiction of state ownership,"[192] to conclude that the Court has announced a categorical rule that states cannot have a proprietary ownership of uncaptured water for state-law purposes.[193] Part II disagrees,

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may only have a property right to *use* the water), *rev'd and remanded*, 139 S. Ct. 1066 (2019), *vacated*, 941 F.3d 953 (9th Cir. 2019); City of El Paso v. Reynolds, 563 F. Supp. 379, 382, 388 (D.N.M. 1983) (noting correctly in a Commerce Clause dispute that "federal constitutional constraints" are not "suspended merely because a state claims public ownership of internal ground waters," but stating more ambiguously that a state's "espoused" or "asserted ownership of public waters within the state is only a legal fiction").

187. *See, e.g.*, A. Dan Tarlock, *Takings, Water Rights, and Climate Change*, 36 VT. L. REV. 731, 740 (2012) ("State ownership is a fiction for the assertion of the power to regulate all aspects of use and enjoyment rather than an assertion of full ownership."); Joseph Regalia & Noah D. Hall, *Waters of the State*, 59 NAT. RES. J. 59, 60 (2019) ("[D]eclarations of water as state-owned property are fundamentally flawed.").

188. *See infra* Section IV.A.

189. *See infra* Section IV.B.

190. *See infra* Section IV.C.

191. Part IV responds to these concerns.

192. Sporhase v. Nebraska *ex rel.* Douglas, 458 U.S. 941, 951 (1982).

193. *See, e.g.*, A. Dan Tarlock, *So It's Not "Ours"—Why Can't We Still Keep It? A First Look at* Sporhase v. Nebraska, 18 LAND & WATER L. REV. 137, 159-61 (1983) ("Justice Stevens dealt the coup de grace to state ownership arguments in *Sporhase* . . . ."); Hall & Regalia, *supra* note 45, at 185 (arguing that "[t]he conclusion to be drawn from the Court's modern jurisprudence"—*Sporhase* and the line of cases that led to it—"is clear and simple: States do not own water, neither by royal prerogative nor on behalf of their citizens"); Regalia & Hall, *supra* note 187, at 78 & n.179 (arguing that *Sporhase* supports the claim that "state ownership of natural resources has been rejected by the Supreme Court, and the very concept of water as property is flawed"); Fed. "Non-Reserved" Water Rts., 6 Op. O.L.C. 328, 366 (1982) [hereinafter Olson

explaining why it is wrong to understand the Court's sometimes-overbroad language—made in the narrow context of a Commerce Clause inquiry—to conclude the Court has somehow abrogated states' ability to own water for state-law purposes.[194] Allowing the language from this line of cases to control questions of internal state property law overlooks that the Court's statements only apply to the specific context of interstate or state-federal disputes. So, a state court might correctly conclude that, for reasons unrelated to Supreme Court opinions, there is no state ownership of groundwater as a matter of state property law.[195] But the Court has not announced a rule that mandates that result.

One Alaskan's desire to hovercraft his way toward particularly choice moose-hunting grounds recently highlighted the division between these two groups, the persistent way that state ownership arises and causes confusion, and the Supreme Court's inclination towards imprecise language.[196] In *Sturgeon II*, Alaska and the federal government disagreed over who had authority to regulate hovercrafting on the Nation River.[197] Because of the idiosyncratic scheme that Congress adopted for regulating lands and waters in Alaska's national parks, whether the federal government had authority to restrict hovercrafting depended upon whether it held "title to" the river.[198] To argue the federal government did *not*

Memo] (citing precursors to *Sporhase* to conclude that "claims of ownership of natural resources by the states or by the federal government are best understood as claims of regulatory jurisdiction over those resources, either under the states' police powers or under the federal government's constitutional powers"); State v. Superior Ct. (*Underwriters at Lloyd's of London*), 93 Cal. Rptr. 2d 276, 285, 287-88 (Ct. App. 2000) (relying on *Sporhase* in support of its ultimate holding that for state-law purposes California "'owns' the groundwater in a regulatory or supervisory sense, but it does not own it in a possessory, proprietary sense").

194. *See infra* Section II.B.

195. *See, e.g.*, Torres, *supra* note 95, at 149-51 (noting that Texas made surface water but not groundwater subject to state ownership). State courts often *reject* state ownership for state-law purposes based on common-law principles or the state's distinct property law. *See* Regalia & Hall, *supra* note 187, at 71-76 (compiling contemporary cases); Lasky, *supra* note 1, at 180-85 (compiling early cases).

196. Sturgeon v. Frost (*Sturgeon II*), 139 S. Ct. 1066, 1072 (2019).

197. *Id*. at 1072-73.

198. *Id*. at 1076 (quoting 16 U.S.C. § 3102 (2018)). In any other state, the federal government would have regulatory authority over the lands and waters within national park boundaries regardless of the ownership status of those "lands or waters (or lands beneath waters)." *Id*. at 1076. But the Alaska National Interest Lands Conservation Act (ANILCA) "set aside extensive land for national parks and preserves" in Alaska "on terms different from those governing such areas in the rest of the country." *Id*. at 1075. ANILCA divides the land and water within Alaska-based national parks (and other federal "conservation system units," such as national preserves) into "public" and "non-public"; and the latter are "exempt . . . from certain regulations" that would normally govern the land and water within the park boundaries. *Id*. at 1076 (citing 16 U.S.C. § 3103(c) (2018)). The resources that are "public"—and thus subject

hold such title, Sturgeon, the would-be hovercrafter, asserted that if anyone owned the river itself, it was Alaska.[199] In advancing a territorial ownership argument, he not only misunderstood state water ownership,[200] but, more importantly, erred in thinking that a state's ownership could resolve a state-federal regulatory clash.[201] Opposing Sturgeon, law professor amici explained why his conception of state ownership was invalid,[202] and why, even if it were valid, it could not "defeat federal authority."[203] So far, this Note agrees. But the amici then appeared to go a step further, citing *Sporhase* to contend that states "do not 'own' [their] resources as traditional property," full stop.[204] En route to ultimately holding that the federal government could not regulate activity on the river,[205] the Court stated flatly that "running waters cannot be owned . . . by a government or by a private party."[206] This is the kind of overbroad disavowal of sovereign ownership that confuses courts — especially state courts.[207]

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to Park Service regulations — are those "lands, waters, and interests therein" "the title to which is in the United States." *Id.* (quoting 16 U.S.C. § 3102 (2018)). Thus, the question was whether "the title to" the Nation River "[was] in the United States," making it "public" under ANILCA and thereby under the Park Service's purview. *Id.* at 1078 (citing 16 U.S.C. § 3102 (2018)).

199. Brief for Petitioner at 27-28, *Sturgeon II*, 139 S. Ct. 1066 (No. 17-949), 2018 WL 3830172 [hereinafter Sturgeon's Brief].

200. Sturgeon asserted that the equal-footing doctrine meant that Alaska owned all navigable waters within its borders. *Id.* *Infra* notes 348-357 and the accompanying text explain why this is wrong.

201. *See supra* notes 163-178 and accompanying text.

202. *See* Brief of Law Professors as Amici Curiae in Support of Respondents at 7-8, *Sturgeon II*, 139 S. Ct. 1066 (No. 17-949), 2018 WL 4522296 [hereinafter Law Professors' *Sturgeon* Brief].

203. *Id.* at 11.

204. *Id.* (first citing Sporhase v. Nebraska *ex. rel.* Douglas, 458 U.S. 941 (1982); and then citing Hughes v. Oklahoma, 441 U.S. 322 (1979)). However, the brief also included a footnote indicating that perhaps the professors rejected only an absolute ownership that would settle federal questions and state-federal regulatory conflicts, not a qualified interest that is valid for state-law purposes: "While state law may define the relative property rights of the state government and its citizens in water or other natural resources, federal law defines the relative rights among the several states and as between the states and the federal government." *Id.* at 11 n.3.

205. The Court concluded that the federal government did not have "title" to the river and retained no "ownership-indifferent" regulatory authority, and rejected the United States's argument that navigable waters merited a "special rule" that would bring them within federal reach. *Sturgeon II*, 139 S. Ct. at 1078-87.

206. *Id.* at 1078. Mexico might find this statement to be a bit rich: the United States certainly acts as if it has more than a usufruct in running water. For most of the past half century, the United States has used or stored nearly the entire Colorado River before it reaches the southern border, turning the "delta" on the Mexico side into a virtual desert. *See* DAVID OWEN, WHERE THE WATER GOES: LIFE AND DEATH ALONG THE COLORADO RIVER 10 (2017).

207. See *infra* notes 494 and 526.

But not all courts have been led astray by the Supreme Court. It is the view of the third and final group — state, and sometimes federal, courts that continue to recognize some form of state ownership for state-law purposes — that this Note seeks to justify and clarify. And it seeks to nudge these courts toward articulating state ownership as a literal proprietary ownership, particularly when uncertainty causes them to refrain from doing so.

By either ignoring the Supreme Court's sweeping statements on state ownership or rightly understanding that they apply only to ownership claims made in analogous interstate or state-federal disputes,[208] these courts articulate a form of qualified state ownership. For example, in spite of *Sturgeon II*'s apparent repudiation of sovereign water ownership the year before, in 2020 the Montana Supreme Court relied on its constitution to reiterate, as it had before, that for state-law purposes all "Montana waters are owned by the State of Montana."[209]

However, courts that recognize state ownership are often quite vague about its exact nature or foundations. Some courts appear to stop short of calling it an outright proprietary ownership, instead invoking the state's ownership as a reason why private rights are limited to usufructs.[210] Courts that do consider the state the property owner of the water invoke the state's constitutional or statutory pronouncements, but do not elaborate upon what basis those pronouncements have continued force.[211] Left unclear in these opinions is why the doctrine remains valid in the modern era despite the doctrinal developments of the twentieth century that ultimately undercut the foundations of absolute ownership.

Colorado is a partial exception that proves the rule. More than any other state, Colorado's state water ownership continues to shape its property law.[212] In a number of decisions over the past few decades, the Colorado Supreme Court

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208. *Cf.* State v. Fertterer, 841 P.2d 467, 470 (Mont. 1992) (agreeing that because there was "no federal constitutional issue or other federal question presented" in the case, *Hughes v. Oklahoma*, 441 U.S. 322 (1979), was "not controlling" and Montana had a proprietary interest in its wild game for state-law purposes), *overruled on other grounds by* State v. Gatts, 928 P.2d 114 (Mont. 1996).

209. Elk Grove Dev. Co. v. Four Corners Cnty. Water & Sewer Dist., 469 P.3d 153, 157 (Mont. 2020) (quoting MONT. CONST. art. IX, § 3(3)) (recognizing state ownership of all waters, including surface water and groundwater).

210. *See, e.g.*, *id.*

211. *See, e.g.*, Olds-Olympic, Inc. v. Com. Union Ins. Co., 918 P.2d 923, 929 n.15, 930-31 (Wash. 1996) (recognizing state ownership of groundwater).

212. *Cf.* Gregory J. Hobbs, Jr., *Reviving the Public Ownership, Antispeculation, and Beneficial Use Moorings of Prior Appropriation Water Law*, 82 U. COLO. L. REV. 97, 127 (2013) (arguing that Colorado "adheres to a strong, state constitutionally based public water ownership doctrine").

has not just reiterated that the state owns its surface water and groundwater,[213] but incorporated that concept into its reasoning.[214] However, the court has been

213. While it is clear that no groundwater in Colorado is capable of being privately owned, it appears to be the case that only some of the state's share of groundwater is state-owned by virtue of its constitutional pronouncement. *See* COLO. CONST. art. XVI, § 5. The complexity arises because that pronouncement only refers to surface water, *see id.*, and the state has statutorily divided its groundwater into four categories based on its location and/or its hydrological connection to surface water, BENSON ET AL., *supra* note 4, at 406-10. Colorado law treats one of those categories—"tributary groundwater," defined as such because of its hydrological connection to streams and rivers—as surface water. *See* Ground Water Comm'n v. N. Kiowa-Bijou Groundwater Mgmt. Dist., 77 P.3d 62, 69-70 (Colo. 2003); COLO. REV. STAT. § 37-82-101(1) (2021) ("The water of every natural stream, as referred to in sections 5 and 6 of article XVI of the state constitution, includes all the water . . . which is in or tributary to a natural surface stream but does *not* include nontributary groundwater . . . ." (emphasis added)). Thus, just as it matters for purposes of legislative control and private rights whether the groundwater is tributary and thus subject to the prior appropriation doctrine codified in sections 5 and 6 of article XVI of the state constitution, *see, e.g.*, Vance v. Wolfe, 205 P.3d 1165, 1171 (Colo. 2009) (discussing legislative authority); E. Cherry Creek Valley Water & Sanitation Dist. v. Rangeview Metro. Dist., 109 P.3d 154, 157 (Colo. 2005) (discussing private rights); *cf.* Griggs, *supra* note 37, at 1292-95 (describing the "regulatory and public consequences" that resulted from Colorado's "statutory redefinitions of [its share of] Ogallala groundwater"), this distinction would seem to affect the scope of the *public* rights announced in the constitution. Indeed, in an opinion written by the late Justice Hobbs, an eminent water expert, the Colorado Supreme Court held that private landowners do not own any category of groundwater within the state, but it implied that the state only affirmatively owned tributary groundwater. Chatfield E. Well Co. v. Chatfield E. Prop. Owners Ass'n, 956 P.2d 1260, 1268 (Colo. 1998) ("Waters of the natural stream, *including tributary ground water*, belong to the public . . . under Colorado's constitutional prior appropriation doctrine . . . . In contrast, the right to use [other categories of groundwater] is governed by the provisions of the Groundwater Management Act . . . Regardless of whether water rights are obtained in accordance with prior appropriation law, or pursuant to the Ground Water Management Act, no person 'owns' Colorado's public water resource as a result of land ownership." (emphasis added)). However, writing later, and citing a different case that he authored, Justice Hobbs suggested that the Colorado "public owns surface water and *all forms of* groundwater . . . ." Hobbs, *supra* note 212, at 128 & n.153 (emphasis added) (first citing State v. Sw. Colo. Water Conservation Dist., 671 P.2d 1294, 1307 (Colo. 1983); and then citing Bd. of Cnty. Comm'rs v. Park Cnty. Sportsmen's Ranch, LLP, 45 P.3d 693, 707-08 (Colo. 2002) (Hobbs, J.)).

214. *See, e.g.*, *infra* notes 216-219 and accompanying text; Shirola v. Turkey Cañon Ranch LLC, 937 P.2d 739, 747-48 (Colo. 1997) ("Under the Colorado Constitution, the water of every natural stream within the state is the property of the public . . . . Thus, a water right is usufructuary in nature because it gives its holder the right to use and enjoy the property of another." (first citing COLO. CONST. art. XVI, § 5; and then citing Navajo Dev. Co. v. Sanderson, 655 P.2d 1374, 1377 n.2 (Colo. 1982))); Kobobel v. State, 249 P.3d 1127, 1137-38 (Colo. 2011) (noting in a takings claim that "[i]n accordance with Colorado's doctrine of prior appropriation"—which is "enshrined" in article XVI, sections 5 and 6—"the well owners neither hold title to the water in their decreed wells, nor is their right to use the water unfettered"); *see also In re* Title, Ballot Title, Submission Clause for 2011-2012 No. 3, 274 P.3d 562, 575 (Colo. 2012) (Hobbs, J., dissenting) (arguing that a ballot initiative that would have subjected Colorado water to the

unclear whether this is a proprietary ownership, or something fuzzier.[215] And, even when the court leans into the former notion, it is vague as to the ownership's source. For example, in *Park County Sportsmen's Ranch*, in response to a water plan for one of Colorado's expanding cities, a dispute arose over who owned the aquifer storage capacity underlying private land[216]—literally, "the spaces between the grains of sand, gravel, silt, clay, and cracks within the rock" that hold water in an aquifer.[217] The Colorado Supreme Court relied on the fact that the public (the state, in this Note's phrasing) owned the groundwater at issue to conclude that the public owns the "water-bearing capacity" of the earth, too.[218] While the court never explicitly labelled this a proprietary ownership, it

public trust doctrine was misleading: its statement that it would "make 'public ownership of [Colorado] water legally superior to water rights' . . . [would] inevitably confuse" voters, because "the principle . . . that waters of natural streams are public property dedicated to the people of the state" is "already inherent in Colorado doctrine").

215. Thus, though it is not consistent in this regard, the court tends to describe *all* Colorado water as a "public resource" to convey that none of it is susceptible to private ownership, *see, e.g.*, *Chatfield*, 956 P.2d at 1267; *Kobobel*, 249 P.3d at 1134, but when the case requires more specificity about the extent of the public's property rights, it opts for terms like "belong," *see, e.g.*, *Park Cnty.*, 45 P.3d at 706-07 (using both terms).

216. *Park Cnty.*, 45 P.3d at 696-97.

217. *Id.* at 702. Private landowners who opposed the plan to store water beneath their overlying tracts alleged they owned the space where the water would be held, so the plan constituted a trespass. *Id.* at 700-01. *See generally* Hobbs, *supra* note 212, at 121-22 (describing the background to and factual issues in this case).

Other state courts have similarly relied on the state's property ownership of groundwater to reject claims that landowners own the water-storage space beneath their tract. *In re Application U-2* concerned a permitting scheme in Nebraska that allowed a private party (in this case, a public power and irrigation district) to claim the exclusive right to a volume of "incidental" groundwater—that is, groundwater that existed underground as an incident of the private party's lawful use of surface water, which had seeped downward into the natural storage space in underlying aquifers. 413 N.W.2d 290, 293-94 (Neb. 1987). Among other objections, landowners whose tracts overlaid that "incidental" groundwater claimed that the statute creating the permitting scheme effected a taking under the state's constitution because it deprived them of the right to use the storage beneath their land. *Id.* at 297. The Nebraska Supreme Court rejected this argument, relying in part on the fact that the state owned all groundwater in the state; this meant that the landowner's property rights were merely rights to *use* groundwater beneath their tract, and those use rights did not translate into ownership of (or even an "exclusive right to use") the "storage space" below. *Id.* at 298-99.

218. *See Park Cnty.*, 45 P.3d at 705-07. Though it sometimes used the term "public resource," the court said that one the "principles of the Colorado Doctrine" is that the "water above and beneath the surface of the ground *belongs to the public*." *Id.* at 707 (quoting *Southwestern*, 671 P.2d at 1307). So, the court said, "by reason of Colorado's constitution, statutes, and case precedent, neither surface water, nor ground water, nor the use rights thereto, nor the water-bearing capacity of natural formations belong to a landowner as a stick in the property rights bundle." *Id.* The court also relied on Colorado laws, "codif[ying] this longstanding aspect" of

implied as much by concluding that Colorado's water law — with state ownership as its centerpiece — abrogated the ad coelum doctrine, a common-law property doctrine that the landowners claimed gave them ownership of everything in the column extending from the surface of their tract to the center of the earth.[219] In this and other cases, the Colorado Supreme Court only partially sketched out the source and limits of the state's ownership, limiting its utility as a concept.[220] The court rightly noted that the federal government has allowed state law to govern water rights, and obliquely gestured toward the necessarily qualified nature of state ownership by noting the way that all state water law is cabined by certain federal constraints.[221] Perhaps because the original rationale for Colorado's ownership has been discredited, the court has cited a decades-old Senate report to support the idea that water in the West "*belongs to the public*."[222] However, these Colorado cases only partially explain why and to what extent a state can, in the modern era, own its water like it might own the timber in a state forest. The next Part takes up this task.

II. STATES CAN OWN GROUNDWATER FOR PURPOSES OF STATE LAW

States have broad authority to define property within their jurisdiction, subject to state and federal constitutional limits as well as federal supremacy. Based on that ability, and because of groundwater's inherent publicness, states can define the private *and* public property rights in their share of groundwater. This means they can give the people — that is, the state — ownership of that ground-

Colorado water law, which "allow[] holders of water rights decrees the right of passage for their appropriated water through and within the natural surface and subsurface water-bearing formations" of the state. *Id*. at 701, 707.

219. *See id*. at 710. Picking a different Latin phrase, the court referred to the ad coelum doctrine — which holds "[*c*]*ujus est solum ejus est usque ad coelum et ad inferos*," or, "[t]o whomsoever the soil belongs, he owns also to the sky and to the depths" — as the *cujus* doctrine. *Id*. at 696 & n.1 (italics added).

220. In this way, while I agree with Justice Hobbs that *Park County* regarded Colorado's ownership as a proprietary interest, I would respectfully suggest that state ownership played a less prominent or clear role in the case than he later described. *See* Hobbs, *supra* note 212, at 124-25 (highlighting the case for "demonstrat[ing] the public's water resource ownership interest in streams and aquifers").

221. *See Southwestern*, 671 P.2d at 1304-07; *Park Cnty.*, 45 P.3d at 708-09 (quoting and citing *Southwestern*, 671 P.2d at 1305-07); Chatfield E. Well Co. v. Chatfield E. Prop. Owners Ass'n, 956 P.2d 1260, 1267-68 n.7 (Colo. 1998) (quoting and citing sections of *Southwestern*, 671 P.2d at 1304-07).

222. *Park Cnty.*, 45 P.3d at 707 (quoting *Southwestern*, 671 P.2d at 1307).

water. Properly understood, that ownership includes an exclusive possessory interest, but does not permit the state to divest or destroy the water. It also allows for, and in some ways facilitates, strong private property rights in the state-owned water. While the Supreme Court has rejected a state's ability to use an ownership claim to thwart federal supremacy or as a sword against fellow states, it has left intact (as it must) an ownership that is valid for state-law purposes and a state's inward-looking efforts to manage its groundwater. So the Court's rejection of *absolute* state water ownership does not mean it has repudiated — or could repudiate — a *qualified* state ownership valid for state-law purposes.

This Part first explains the doctrinal foundations of this qualified state ownership, and then explores a line of Supreme Court cases on natural resources to demonstrate that the Court has recognized states' authority to assert such ownership. Finally, it draws on the preceding analysis and a collection of state-court cases to provide a succinct account of state water ownership's basis, extent, and nature in the modern era.

A. States' Almost Unfettered Authority to Define the Property Character of the Water They Control Allows Them to Assign Ownership to the State

States' property-law-defining power and police power are the source of state groundwater ownership. Together, they allow the state to define for state-law purposes which public property rights — up to and including exclusive ownership — exist in essentially public things.

It is "axiomatic"[223] that under our constitutional system, state law almost always defines property rights,[224] including for real property.[225] This means that

223. Nollan v. Cal. Coastal Comm'n, 483 U.S. 825, 857 (1987) (Brennan, J., dissenting) ("It is axiomatic, of course, that state law is the source of those strands that constitute a property owner's bundle of property rights.").

224. *See* Cedar Point Nursery v. Hassid, 141 S. Ct. 2063, 2075-76 (2021) ("As a general matter, . . . property rights protected by the Takings Clause are creatures of state law."); Palazzolo v. Rhode Island, 533 U.S. 606, 626 (2001) ("Property rights are created by the State."); Manhattan Cmty. Access Corp. v. Halleck, 139 S. Ct. 1921, 1938 (2019) (Sotomayor, J., dissenting) ("'State law determines . . . which sticks are in a person's bundle,' and therefore defining property itself is a state-law exercise." (quoting United States v. Craft, 535 U.S. 274, 278 (2002))); Butner v. United States, 440 U.S. 48, 55 (1979) ("Property interests are created and defined by state law."); Leis v. Flynt, 439 U.S. 438, 441 (1979) (per curiam) ("As this Court has observed on numerous occasions, the Constitution does not create property interests. Rather it extends various procedural safeguards to certain interests 'that stem from an independent source such as state law.'" (quoting Bd. of Regents of St. Colls. v. Roth, 408 U.S. 564, 577 (1972))).

225. Phillips Petrol. Co. v. Mississippi, 484 U.S. 469, 484 (1988) (declining to "disturb the 'general proposition [that] the law of real property is, under our Constitution, left to the individual

"[i]n the absence of any controlling federal law, 'property' and 'interests in property' are creatures of state law."[226] The body of state law that "create[s]" property rights and "define[s]" "their dimensions"[227] includes statutory and constitutional provisions,[228] the common law (which may be distinct within a state),[229] and, more controversially, custom.[230]

Each state's authority to define property enables it to decide which *public* property rights can exist in things that are sufficiently public. This is a distinct but related exercise of the property-defining power that enables states to decide

States to develop and administer.'" (quoting Hughes v. Washington, 389 U.S. 290, 295 (1967) (Stewart, J., concurring))).

226. Barnhill v. Johnson, 503 U.S. 393, 397-98 (1992) (citing McKenzie v. Irving Tr. Co., 323 U.S. 365, 370 (1945)); PruneYard Shopping Ctr. v. Robins, 447 U.S. 74, 84 (1980) ("Nor as a general proposition is the United States, as opposed to the several States, possessed of residual authority that enables it to define 'property' in the first instance."). *But see PruneYard*, 447 U.S. at 93 (Marshall, J., concurring) ("[R]ights of property are [not] to be defined *solely* by state law, [nor is there] no federal constitutional barrier to the abrogation of common-law rights by Congress or a state government. The constitutional terms 'life, liberty, and property' do not derive their meaning solely from the provisions of positive law." (emphasis added)).

227. *Roth*, 408 U.S. at 577.

228. Stewart E. Sterk, *The Federalist Dimension of Regulatory Takings Jurisprudence*, 114 YALE L.J. 203, 205 (2004) ("The 'property' protected by the Takings Clause is defined not by a single sovereign, but by the legislative enactments and judicial pronouncements of fifty separate states."). The Supreme Court's jurisprudence—emphasizing state law, and "impos[ing] little or no limit on [the] content" of property—has led some to argue that constitutionally protected property should meet certain basic criteria. *See, e.g.,* Thomas W. Merrill, *The Landscape of Constitutional Property*, 86 VA. L. REV. 885, 892-93 (2000) (arguing that to identify property protected by the Takings and Due Process Clauses we should reject natural law or "pure positivis[m]," and instead rely on a "'patterning definition' method" that would establish "general criteria that distinguish constitutional property from other [legally recognized] interests" and would then look to a "non-constitutional" source like state law to determine whether the "interest satisfies these criteria"); Maureen E. Brady, *Defining "Navigability": Balancing State-Court Flexibility and Private Rights in Waterways*, 36 CARDOZO L. REV. 1415, 1446-47 (2015) (noting that these kinds of calls for a "federal benchmark" have failed to take root in the Supreme Court's jurisprudence).

229. *See, e.g.*, Stop the Beach Renourishment, Inc. v. Fla. Dep't of Env't Prot., 560 U.S. 702, 708-09 (2010) (noting that the law governing littoral—that is, beachfront—property arises from Florida's common law, and comparing the state's common law with that of other jurisdictions).

230. Custom as a source of property rights has largely featured in beachfront property cases, wherein "the public asserts ownership of property under some claim so ancient that it antedates any memory to the contrary," Rose, *supra* note 98, at 714, and thus may originate antecedent to and outside of the state's established common law, *see* Sterk, *supra* note 228, at 223 (noting states' differing approaches toward "custom" as a source of property rights); *see also* Stevens v. City of Cannon Beach, 510 U.S. 1207, 1209-11 (1994) (mem.) (Scalia & O'Connor, JJ., dissenting from denial of certiorari) (discussing how the Oregon Supreme Court has relied on "custom" to define property rights of beachfront Oregonians in takings cases).

which property interests comprise certain categories of private property, like fee simple.[231] The *publicness* of the resource that allows for public property rights in that resource can arise from different characteristics. Two apply to groundwater. First, the fact that by its nature a resource is part of the public domain and unowned by any private party until reduced to individual possession can make it so public as to be susceptible to state ownership. For example, in *Horne II*,[232] a takings case from 2015, the Supreme Court noted that for state-law purposes, Maryland could own the oysters in its beaches: they "were 'ferae naturae' that *belonged to the State* under state law."[233] "[U]nlike raisins" that in California were "the fruit of the growers' labor,"[234] oysters in Maryland were "public things subject to the absolute control of the state," meaning that "[n]o individual ha[d] any property rights in them other than such as the state may permit him to acquire."[235] Thus, *Horne II* recognized a state's ability to claim ownership over fugitive natural resources, like groundwater, but implicitly limited its ability to do so over things people create or cultivate.

Second, the public's overriding interest in a thing can also import a publicness that in turn gives rise to public rights, including distinct property interests. Land adjacent to and beneath certain bodies of water is a prominent though sometimes controversial example. In the American legal tradition, society's paramount need to access and use these waters—including for fishing, navigation, and trade—transforms littoral or submerged land from presumptively private property into property encumbered by strong public property interests.[236] To

231. *See* Brady, *supra* note 228, at 1444 ("Even the most 'established' rights—say, the presumptive right of an owner in fee simple to exclude others from his property—are tempered by a combination of legislative and common-law restrictions . . . .").

232. Horne v. Dep't of Agric. (*Horne II*), 576 U.S. 351 (2015).

233. *Id.* at 367 (emphasis added).

234. *Id*.

235. *Id.* (alterations in original) (quoting Leonard v. Earle, 141 A. 714, 716 (Md. 1928)).

236. *See* Rose, *supra* note 84, at 727-28 (describing the way in which the public trust doctrine took root in the American legal tradition in the nineteenth century, meaning "waterways and submerged lands enjoyed" such a "strong presumption of 'publicness,'" that "[t]hese lands and their waters were [considered] held in trust for the public's rights of navigation and fishing . . . and even if alienated, . . . continue[d] to be impressed with the public 'trust,'" which is like "an inalienable easement, assuring public access"); *id.* at 728-29 (noting that what had in the English tradition been a "mere presumption" of "'sovereign' ownership" of submerged lands "was soon extended from tidelands to land beneath navigable streams generally" and "transformed by American jurists into a brute assertion: not even the king himself could alienate trust property free of its subservience to the people's trust rights"). That the public has certain rights in the resource that trump private property interests and cannot be eliminated because they predate the sovereign is the heart of the public trust doctrine. *See id.* at 714; Brady, *supra* note 228, at 1419. The public rights that are enforceable depend on the resource at issue and the relevant state's property law. Brady, *supra* note 228, at 1417-18 n.6.

raise this example is not to say that, like these lands, surface water and groundwater are state-ownable because they are subject to the public trust doctrine. Groundwater often is not,[237] and state trust ownership adds a layer—a trust duty—not always present in state ownership.[238] Instead, it is to show the basic operation at the heart of state ownership: the more public the thing, the greater the amount of public property rights obtainable in it. In addition, for this subset of public things that are critically important to society, the state's police power comes into play. Controlling water—uniquely important to public welfare and a source of potential conflict—is at the "core" of the state's police power.[239] That power enables the state to limit private rights in its water.[240]

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237. Each state decides the extent to which the public trust doctrine applies to its natural resources. Phillips Petrol. Co. v. Mississippi, 484 U.S. 469, 475 (1988) ("[I]t has been long established that the individual States have the authority to define the limits of the lands held in public trust and to recognize private rights in such lands as they see fit." (citing Shively v. Bowlby, 152 U.S. 1, 26 (1894))). Given the doctrine's historical application to *navigable* waters, groundwater is often not subject to the public trust doctrine. BENSON ET AL., *supra* note 4, at 559. *Compare, e.g.*, Env't L. Found. v. State Water Res. Control Bd., 237 Cal. Rptr. 3d 393, 399-403 (Ct. App. 2018) (holding that the public trust doctrine applies to extractions of groundwater that adversely impact a navigable waterway), *with* Rettkowski v. Dep't of Ecology, 858 P.2d 232, 239 (Wash. 1993) (holding that the public trust doctrine does not extend to groundwater).

238. BENSON ET AL., *supra* note 4, at 534 ("State proprietary claims to navigable waters are different from other government proprietary claims. The state is not simply claiming exclusive, individual ownership of a resource. It is claiming ownership as trustee for the people. State trust ownership is one of the most difficult and contested areas of water law."); *see, e.g.*, TENN. CODE ANN. § 69-3-102 (2021) ("[T]he waters of Tennessee are the property of the state and are held in public trust for the use of the people of the state . . . ."). Some commentators contend that the limits on *private* ownership contemplated by the public trust doctrine means the doctrine precludes *sovereign*—or state—ownership. *See* Regalia & Hall, *supra* note 187, at 67-68. But the doctrine, where it applies, limits the government's ability to create *private* property rights in already public or publicly owned resources. *See* Richard A. Epstein, *The Public Trust Doctrine*, 7 CATO J. 411, 419 (1987) (noting this aspect of the doctrine makes it in many ways a "mirror image" of the Takings Clause).

239. Sporhase v. Nebraska *ex rel*. Douglas, 458 U.S. 941, 956 (1982) ("[A] State's power to regulate the use of water . . . for the purpose of protecting the health of its citizens—and not simply the health of its economy—is at the core of its police power.").

240. For example, even as *Hudson County* did not rely primarily on state ownership to uphold a state water export ban, *see supra* notes 171-173 and accompanying text, it recognized that water's singular importance meant the state's police power enabled it not just to circumscribe private rights on a case-by-case basis but to define categorically the scope of private rights obtainable in that water, *see* Hudson Cnty. Water Co. v. McCarter, 209 U.S. 349, 355-56 (1908) ("The limits set to property by other public interests present themselves as a branch of what is called the police power of the State. . . [F]ew public interests are more obvious, indisputable and independent of particular theory than the interest of the public of a State to maintain the rivers that are wholly within it substantially undiminished, except by such drafts upon

Because the state's property-law-defining power, augmented by its police power, enables a state to define the extent of private *and* public rights in public things, and because groundwater is paradigmatically public, a state can legislatively or constitutionally classify that water as state-owned. Controversy surrounds the publicness — and thus the public rights obtainable in — certain natural resources,[241] but groundwater is not an edge case: it a fugitive resource that is of paramount societal importance. As such, states have a "practically plenary capacity . . . to legislatively characterize the legal category that water occupies" for the purposes of state law.[242] Exercising this authority, every state has through common or positive law defined the amount and type of *private* rights obtainable in its water.[243] When the people assign themselves proprietary ownership of water,

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them as the guardian of the public welfare may permit . . . [The] public interest is omnipresent wherever there is a State . . . It is fundamental, and . . . the private property of riparian proprietors cannot be supposed to have deeper roots.").

241. *See, e.g.*, Rose, *supra* note 84, at 714-15, 715 n.18 (describing the controversy around calls to expand "a public trust to a much wider range of property where public access or control should be vindicated," and collecting sources).

242. Torres, *supra* note 95, at 155 (not specifying the source of this authority). This authority is ultimately a matter of federal deference. *See infra* note 254 and accompanying text.

243. As noted above, for allocating surface water for private use, Eastern states typically follow a riparian rights scheme, while arid Western states generally adopt a prior appropriation scheme. A few Pacific states, like California, have forged a hybrid system. *See* RASBAND ET AL., *supra* note 4, at 758; SCHORR, *supra* note 6, at 165 n.3.

State regimes for private rights in groundwater are more varied and sometimes harder to classify than those pertaining to surface water. *See* THOMPSON ET AL., *supra* note 27, at 472-73; Joseph W. Dellapenna, *A Primer on Groundwater Law*, 49 IDAHO L. REV. 265, 276 (2013). States typically follow one of five doctrines, though they frequently adopt features from more than one. Dellapenna, *supra*, at 269, 308. Here is a simplified overview. The first doctrine — variously known as the rule of capture, absolute ownership, or absolute dominion — gives the landowner an absolute property right in the groundwater beneath their tract; that right vests either before or after pumping, and in the United States is less than full ownership even where the regime exists in its strongest form (Texas). *See* Dellapenna, *supra*, at 269-70; Torres, *supra* note 95, at 163. In slightly different ways, the next two doctrines — "correlative rights" and "reasonable use" — require "a sharing of the groundwater resources among those who have legitimate claims upon them." Dellapenna, *supra*, at 270. In states that restrict groundwater to "reasonable use," what counts as reasonable often differs and reasonableness can sometimes be defined in the "abstract," which would allow pumping as much water for use on one's own land as necessary for a reasonable end. *Id.* at 292, 294-95. But many courts adopt a "relational" rather than an "abstract test of reasonableness," meaning they allocate groundwater according to the "social utility of *competing* uses." *Id.* at 285, 292 (emphasis added). This is the approach adopted by the *Restatement (Second) of Torts*. *Id.* at 294. While reasonable use gives an adjudicator discretion to allocate water according to competing uses, a correlative rights regime embraces a more "mechanical" method: "owners of land overlying a single groundwater source have rights in the water in proportion to their ownership of the surface estates, at least when using the water to irrigate, and the first one to use the water does not acquire a right to more

they define the amount and type of the *public's* property right in that water. These actions are two sides of the same property-law-defining coin.[244] As a result, for the bundle of property rights in water under state law,[245] the state assigns to itself—that is, the governmentally organized public—those strands that together comprise exclusive ownership, and it allows private users to obtain the strand that represents usufructuary rights.[246]

It is important to note that not all water that flows or percolates within a state is that state's to use and, thus, to define as property. First, some water may be allocated to another state. When surface water in lakes, rivers, or other watersheds spans state lines, then a congressionally approved interstate compact, an act of Congress, or the Supreme Court exercising its original jurisdiction can divide it up among the states.[247] Groundwater can be allocated by compact or congressional legislation,[248] and *Mississippi v. Tennessee* resolved that the Court's remedy—equitable apportionment—applies to interstate aquifers.[249] Second, some of the water within the state may be allocated to the federal government.

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than that proportion." *Id.* at 278. Few states follow such a "strict" approach, and they often create a hierarchy among uses. *Id.* at 280, 283. Some states apply prior appropriation to groundwater, *id.* at 299-302, while others apply "regulated riparianism," the "core" of which is that water rights "are determined by the permits, not by the place of the use," and approved by administrators who determine what is a "reasonable use," *id.* at 305-06.

244. *Cf.* CAROL M. ROSE, *The Comedy of the Commons: Custom, Commerce, and Inherently Public Property*, *in* PROPERTY AND PERSUASION: ESSAYS ON THE HISTORY, THEORY, AND RHETORIC OF OWNERSHIP 104, 109 (1994) (noting that the "'public' ownership" of "the public not as an unorganized assemblage of individuals but rather as a corporately organized governmental body . . . is only a variant on private ownership, albeit on a larger scale," such that it "still has a single owner" that "can manage . . . its property just as any other owner does").

245. *See generally* CAROL M. ROSE, *Seeing Property*, *in* PROPERTY AND PERSUASION: ESSAYS ON THE HISTORY, THEORY, AND RHETORIC OF OWNERSHIP, *supra* note 244, at 267, 278-85 (discussing the source, critiques, and faults of the now-ubiquitous "bundle of sticks" metaphor of property, and analyzing its ability to help us "see" and thus understand property).

246. Some states in fact give the people an *irrevocable* usufructuary right in the same breath that they claim state ownership. *See* COLO. CONST. art. XVI, § 5 (claiming state ownership); *id.* § 6 ("The right [of the people of the state] to divert the unappropriated waters of any natural stream to beneficial uses *shall never be denied*." (emphasis added)).

247. *See* RASBAND ET AL., *supra* note 4, at 881-88.

248. "Only a handful of interstate compacts refer expressly to groundwater," but in the past couple decades a number of interstate water disputes before the Supreme Court have "effectively extended compacts that are silent on the subject to include groundwater hydrologically related to the surface water addressed in the compact." John D. Leshy, *Interstate Groundwater Resources: The Federal Role*, 14 HASTINGS W.-NW. J. ENV'T L. & POL'Y 1475, 1486 (2008). For an analysis of the central role groundwater has played in interstate compact litigation, see Burke W. Griggs, *Interstate Water Litigation in the West: A Fifty-Year Retrospective*, 20 U. DENV. WATER L. REV. 153 (2018).

249. *See* Mississippi v. Tennessee, 142 S. Ct. 31, 39-41 (2021).

Based upon its Commerce, Property, and/or Treaty Clause powers, the federal government can "reserve" water for its own needs or those of Native American tribes.[250] That federally reserved water is withdrawn from the state's share.[251] Thus, a state may be entitled to use only a portion of the water that flows or percolates within its territory. But for water that *is* allocated to a state to use, that state may freely define the public and private rights in it for the purposes of state law.

As always, there are limits. Most important for the purposes of this Note, a state's classification, legislative or otherwise, of a natural resource is subject to federal supremacy.[252] That means that a state's claim to own water—which is really just state property law—cannot act as a shield to federal regulation, thwart federal common law, or evade federal constitutional scrutiny.[253]

That state ownership claims are encumbered by federal supremacy is also why focusing on chain of title is misplaced when discussing the *qualified* state water ownership that this Note articulates. That state-law regimes control the allocation of states' share of water—and thus define the property character of that water—is ultimately a matter of federal grace, not constitutional design.[254] In theory, if it wanted to, Congress could dictate that some or all states follow a certain regime of water rights and allocation.[255] Doing so would displace any

250. *See* Cappaert v. United States, 426 U.S. 128, 138 (1976); Arizona v. California, 373 U.S. 546, 598 (1963).

251. See *infra* Section IV.B.

252. Hughes v. Oklahoma, 441 U.S. 322 (1979).

253. *See infra* notes 309-318; *accord* Torres, *supra* note 95, at 155 & n.44.

254. Regardless of whether the federal government has the authority to create the bulk of property law in the states, *see supra* note 226, water is different: for "the day-to-day actual governmental control of the rights to use the waters of the United States, Congress has left allocation decisions to the states," but Congress retains "ultimate, theoretical governmental control of the waters of the United States," Kelley, *supra* note 56, § 36.02, by virtue of the Commerce, Property, and Supremacy Clauses, Amy K. Kelley, *Constitutional Foundations of Federal Water Law*, *in* 2 WATERS AND WATER RIGHTS, *supra* note 56, § 35. States have sometimes misconceived longstanding federal abstention to be "state primacy." David H. Getches, *The Metamorphosis of Western Water Policy: Have Federal Laws and Local Decisions Eclipsed the States' Role?*, 20 STAN. ENV'T L.J. 3, 8 (2001). Moreover, scholars have challenged the description that the federal government actually does defer to the states on water policy. *See, e.g.*, *id.* at 5 (arguing that "even though the states have determined the laws governing allocation of water rights, the federal government has always had a powerful influence on western water policies").

255. Kelley, *supra* note 56, § 36.02 n.19. On federal preemption of state water law, see RASBAND ET AL., *supra* note 4, at 846-47. Relatedly, while federal agencies must generally obtain *non*-reserved water rights to unappropriated water pursuant to state law, Congress could theoretically change that rule. *See, e.g.*, Olson Memo, *supra* note 193, at 331-32, 356 (disagreeing with a since-abandoned Interior Department position that the federal government's purported title

conflicting aspects of an existing state-law regime – including state ownership. So to say that the state owns its share of water for state-law purposes is *not* to say the federal government has ceded its title to the water[256] (if such title exists[257]). Instead, it is to say that in any given state, the federal government has allowed state law to govern which, if any, private and public property rights are obtainable in the state's share of water. So as long as that state property law controls, state ownership remains valid. But just as an individual federal law invalidates state water ownership to the degree there is a conflict, Congress could abolish such ownership more broadly: *all groundwater in all jurisdictions*, it could say through legislation, *is deemed unowned and unownable either before or after private appropriation*. Such a federal law would not retract the federal government's title; it would preempt a state property law that had established qualified ownership.

This Note's position – arguing for the validity of *qualified* state ownership even as it recognizes the impossibility of *absolute* ownership – does not just harmonize with subsequent developments in the Supreme Court's treatment of state claims over natural resources.[258] It also accords with trends in our understanding of what "property" and "property rights" are. To say that a state has a qualified ownership means that although its claim is not valid against all comers, and in all settings, in one sphere it *is* proprietary ownership and thus helps order the legal relationships among the state, private users, and the water. The contingent nature of this ownership reflects a prevalent, if not prevailing, view that property

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to all waters by itself permitted an agency to obtain and use water "without regard to state law," but concluding that the "presumption . . . that federal agencies can acquire water rights only in accordance with state law" is "rebuttable," and the "critical question is what evidence of congressional intent is necessary to rebut the inference that state law is controlling").

256. Theories of *absolute* ownership require tortured explanations for how title passed from the federal government to states – and then sometimes reverts to the federal government – depending on whether the former or the latter uses or regulates the water. *See, e.g.*, *supra* notes 156-158 and accompanying text; Olson Memo, *supra* note 193, at 364-65; *see also* Aaron H. Hostyk, *Who Controls the Water? The Emerging Balance Among Federal, State, and Indian Jurisdictional Claims and Its Impact on Energy Development in the Upper Colorado and Upper Missouri River Basins*, 18 TULSA L.J. 1, 14-26 (1982) (demonstrating how rationalizing federal water rights based on the federal government's purported absolute ownership of water fails to justify those rights and leads to contradictory positions).

257. While it is clear the United States retains ultimate *control* of the nation's waters, whether it has ultimate proprietary ownership of those waters is beyond the scope of this Note. *See, e.g.*, Hostyk, *supra* note 256, at 14 (recounting one argument that the federal government has such ownership).

258. *See infra* Section II.B.2.b.

is as much about defining the legal relationships among individuals as it is about deciding who has certain absolute entitlements to the thing itself.[259]

Even for state-law purposes, there are limits on the capacity of the state to define the property character of natural resources, water or otherwise.[260] Most importantly, while a state can change its common and positive law of property, doing so might trigger takings claims under either the Fifth Amendment or a state analog.[261] That is, if a state "by *ipse dixit* . . . transform[s] private property into public property," it must compensate those whose private property interests it has diminished or destroyed.[262] Nevertheless, this takings restriction does not prevent a state from its ultimate end of classifying a natural resource as public property for state-law purposes — it only means that it might have to pay (a lot) to do so if the reclassification interferes with vested private rights.[263]

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259. *See* ROSE, *supra* note 245, at 269 (noting the development of the idea that "property rights" are less "about claims to things as such" and more "about the claims and obligations, or 'jural relations,' that people have vis-à-vis *other people*," but adding that "the material characteristics of the 'things' over which property rights are claimed" often "influence" how these relations are "frame[d]" and "construct[ed]"); Sandra B. Zellmer & Jessica Harder, *Unbundling Property in Water*, 59 ALA. L. REV. 679, 700-01, 704-06 (2008) (also rejecting the idea that property rights can be fully "reduce[d] [from] *in rem* rights to clusters of *in personam* rights," but concluding that "[a] thing might be property in one situation or for the purposes of one type of claim but not others"); *cf.* Kristen A. Carpenter, Sonia K. Katyal & Angela R. Riley, *In Defense of Property*, 118 YALE L.J. 1022, 1066 (2009) (noting that "the absolute ownership model of property is neither the only nor the leading approach to property theory today," and "argu[ing] that cultural property protection reflects, in part, the now pervasive view that property is a bundle of relative, rather than absolute, entitlements, including limited rights to use, alienate, and exclude").

260. Altering property definitions may raise other constitutional issues, including under the Due Process Clause, that are not addressed here. *See, e.g.*, PruneYard Shopping Ctr. v. Robins, 447 U.S. 74, 93-94 (1980) (Marshall, J., concurring) (noting that "[q]uite serious constitutional questions might be raised if a legislature attempted to abolish certain categories of common-law rights," including property rights, "in some general way," because "there are limits on governmental authority to abolish 'core' common-law rights . . . without a compelling showing of necessity or a provision for a reasonable alternative remedy").

261. Like other articles, this Note for simplicity refers to the Takings Clause's limit on state action and elides a nuance: "The Takings Clause does not apply directly against the states. . . . [T]he key case . . . precisely held that substantive due process requires the payment of 'just compensation' when a state legislature takes property rights." Brady, *supra* note 228, at 1417 n.5 (citing Chi., Burlington & Quincy R.R. Co. v. Chicago, 166 U.S. 226, 236 (1897)).

262. Lucas v. S.C. Coastal Council, 505 U.S. 1003, 1031 (1992) (quoting Webb's Fabulous Pharmacies, Inc. v. Beckwith, 449 U.S. 155, 164 (1980)). But see note 468, *infra*, for why property has historically evolved, namely in response to changed circumstances and new societal demands, more than this declaration suggests.

263. First English Evangelical Lutheran Church of Glendale v. Cnty. of Los Angeles, 482 U.S. 304, 315 (1987) (holding that the Takings Clause "is designed not to limit the governmental interference with property rights *per se*, but rather to secure *compensation* in the event of otherwise proper interference amounting to a taking").

B. The Supreme Court Has Recognized—Not Abrogated—States' Authority to Characterize Groundwater as State-Owned Subject to Certain Limits

Contrary to what many commentators and lower courts conclude,[264] the Supreme Court has not repudiated the basic principle that states can, subject to the limits above, define the property character of their natural resources for state-law purposes. More importantly, the Court could not abrogate this authority, absent a conflict of federal and state law. This Section shows that it is wrong to read the line of Supreme Court cases on state natural-resource ownership culminating in *Sporhase*[265] to conclude otherwise. In fact, in *Sporhase* and other cases, the Court recognized the first part of this Note's thesis or, at the very least, the principles underpinning it: states can have a qualified proprietary interest in their share of natural resources, including groundwater; whether and to what extent such an interest exists is a function of state property law; and state ownership claims remain valid to the degree they do not conflict with federal law or regulation.

1. The History and Holding of Sporhase

In 1982, many politicians and citizens of the Great Lakes region watched anxiously as the Supreme Court handled a Commerce Clause dispute that arose on a parcel of land in the southwest corner of Nebraska.[266] At the time, wild midcentury schemes to divert water from Alaska and Canada south to the United States fueled paranoia that the Great Lakes would be drained to water the parched crops and bulging cities of the High Plains and West.[267] These onlookers in the upper Midwest feared that the outcome of *Sporhase* would determine whether their states' claim to own their water could keep that water from being siphoned for use in faraway states.[268]

At issue was groundwater from the Ogallala Aquifer, which lay beneath a tract that spanned the Nebraska-Colorado border.[269] Joy Sporhase and his son-

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264. *See supra* notes 184-187, 193; *infra* notes 494, 526.

265. Sporhase v. Nebraska *ex rel*. Douglas, 458 U.S. 941 (1982).

266. PETER ANNIN, THE GREAT LAKES WATER WARS 67-75 (2018). I am grateful to Professor Rose for alerting me to the historical context of *Sporhase*.

267. *Id.*

268. *Id*.

269. State *ex rel.* Douglas v. Sporhase, 305 N.W.2d 614, 616 (Neb. 1981), *rev'd*, 458 U.S. 941 (1982).

in-law Delmer Moss[270] irrigated the Colorado side with water pumped from the Nebraska side.[271] Doing so, however, was unlawful: Nebraska restricted withdrawing groundwater within its borders if that water was to be used in a different state that did not allow *its* groundwater to be exported to Nebraska.[272] As a sign of the protectionist times, Colorado *also* had a groundwater export ban—but it contained no reciprocity provision,[273] so Sporhase and Moss were in violation of the Nebraska law.[274]

The Supreme Court agreed with Sporhase and Moss that Nebraska's export prohibition violated the Commerce Clause.[275] The first of the Court's three inquiries—whether groundwater is an article of commerce—is relevant here. It required the Court to confront Nebraska's theory that because the state *owned* the groundwater, it could withdraw it from Commerce Clause analysis. In making this argument, Nebraska recited a form of the "state ownership theory" discussed in the previous Part.[276]

The Supreme Court predictably rejected Nebraska's reliance on the state ownership theory[277] because that theory had finally met its demise three years before, in *Hughes v. Oklahoma*.[278] As noted earlier, the theory had died a slow death. Not long after the theory's emergence, the Court began to "erode[]" its reasoning,[279] and then all but dispensed with it in 1948: the "whole ownership theory," the Court said in *Toomer v. Witsell*, "is now generally regarded as but a fiction expressive in legal shorthand of the importance to its people that a State

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270. *Id.*; Dale Russakoff, *Wheat Farmer Stuns the West with Water Suit*, WASH. POST (Sept. 12, 1982), https://www.washingtonpost.com/archive/politics/1982/09/12/wheat-farmer-stuns-the-west-with-water-suit/ca480925-86f0-49a8-bc04-909e0e1716c8 [https://perma.cc/T8WS-GZJN].

271. *Sporhase*, 305 N.W.2d at 616.

272. It would only grant a permit to transfer its groundwater across state lines if, among other things, "the receiving state 'grant[ed] reciprocal rights' providing for transfer of ground water [sic] from that state into Nebraska." *Id.* at 617. Both the Nebraska Supreme Court and the U.S. Supreme Court referred to "ground water" using two words; today the convention is "groundwater."

273. *Sporhase*, 458 U.S. at 957 & n.17.

274. *Id.* at 944 n.2.

275. *Id.* at 960. The Court held that groundwater was an article of commerce, *id.* at 945-54, that the reciprocity requirement in the Nebraska statute imposed an impermissible burden on commerce in violation of the dormant Commerce Clause, *id.* at 957-58, and that Congress's historical deference to states on water policy did not mean Nebraska had license from Congress to impose "otherwise impermissible" burdens on interstate commerce, *id.* at 958-60.

276. See *supra* notes 163-177 and accompanying text.

277. *Sporhase*, 458 U.S. at 951.

278. 441 U.S. 322, 325 (1979).

279. *Id.* at 331.

have power to preserve and regulate the exploitation of an important resource."[280] In spite of *Toomer*, *Geer* remained nominally good law for another three decades until *Hughes* formally overruled it.[281] Thus, after *Hughes*, a state could not rely on its claim of absolute ownership to evade federal supremacy: any state regulation of a natural resource must be "in conformity with the federal laws and Constitution."[282]

To sidestep *Hughes*, Nebraska argued that water was special—indeed unique.[283] Further, it argued, groundwater was different from the resources at issue in prior cases: private rights in Nebraska groundwater were far less than those in Connecticut woodcock or Oklahoma minnows, so the water was not an article of commerce and the state could limit its export without triggering Commerce Clause analysis.[284]

The Supreme Court rejected this argument because it was "still based on the legal fiction of state ownership."[285] To "illustrate[]" the "fiction,"[286] the Court looked to how "Nebraska treated water *de facto*."[287] Nebraska and its supreme court said that groundwater remained wholly publicly owned even after capture, because any fees paid for it by Nebraskans were for the "costs of distribution and not [for] the value of the water itself."[288] Disagreeing, "the Court concluded that the characterization of the payment was unimportant" and "the fact that the water was distributed in exchange for value made it an article of commerce."[289]

It is the Supreme Court's language from this section of its opinion—flatly describing "state ownership" as a "legal fiction"—that many seize upon to say that *Sporhase* means no state can have a proprietary ownership in groundwater

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280. 334 U.S. 385, 402 (1948).

281. *Hughes*, 441 U.S. at 325. *Hughes* said that *Toomer*'s rejection of the state ownership theory, made in the context of a Privileges and Immunities Clause challenge, extended to Commerce Clause challenges. *Id*. at 334.

282. *Id.* at 335 (quoting Douglas v. Seacoast Prods., Inc., 431 U.S. 265, 284-85 (1977)).

283. Sporhase v. Nebraska *ex rel.* Douglas, 458 U.S. 941, 951-52 (1982); Brief of Appellee at 7-8, *Sporhase*, 458 U.S. 941 (No. 81-613), 1982 WL 608566. Acknowledging water's importance, the Court said that "there [was] a significant federal interest" in regulating water and so Nebraska's attempt to remove it from the reach of congressional regulation went "too far." *Sporhase*, 458 U.S. at 953-54.

284. *Sporhase*, 458 U.S. at 951.

285. *Id.*

286. *Id.*

287. Mark S. Davis & Michael Pappas, *Escaping the* Sporhase *Maze: Protecting State Waters Within the Commerce Clause*, 73 LA. L. REV. 175, 193 (2012).

288. *Sporhase*, 458 U.S. at 951-52.

289. Davis & Pappas, *supra* note 287, at 193.

for any purpose.[290] And, to be sure, there is also language in *Hughes*,[291] even in the dissent,[292] that one could isolate to argue that the Court has held any ownership language must in any context be read to convey only a regulatory interest.

2. *Misreading* Sporhase

This conclusion ignores two things. First, while *Sporhase* rejected the federal-supremacy-thwarting power of the state ownership theory, it did not reject states' ability to own their share of water for state-law purposes. In fact, a close reading of the case demonstrates just the opposite. Second, and more to the point, the Supreme Court could not have rejected the validity of state ownership for state-law-only purposes because it can invalidate state property law — and the state ownership that flows from it — only to the degree that such law raises a federal conflict. Indeed, despite its overbroad language in natural-resource cases, the Court is actually careful to sort invalid outward-looking state ownership claims from valid inward-looking ones.

a. Conflating Two Concepts Under "State Ownership"

In spite of the Supreme Court's seemingly categorical statement that state ownership is only fictive, its analysis throughout the opinion incorporates the notion that Nebraska *did* have a proprietary interest in groundwater both before and after its capture. Indeed, one sentence before it spoke of "the legal fiction of state ownership," the Court noted that Nebraska had a "greater ownership interest" in groundwater than did Texas.[293] Shortly after, the Court explained that Nebraska's "claim to public ownership" had "significance" for its Commerce Clause analysis; it "inform[s] . . . whether the burdens on commerce imposed

290. *See supra* notes 184-187, 193; *infra* notes 494, 526.

291. *See, e.g.*, Hughes v. Oklahoma, 441 U.S. 322, 335 (1979) (explaining that "[t]he 'ownership' language of cases such as" *Geer v. Connecticut*, 161 U.S. 519 (1896), "must be understood as no more than a 19th-century legal fiction" (quoting Douglas v. Seacoast Prods., Inc., 431 U.S. 265, 284 (1977))).

292. *See, e.g.*, *id*. at 341-42 (Rehnquist, J., dissenting) ("Admittedly, a State does not 'own' the wild creatures within its borders in any conventional sense of the word . . . This Court long has recognized that the ownership language of *Geer* and similar cases is simply a shorthand way of describing a State's substantial interest in preserving and regulating the exploitation of the fish and game and other natural resources within its boundaries for the benefit of its citizens." (citations omitted)).

293. *Sporhase*, 458 U.S. at 951.

by state ground water regulation are reasonable or unreasonable."[294] And elsewhere the Court said that the state's "claim to public ownership of Nebraska ground water [could not] justify a total denial of federal regulatory power," but "it may support a limited preference for its own citizens in the utilization of the resource."[295]

How do we square the Supreme Court appearing to cast state ownership as a "fiction" in one breath and, in the next, seemingly affirming the existence of state ownership and its relevance to Commerce Clause analysis? The answer is that there are two concepts at play that the Court's inexact terminology muddles. One notion—which the Court accepted as given—is that states can have a literal proprietary ownership of natural resources subject to certain limitations. The other—which the Court rejected—is the theory that states can bootstrap that proprietary interest into a shield against federal regulation and supremacy.[296] The first notion is simply state ownership; the second is the state ownership *theory*.

It is incorrect to read the Supreme Court's rejection of the latter to be a total repudiation of the former. The now-defunct state ownership theory did not merely posit that states could own resources; the theory was that such ownership *insulated* resources from federal supremacy. However, the state ownership theory is different from the far more modest claim of state ownership that *Sporhase* left fully intact. This modest state ownership concept is that states *can* have a proprietary interest in a natural resource, and—as the Court recognized—the basis of that authority is the state's ability to define property subject to certain limits. Thus, when the "theory" died in *Hughes*, so too did the shielding effect of a state ownership claim: state-owned natural resources became subject to federal regulation[297] because the state property laws underpinning that ownership are subject to federal supremacy.

The confusion between state ownership and the state ownership *theory* arises in part from the Supreme Court's inexact terminology in *Sporhase* and this broader line of cases. When the *Sporhase* Court wrote of "the fiction of state ownership,"[298] it elided a few words: the Court should have said the "fiction of the state ownership *theory*," or "the fiction of state ownership *as a shield against federal supremacy*." Perhaps because greater specificity would not have affected the outcomes of what were state-federal regulatory conflicts, the Court committed the

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294. *Id.* at 953.

295. *Id.* at 956.

296. I am grateful to Michael Pappas for suggesting this turn of phrase.

297. *Hughes* applied the Court's traditional Commerce Clause balancing test from *Pike v. Bruce Church, Inc.*, 397 U.S. 137 (1970), to natural resources. *See Hughes*, 441 U.S. at 331.

298. *Sporhase*, 458 U.S. at 951.

same slippage in phrasing—from correctly rejecting the state ownership *theory* to more sloppily rejecting state ownership *language*—across the line of cases that undercut *Geer*.[299]

A contrary reading—one that would undercut this Note's argument—would say that when the Supreme Court spoke of Nebraska's "ownership," it used it as shorthand for the state's regulatory, not proprietary, interest. Perhaps the Court used the word "ownership" because Nebraska did so in its arguments and in its water code. But, this argument would continue, the Court understood after *Hughes* that "state ownership" was a "legal fiction" and so used ownership as a proxy for the "importance to" Nebraskans that the "State have power to preserve and regulate the exploitation of [its] important resource."[300] So, because Nebraska regulated water more strictly than did Texas, that must have meant that groundwater was more important to Nebraska than Texas, so the Nebraska public had a "greater ownership interest" in groundwater than did the Texas public.[301]

This reading is unpersuasive because it would make much of the Supreme Court's analysis in *Sporhase* awkward, inconsistent, or superfluous. First, it would be somewhat odd and confusing—though not implausible—for the Court to have continued to use the term ownership when simply saying "regulatory interest" would have been clearer.

Second, throughout the opinion, the Supreme Court drew a meaningful distinction between Nebraska's regulatory interest and its asserted ownership stake in groundwater. For example, the Court described "Western States' interests . . . in conserving and preserving scarce water resources" and Nebraska's "claim to public ownership" as *separate* "factors" to consider.[302] It did not say the latter is shorthand for the former.

And finally, if the Supreme Court really meant that *any* talk of ownership was fictive, then it would have been unnecessary to engage in the analysis of whether Nebraska actually treated groundwater like a wholly publicly owned thing that

299. *Compare* Toomer v. Witsell, 334 U.S. 385, 399-402 (1948) (rejecting the "theory" that ownership serves as a shield against federal regulations or constitutional protections), *and Hughes*, 441 U.S. at 339-41 (Rehnquist, J., dissenting) (rejecting the *Geer* "theory" and "rationale"), *with Hughes*, 441 U.S. at 332-35 (majority opinion) (also rejecting the *Geer* "rationale" but then continuing on to say more loosely that any "'ownership' *language*" in these cases was a "19th-century legal fiction" (emphasis added) (quoting Douglas v. Seacoast Prods., Inc., 431 U.S. 265, 284 (1977))). See *infra* notes 494 and 526 for examples of how this imprecision can lead lower courts to conclude states cannot own the groundwater for state-law purposes.

300. *Sporhase*, 458 U.S. at 951 (quoting *Hughes*, 441 U.S. at 334).

301. *Id.*

302. *Id.* at 953.

never became a commodity or entered the flow of commerce.[303] The Court did so in order to determine whether the state's "de facto" practice matched its assertions of state ownership.[304] It engaged in this inquiry because, as Mark Davis and Michael Pappas have convincingly argued, while the Court disclaimed that groundwater was beyond the reach of Commerce Clause analysis, it left open the possibility that a state regulation could survive that analysis.[305] Doing so would require as an initial matter that the state both classify and in practice treat its groundwater as state-owned and not as an article of commerce.[306] Thus, the first step of the state-specific test that the Court established in *Sporhase* incorporates—rather than rejects—the "fundamental" principle that "states have the power to define property rights in natural resources" (including water) in such a way to designate them "as public things that cannot be held as private property and thus cannot be bought and sold."[307] Although Nebraska did not pass the *Sporhase* test,[308] the Court's Commerce Clause analysis accepted as a premise that it or any other state *could* make its groundwater state-owned.

Thus, the Supreme Court *did* use "state ownership" to mean Nebraska's proprietary interest, and it did not reject its validity for state-law purposes.

b. Sorting Inward- Versus Outward-Looking State Ownership Claims

Nor could the Supreme Court reject the validity of Nebraska's proprietary interest, absent a federal conflict. Indeed, the Court's handling of state ownership claims in *Sporhase* and other cases demonstrates the truism that the state-law portion of ownership can remain valid to the extent it does not conflict with federal common law, federal regulations, or the Constitution.[309]

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303. *Id.* at 951-52.

304. *See* Davis & Pappas, *supra* note 287, at 202.

305. *See id.* at 197-203.

306. Mark Davis and Michael Pappas read *Sporhase* to mean that the "inquiry" the *Sporhase* Court engaged in "contains no categorical conclusion that all water is necessarily an article of commerce," *id.* at 203, and "whether" it is "depends on how states treat water, both in law and in practice," *id.* at 199. Thus, "Nebraska's groundwater was an article of commerce not because Nebraska lacked the authority to reserve it outside of commerce, but because Nebraska *de facto* treated its groundwater as a marketable item." *Id.* at 201.

307. *Id.* at 200-01.

308. *Id.* at 200-02.

309. *Cf.* Maryland v. Louisiana, 451 U.S. 725, 746-47 (1981) (noting that "[i]t is basic to" the Supremacy Clause's "constitutional command that all . . . state provisions" that conflict with federal law or the Constitution "be without effect," but noting that "a state statute is void *to the extent* it conflicts with a federal statute" (emphasis added)).

When a state seeks to wield ownership as an outward-facing screen against federal regulation or a cudgel against its neighbors, the Supreme Court finds the state "goes too far."[310] Conversely, the Court is untroubled by ownership claims that are inward-facing and merely facilitate the state's internal regulation. Consider oysters. For state-law purposes, Maryland can make oysters state-owned property—so much so, in fact, that the state could take oyster shells from its citizens' possession without paying compensation.[311] But Maryland could not rely on a claim to own its oysters to override the Privileges and Immunities Clause.[312] Relatedly, just as Missouri could not claim title to birds in order to thwart the Migratory Bird Treaty[313] and Texas could not "recategorize" groundwater as state-owned to fend off "federal oversight,"[314] nor would Oregon be able to enact a law creatively defining the northern spotted owl as state property in order to remove it from the reach of the Endangered Species Act.[315]

Indeed, reflecting this approach to sorting state ownership claims, just a month before issuing *Sporhase*, the Supreme Court disagreed that New Hampshire's claim to own water could fend off federal regulation.[316] However, it was careful not to deny *categorically* that the state could have a "proprietary interest in the river" in other legal contexts.[317] The *Sporhase* Court echoed this posture when it decided that Nebraska's "claim to public ownership" had "significance" for its Commerce Clause analysis but the state "[went] too far" when it relied on that ownership to fend off that analysis entirely[318] or to "justify a total denial of federal regulatory power."[319]

This two-step—whereby state claims over a resource can be valid as a matter of state law but not federal law—is familiar to the Supreme Court. For example, in *PPL Montana, LLC v. Montana*, the Court considered whether stretches of

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310. Sporhase v. Nebraska *ex rel.* Douglas, 458 U.S. 941, 953 (1982).

311. See *Horne v. Department of Agriculture*, 576 U.S. 350, 367 (2015), which is discussed *infra* Section III.A.2.

312. By holding that the state ownership theory cannot insulate state decisions from federal constitutional scrutiny, *Hughes v. Oklahoma*, 441 U.S. 322, 329-36 (1979), overruled by implication *McCready v. Virginia*, 94 U.S. 391 (1876), where the state relied on its ownership to prevail in a Privileges and Immunities Clause challenge to its oyster-planting regulations.

313. *See* Missouri v. Holland, 252 U.S. 416, 434 (1920) (Holmes, J.).

314. Torres, *supra* note 95, at 155 & n.44.

315. *See* 50 C.F.R. § 17.95(b) (2021). I am grateful to Professor Pappas for raising this hypothetical.

316. New England Power Co. v. New Hampshire, 455 U.S. 331, 338 n.6 (1982).

317. *Id.* ("Whatever the extent of the State's proprietary interest in the river, the pre-eminent authority to regulate the flow of navigable waters resides with the Federal Government . . . ." (citing United States v. Twin City Power Co., 350 U.S. 222 (1956))).

318. Sporhase v. Nebraska *ex rel.* Douglas, 458 U.S. 941, 953 (1982).

319. *Id.* at 956.

three rivers in Montana were "navigable."[320] If so, the state would hold title to the lands beneath the rivers as a matter of constitutional principle.[321] The Court reiterated that there are two tests for determining whether a river is legally defined as "navigable" – one for purposes of federal law, the other for state law.[322] Where it determines whether the state or the United States has title to the land as a matter of federal constitutional principle, the navigability test must necessarily be a federal one.[323] However, the Court added that the outcome of the federal test had no bearing on the question of navigability under *state* law, which determined the scope of Montanans' public rights under state law to the waterway.[324] Thus, while a state cannot decide which waterways are navigable for purposes of federal law, it *can* for purposes of state law.[325]

Understanding the context in which state ownership claims arise resolves the apparent contradictions created by the Supreme Court's overbroad phrasing. Recall that in *Horne II*, the proposition that a state could own wild oysters in the proprietary sense was unobjectionable to the Court.[326] But, nearly forty years earlier, the Court in *Hughes* "explicitly embraced the" view that "it [was] pure fantasy" to say that either the state or federal government "has title to . . . creatures" like "wild fish, birds, or animals."[327] How to make sense of this? *Horne II* was a takings case, in which the Court looked to state law for property definitions[328] and found it unremarkable that Maryland owned the oysters for state-

320. 565 U.S. 576, 580-81 (2012). I am grateful to Dave Owen for suggesting this conceptual parallel to my argument.

321. *Id.* at 590-91. This concept is known as the equal-footing doctrine. *Id.* The difference between equal-footing-based state ownership and state ownership of water is discussed *infra* Section II.C.2.

322. *PPL Mont.*, 565 U.S. at 603-04.

323. *Id.* at 591.

324. *Id.* at 603-04.

325. *Id*. *But see* BENSON ET AL., *supra* note 4, at 525-26 (noting that while *PPL Montana* means the federal test "clearly" controls for title in all states admitted after ratification of the Constitution, it left unclear whether the original thirteen states have to adopt the federal test on the theory that they received the land directly from the English Crown prior to the formation of the United States). In Montana, like in other states, whether the river is navigable for state-law purposes determines whether it falls within the state's public trust doctrine, which in turn ensures that the public has certain rights to the water. *See PPL Mont.*, 565 U.S. at 603; Brady, *supra* note 228, at 1417-18 n.6, 1419. *See generally* Brady, *supra* note 228 (describing and critiquing the ways in which state courts have expanded state-law definitions of "navigability," thus changing the balance of public and private rights over vast amounts of the nation's water).

326. *See* Horne v. Dep't of Agric., 576 U.S. 350, 366-67 (2015).

327. Hughes v. Oklahoma, 441 U.S. 322, 334-35 (1979) (quoting Douglas v. Seacoast Prods., Inc., 431 U.S. 265, 284 (1977)).

328. *See* Cedar Point Nursery v. Hassid, 141 S. Ct. 2063, 2075-76 (2021) ("As a general matter . . . the property rights protected by the Takings Clause are creatures of state law.").

law purposes. Conversely, *Hughes*'s pronouncement was made in the context of a Commerce Clause challenge.[329] So that statement should be understood to mean it is "pure fantasy" to settle state-federal regulatory conflicts based on the concept of "title" to the regulated *ferae naturae*. Indeed, that is how some state courts have correctly read *Hughes*, concluding that state claims to own wildlife are valid to the degree they do not interfere with federal laws or the Constitution.[330] And this principle—that states' baseline ability to control wildlife is invalid *only* insofar as it conflicts with federal supremacy—is one the Court has carefully articulated elsewhere.[331] The Court's Commerce Clause cases lack this exactitude, inviting commentators and courts to export the language rejecting state ownership to inapt contexts.[332]

Adding to the confusion, the Supreme Court relies upon different indicia of state ownership when it performs different types of legal analysis. For Commerce Clause analysis, *Sporhase* reveals that the existence of state ownership depends on positive property law and de facto state practice.[333] But it's almost the inverse for the Court's takings analysis. There, the state's original definition of property—*not* subsequent state practice—mostly determines the scope of state ownership and private rights.[334] Thus, the Court's takings analysis emphasizes

329. *Hughes*, 441 U.S. at 323.

330. *See, e.g.*, State v. Fertterer, 841 P.2d 467, 470-71 (Mont. 1992) (agreeing that because there was "no federal constitutional issue or other federal question presented" in the case, *Hughes* was "not controlling" and Montana had a proprietary interest in its wild game for purposes of state law), *overruled on other grounds by* State v. Gatts, 928 P.2d 114 (Mont. 1996).

331. In *Kleppe v. New Mexico*, the Court held that the Property Clause empowered the federal government to prohibit the killing or capture of wild and free-roaming burros and horses in the West, thus "overrid[ing]" any state laws and actions to the contrary. 426 U.S. 529, 542-45 (1976). In the same breath, however, the Court noted the federal government's regulation of the animals and public lands they roamed on was not "exclusive." *Id.* at 543. New Mexico thus had "broad" authority to regulate "wild animals" to the degree that such regulations did not conflict with federal law. *Id.* at 543, 545-46.

332. *See supra* notes 184-187, 193; *infra* notes 494, 526.

333. *See* Davis & Pappas, *supra* note 287, at 193, 200-03 (clarifying how *Sporhase v. Nebraska ex rel. Douglas*, 458 U.S. 941 (1982), means the state's "de facto" treatment of water is central to Commerce Clause analysis).

334. *See* Phillips Petrol. Co. v. Mississippi, 484 U.S. 469, 483-84 (1988) (holding that Mississippi held title to non-navigable tidelands by virtue of statehood even though private persons subsequently had claims to and paid taxes on those lands). Joseph Sax noted that *Phillips Petroleum* "invites the conclusion that definitions of property are of primary, if not determinative, importance . . . notwithstanding government behavior to suggest that the law is different from its formal statement." Joseph L. Sax, *Rights that "Inhere in the Title Itself": The Impact of the* Lucas *Case on Western Water Law*, 26 LOY. L.A. L. REV. 943, 950 (1993); *see also* John D. Leshy, *A Conversation About Takings and Water Rights*, 83 TEX. L. REV. 1985, 2017-18 (2005) ("[T]he Supreme Court has said that the most important factor in determining whether the

the state's original definition of property,[335] while its Commerce Clause analysis looks past the definitions on the books to present-day practice.

In sum, *Sporhase* and the line of cases preceding it made clear that state ownership claims are subject to federal supremacy. However, this limit comes into play *only* when the state property laws, defining a resource, conflict in some way with the Constitution, federal regulation, or federal common law. And, as the Supreme Court itself has recognized, absent such a conflict, the inward-looking, state-law portion of the state ownership doctrine remains intact.

C. Qualified State Water Ownership Is — or Should Be — a Limited, Inward-Looking Possessory Interest

If all the above is true — if the Supreme Court cannot abrogate states' nearly plenary authority to define water as state-owned for state-law purposes — then how should we conceive of state groundwater ownership?

Some aspects of state ownership will be consistent among states: the basis of a state's ownership is its authority to make state property law; a state can own only its share of water, meaning that state ownership is different from — and often less extensive than — the state's regulatory power; and state ownership does not preclude private rights to use the water. As a creature of state law, the nature of the proprietary interest will differ state-to-state, but the concept of state ownership as well as longstanding principles of water law, many of them codified by states, argue for important limits: the sticks in the state's bundle include a right to exclude, but not to destroy or to divest the state's water.[336]

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expectations of the property owner are reasonable is how property is formally defined by the state.").

335. *See* Sax, *supra* note 334, at 945-46.

336. This account applies to surface water as well as groundwater. For that reason, recognizing state ownership of groundwater does not create another legal barrier between it and surface water. This is important because opposition to groundwater "ownership" is sometimes in service to the long-held aspiration to regulate groundwater and surface water in a single, coherent system given the hydrologic — that is, physical — continuity between the two. *See* Klein, *supra* note 45, at 476 (rejecting a "groundwater exceptionalism" that would make "groundwater . . . subject to ownership by states or landowners, even if surface water is not"); Barton H. Thompson Jr., *Institutional Perspectives on Water Policy and Markets*, 81 CALIF. L. REV. 671, 685-86 (1993) (noting that the "widespread separation of legal regimes for groundwater and surface water is largely historical and today makes little policy sense"); Samuel C. Wiel, *Need of Unified Law for Surface and Underground Water*, 2 S. CAL. L. REV. 358, 369 (1929) (criticizing the law's "ignorance or disregard" of the connection between surface water and groundwater). A minority of states have adopted "conjunctive" management of surface water and groundwater, and more states are moving in that direction. *See* GETCHES ET AL., *supra* note 32, at 227-

Drawing on the preceding analysis and a representative sample of state-court cases, this Section develops each of these points in turn. In doing so, it explains the distinction between the state's police power and its ownership, and demonstrates the difference between state water ownership and other forms of natural-resources ownership, such as equal-footing-based claims.

1. The Basis of State Water Ownership

Any state ownership of groundwater, if it exists, results from how the state defines groundwater as property. As explained, just as the state can define private rights in that water, so too can it define public rights.[337] Some states assert such ownership claims through clear constitutional or statutory pronouncements.[338]

Even absent an explicit pronouncement, however, state ownership can be derived from the legal regime governing groundwater, including codifications of common law. As an illustration, consider how, at the time of *Sporhase*, the ratio of public-to-private ownership in groundwater differed in Nebraska and Texas based upon how those states defined water rights.[339] Following the rule of capture, Texas allowed landowners to drill freely on their land not just to capture water for their own "beneficial purposes," but also to sell any excess to other users, without geographic limitation, "just as [they] could sell any other species of property."[340] Nebraska's correlative rights system gave "the surface owner . . . no comparable interest in ground water": the Nebraskan could only tap as much as she could put to "reasonable and beneficial use upon" her *own* land.[341] She could not sell any excess to others and, if water were scarce, her proportion of water

28, 251; THOMPSON ET AL., *supra* note 27, at 20-21. Because state ownership claims are irrelevant in interstate disputes over *surface* water, some commentators feared that allowing state ownership claims to prevail in interstate *groundwater* disputes—as Mississippi hoped—would mean groundwater could have been owned for *extra*state purposes in a way surface water cannot be. But the modest state ownership this Note advances—valid only for inward-looking state-law purposes—would not create that bifurcation: in my view, absent a federal conflict, states can own both surface water and groundwater for state-law purposes; however, a state's claim to own either surface water or groundwater is meaningless in interstate, state-federal, or state-tribal conflicts. *See infra* Part IV.

337. *See supra* Section II.A.

338. *See supra* notes 74-80 and accompanying text.

339. The Court in *Sporhase* used Texas as the counterexample to Nebraska because the appellants relied on a case involving Texas groundwater that the Supreme Court had summarily affirmed fifteen years earlier. *See* Sporhase v. Nebraska *ex rel*. Douglas, 458 U.S. 941, 947 (1982) (discussing Carr v. City of Altus, 385 U.S. 35 (1966)).

340. *Id.* at 949 (quoting City of Altus v. Carr, 255 F. Supp. 828, 833 n.8 (W.D. Tex. 1966)).

341. *Id*. at 950.

might shrink so that all landowners could withdraw from the aquifer.[342] Seen one way, the features the Supreme Court describes here reflect how the two regimes differed in the protections they afforded other private users: adjacent landowners.[343] But, as the Court rightly understood it, the Nebraska regime implicitly asserted the state's property interest over groundwater in a way Texas did not. As the Court noted, the Nebraskan "enjoy[ed] a lesser [private] ownership interest in the water than" did the Texan, so Nebraska had a "greater [public] ownership interest" in that water than did Texas.[344]

Thus, if through their laws or constitution the people of a state decide to assign a proprietary interest in uncaptured groundwater to themselves, they can do so.[345] Conversely, the state could say nothing on the subject; it could say no one owns groundwater until it is captured; or it could say groundwater is unownable in any state, natural or captured. Regardless, a state does not *automatically* own its water.

2. *The Difference Between State Water Ownership and Other Forms of State Resource Ownership*

The previous point clarifies how state water ownership in the modern era differs from other forms of state resource ownership, both past and present. First, modern state water ownership differs in two ways from the obsolete *Geer* view of state ownership. The *Geer* view suggested that the people of Connecticut automatically inherited a shared ownership of the quail in the state as a function of common-law tradition.[346] Thus, the people of Connecticut and New York had an identical public ownership in quail regardless of the particulars of state property law. Such particulars are what define a state's ownership of water in the modern era. Moreover, state water ownership operates by the inverse logic from

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342. *Id*.

343. I am grateful to Professor Owen for this observation.

344. *Sporhase*, 458 U.S. at 951. Indeed, following *Sporhase*, the Nebraska Supreme Court reaffirmed that based upon the groundwater regime of reasonable use and correlative rights as codified in the state water code, the state owned the groundwater for *state-law purposes*. *See In re* Application U-2, 413 N.W.2d 290, 298 (Neb. 1987).

345. As noted above, Professors Davis and Pappas explain that *Sporhase* indicates that if a state wants to go a significant step further and assert that its ownership *does* keep that resource out of commerce, its actual practice around that water must match those pronouncements. Davis & Pappas, *supra* note 287, at 201-02.

346. *See* Geer v. Connecticut, 161 U.S. 519, 522-29 (1896); *see also* Hudson Cnty. Water Co. v. McCarter, 209 U.S. 349, 356 (1908) (summarizing the *Geer* view of state ownership as one vested in the state as "the inheritor of a royal prerogative").

the antiquated *Geer*-type arguments. By basing their jurisdiction upon their sovereign ownership, states making the *Geer* argument confused the order of things. A state does not, as *Geer* asserted, derive an exclusive power to regulate a resource from its proprietary interest in that resource.[347] But the people of a state *can* rely on the state's power to define property to assign themselves a limited proprietary interest in the resource.

More important are the differences with other forms of extant state ownership. In particular, a state's ownership of its water differs critically from its ownership of the land beneath those waters. As noted briefly above, every state holds title to the land underneath navigable or tidally influenced waters as a federal constitutional right.[348] This is known as the equal-footing doctrine: because each of the original thirteen states held title to these lands at common law, every other state took title to the same lands upon statehood as a matter of constitutional principle.[349] Every new state must necessarily be on equal footing with those that preceded it, so title to these submerged lands vests automatically in a state as an "essential attribute" of its sovereignty.[350] This distinguishes equal-footing ownership from state water ownership. The basis of the latter is ultimately a matter of federal deference: states make property law.[351] In contrast, while Congress has codified and elaborated the equal-footing doctrine by statute,[352] a state's ownership of submerged lands is "conferred not by Congress but by the Constitution itself."[353]

Because state ownership of water and state ownership of the land beneath that water are premised upon different sources of authority, they admit of dramatically different limits. As already noted, state water ownership is invalid to the extent it conflicts with federal law, and Congress and the Supreme Court can diminish a state's share of water. But Congress cannot abrogate a state's title to equal-footing lands, and a state "may allocate and govern those lands according to state law subject only to 'the paramount power of the United States to control such waters for purposes of navigation in interstate and foreign commerce.'"[354] Clarifying this distinction is important, because a state's ownership of riverbeds

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347. *Cf. Sporhase*, 458 U.S. at 952 ("A State's power to regulate prices or rates has never been thought to depend on public ownership of the controlled commodity.").

348. PPL Mont., LLC v. Montana, 565 U.S. 576, 589-93 (2012).

349. *Id.* at 590-91.

350. Utah Div. of State Lands v. United States, 482 U.S. 193, 195 (1987).

351. *See supra* notes 223-230 and accompanying text.

352. *See* Submerged Lands Act, 43 U.S.C. §§ 1301-1356b (2018).

353. *PPL Mont.*, 565 U.S. at 591 (quoting Oregon *ex rel.* State Land Bd. v. Corvallis Sand & Gravel Co., 429 U.S. 363, 374 (1977)).

354. *Id.* (quoting United States v. Oregon, 295 U.S. 1, 14 (1935)).

is sometimes conflated with its ownership of the water flowing above.[355] In rejecting this improper leap,[356] however, litigants and courts sometimes sweep too broadly and reject state water ownership outright.[357] A state may indeed own those waters for *state-law* purposes, but equal footing is not the basis of that ownership.

3. The Extent of State Water Ownership

A state can only own the water it has a right to use. That is because a state's ownership extends only to the water whose property character it can define.[358] Recall, however, that this may not include all the water within the state's borders: the state only controls—and defines the property of—its *share* of the water that moves across state lines, either above or below ground. That share is determined by an interstate compact, an act of Congress, or equitable apportionment from the Supreme Court.[359]

The contest between Mississippi and Tennessee demonstrated this point. As I explain further below, Mississippi was wrong to claim it necessarily owned *all* groundwater within its borders.[360] If Mississippi owns any groundwater for state-law purposes,[361] it is only the amount that is its to control and use. For

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355. In the *Mississippi v. Tennessee* litigation, Mississippi erroneously relied on equal-footing arguments. *See* Motion for Leave to File Bill of Complaint in Original Action, Complaint, and Brief in Support of Motion at 3, Mississippi v. Tennessee, 142 S. Ct. 31 (2021) (No. 22O143) [hereinafter Mississippi Complaint] ("Mississippi was admitted . . . on an equal footing . . . and, thereupon, became vested with *ownership*, control, and dominion over the land and *waters* within its territorial boundaries." (emphasis added)). In *Sturgeon II*, while Alaska itself was careful not to conflate its ownership of submerged lands with ownership of the water that flowed over them, *see* Brief of Amicus Curiae State of Alaska in Support of Petitioner at 8-9, *Sturgeon II*, 139 S. Ct. 1066 (2019) (No. 17-949), 2018 WL 4063284, at *7-8, Sturgeon made this mistake, *see* Sturgeon's Brief, *supra* note 199, at 27-28.

356. Law Professors' *Sturgeon* Brief, *supra* note 202, at 7-8 ("[The Supreme] Court has never stretched the Equal Footing Doctrine to grant states title to the *water* within navigable waterways. This theory of conveyance amounts to a contention that the conveyance of submerged lands implicitly includes an exclusive proprietary interest in an entirely separate resource, water, simply because the two resources are adjacent.").

357. *See, e.g.*, Sturgeon v. Frost, 872 F.3d 927, 932-33, 935-36 (9th Cir. 2017) ("Water cannot be owned . . . ."), *rev'd and remanded*, 139 S. Ct. 1066 (2019), *vacated*, 941 F.3d 953 (9th Cir. 2019).

358. See *supra* notes 241-246 and accompanying text.

359. See *supra* notes 247-251 and accompanying text.

360. *See infra* Section IV.C.

361. As Memphis and its water utility have pointed out, "[t]he Mississippi Supreme Court has held that groundwater is not susceptible to absolute ownership." *See* Memphis and MLGW Reply, *supra* note 185, at 24 (quoting Dycus v. Sillers, 557 So. 2d 486, 501-02 (Miss. 1990)).

example, the Supreme Court, Congress, or a compact might divvy up the Middle Claiborne Aquifer underlying Mississippi and Tennessee, such that Mississippi only has a right to use and control *some* of the groundwater percolating beneath its soil.

However, the United States as amicus was also wrong—or, rather, only half correct—to rely on *Sporhase* to conclude that "[a] [s]tate's assertion that it owns the groundwater within its borders is thus no different from an assertion that it possesses sovereign authority over that resource."[362] A right to control and use the water must *precede* any state proprietary ownership, but, as this Part has shown, the two are not equivalent. All states have police power over their share of water; only some states have chosen to exercise their police power and property-law-making authority to give the state ownership of that water. Thus, state ownership and the state's police power are neither synonymous nor coextensive. When exercising its police power, the state acts as *regulator*; when present, state ownership makes the state the *property-owner* of its water. The police power is a sovereign authority, while state ownership conveys a property status.[363] And, because the state's police power can extend to water it does not own, the two may differ in scope. In all cases, state ownership will be no more extensive than the water that the state can use. And, in some cases, the state's ownership will be *less* extensive than its regulatory reach: the state may have authority to regulate water within its borders (e.g., for environmental reasons) that it does not have a right to *use*.

This is why recognizing qualified state ownership is no more vexing than speaking of a state's ability to control and regulate its share of water—as it already does routinely in myriad ways. Allocating water or any other migrating resource between states is often time-consuming, costly, highly technical, and litigious.[364]

While true, this contention misses the point about why Mississippi's ownership claim should be immaterial in the context of interstate disputes. On this, see *infra* notes 655-658 and accompanying text.

362. Brief for the United States as Amicus Curiae in Support of Overruling Mississippi's Exceptions to the Report of the Special Master at 24-25 n.3, Mississippi v. Tennessee, 142 S. Ct. 31 (2021) (No. 22O143) [hereinafter United States Amicus Brief] (basing this conclusion upon the fact that in *Sporhase*, the Supreme Court "made clear that state 'ownership' of groundwater is 'but a fiction expressive in legal shorthand of the importance to its people that a State have power to preserve and regulate the exploitation of an important resource.'" (quoting Sporhase v. Nebraska *ex rel.* Douglas, 458 U.S. 941, 951 (1982))).

363. *Cf.* Lasky, *supra* note 1, at 176 ("Apparently these [state ownership] provisions mean what they say; the state, of course, is sovereign, but more—it is proprietor."); *see also infra* note 509 and accompanying text (noting how in the insurance context it matters whether the state seeks to regulate pursuant to its police powers or whether it seeks redress as property-owner).

364. *See, e.g.*, Transcript of Oral Argument at 12, Texas v. New Mexico, 141 S. Ct. 509 (2020) (No. 22O65) (reporting Justice Breyer's lament that a long-running interstate water dispute concerned some "very technical stuff").

However, an ownership based upon state property law does not further complicate any of that because it happens well downstream of that process. Because a state cannot define the property character of the water it does not have the right to use, its qualified ownership can apply only to its already-allocated share of groundwater. And there is no way for a state to use its ownership claim to work upstream claiming a greater share: "the just apportionment of interstate waters is a question of federal law," so "state law is not controlling."[365] Recognizing qualified state ownership, which is a state-law-based *public* property right in a state's share of groundwater, is therefore no more troubling than allocating state-law-based *private* property rights in that water, which is a routine component of water administration.

4. The Nature of the Property Interest

Finally, the nature of the state's ownership does or will vary according to each state's distinct property law. In most cases, when a court recognizes state ownership, it rarely delves too deeply into the exact character of that interest. Instead, the question is more binary: does the state have *any* possessory interest in uncaptured water sufficient to say that water is owned? As the cases discussed throughout the next Part demonstrate, this is frequently the start and end of the inquiry. In one insurance case, for example, the Washington Supreme Court addressed Washington State's definition of its surface water and groundwater as "belong[ing] to the public."[366] The court accepted without elaboration that this means the state owns its water in the proprietary—not fictive—sense.[367] This was enough for the legal issue in the case.

That said, there are important limits on states' possessory ownership, inherent in the concept of state ownership and by virtue of water-law-specific principles. In short, the state's possessory interest should include the right to exclude[368] but not to sell off or destroy its share of water. This is so for a few

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365. Colorado v. New Mexico, 459 U.S. 176, 184 (1982); *see also Mississippi v. Tennessee*, 142 S. Ct. at 39-40 (holding that equitable apportionment is appropriate for transboundary groundwater resources); *infra* Section IV.C.

366. *See* WASH. REV. CODE §§ 90.03.010, 90.44.040 (2021).

367. *See* Olds-Olympic, Inc. v. Com. Union Ins. Co., 918 P.2d 923, 929 n.15, 930-31 (Wash. 1996) (noting that "the parties in this case concede the groundwater belonged to the State of Washington, a third party," under the state's water code and constitution, and that "[t]he jury here determined there was injury to the groundwater, the property of the State" (citing WASH. REV. CODE § 90.44.040 (1996))).

368. *Cf*. Merrill, *supra* note 228, at 972 ("Even public property can be intelligibly described as property because . . . the government and its agents have the right to exclude others from these resources.").

reasons. Most importantly, the ultimate owner is not the state *government*, but the people as a governmentally organized body.[369] While the people empower the legislature and officials to make decisions for how that water will be regulated and used, the ownership remains always and only in the people of *that* state: by the terms of the pronouncement creating it, the ownership's existence is contingent on the owner being the people of *that* state. Moreover, even if in theory the people of the state unanimously agreed to divest, the category of property right they have to offer is not one that is acquirable by a private or even governmental entity. Public ownership is *like* private ownership, but the two are ultimately different kinds of title: public ownership can only be held by a public. So the people could cancel their public ownership, making the water unowned and privately unownable. But they would have nothing that a private entity could take possession of: the *public* ownership could not transmogrify, by being sold, into a type of *private* ownership holdable by a private entity—just as, by analogy to the realm of private property, an easement cannot suddenly transform into fee simple by being transferred from seller to buyer. Both instances involve a kind of category error.

The positive-law principles that accompany state water ownership declarations also support the conclusion that the bundle of sticks does not include the right to alienate, waste, or destroy the state's water. In the same breath that they claim ownership to their waters, states note that the water is for "use [by the] people";[370] require that use to be "beneficial . . . and not otherwise";[371] and mandate that state management should be subject to "the public interests."[372] These principles, reflecting the publicness of water, should shape how state courts conceive of state ownership as a property category. That concepts like the "public interest" or "beneficial use" are often ignored in the practical administration of water management[373] does not negate this point. That is, whether state officials choose to approve permits only if they accord with the "public interest" as required by a state's water code is a separate issue from how a state's water (i.e., property) law, as it exists on the books, defines the nature of the state's ownership by forming the backdrop against which that ownership exists. The former is a matter of good or poor governance; the latter is a purely legal question.

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369. *See supra* note 55 and notes 223-246 and accompanying text.

370. *See* MONT. CONST. art. IX, § 3(3).

371. WASH. REV. CODE § 90.44.040 (2021).

372. WYO. CONST. art. VIII, § 3.

373. *See infra* notes 387-390 and accompanying text.

5. State Water Ownership and Private Rights

Finally, a state's claim to own its water does not preclude private parties from securing strong property rights in that water. Instead, state ownership primarily impacts two things vis-à-vis private rights. First, it limits the property rights that private parties can acquire in the water to a usufruct—a right to *use* a thing one "does not own."[374] And second, it changes the ownership status of the water in which a private user has usufructuary rights.

In fact, the first of these is less of a limit than it sounds. With one exception, across all states—even those without state ownership—a private individual cannot own outright either surface water or groundwater.[375] At most, a private entity can have usufructuary rights in the water itself.[376] This is true even in states that recognize the greatest amount of private property rights in water. For groundwater, a few states still follow one common-law doctrine—the rule of capture, or absolute ownership—that in its original incarnation allowed the landowner to own the groundwater underlying her tract.[377] This groundwater doctrine survives in its strongest form in Texas, the exception: there, landowners do not just own the water they capture, but also have a real property interest in uncaptured water beneath their tract as they would for oil and gas.[378]

Meanwhile, private users can obtain usufructs in water that is state-owned.[379] Indeed, state ownership can coexist with quite strong private property

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374. *Sturgeon II*, 139 S. Ct. 1066, 1079 (2019).

375. Joseph W. Dellapenna, *Categories of Surface Water*, *in* 1 WATERS AND WATER RIGHTS, *supra* note 56, § 6.02 ("Owners of water rights have never held unequivocal title to the waters to which their rights pertain, holding instead mere usufructuary rights . . . .").

376. *Id.*; Klein, *supra* note 45, at 514 (noting the "broad consensus that virtually all [private] water rights under state law constitute usufructuary rights only").

377. *See* Dellapenna, *supra* note 243, at 269-70; *see also supra* note 243 (discussing doctrines of private groundwater allocation).

378. Edwards Aquifer Auth. v. Day, 369 S.W.3d 814, 831-32 (Tex. 2012); *see* Robin Kundis Craig, *What the Public Trust Doctrine Can Teach Us About the Police Power,* Penn Central*, and the Public Interest in Natural Resource Regulation*, 45 ENV'T L. 519, 543 (2015) (noting that a Texan's *in situ* ownership differentiates Texas's rule of capture from other states); *see also* Torres, *supra* note 95, at 161-63 (arguing that in Texas the landowner's ownership of groundwater in place lacks "important attributes of property" even if it might support a successful takings claim); *infra* notes 432-434 and accompanying text (discussing the takings implications of Texas's groundwater law).

379. *See, e.g.*, Mont. Trout Unlimited v. Beaverhead Water Co., 255 P.3d 179, 185 (Mont. 2011) (explaining that in Montana, a water right "is a right to make a use of waters owned by the state—a water right confers no ownership in those waters" (quoting ALBERT W. STONE, STATE BAR OF MONT., MONTANA WATER LAW 70 (1993))); *see also* Elk Grove Dev. Co. v. Four Corners Cnty. Water & Sewer Dist., 469 P.3d 153, 157-58 (Mont. 2020) (quoting STONE, *supra*, and reiterating this point).

rights in that water. For example, in Colorado, against a strong background of state water ownership, including over groundwater,[380] private water rights are vested property rights.[381] Similarly, the Washington State Supreme Court has recognized state ownership of groundwater,[382] and a Washingtonian's usufruct to groundwater is considered a real property right.[383]

Thus, as a legal matter, state ownership limits a private water right to a usufruct and changes the ownership status of the water in which the rightsholder has a usufruct. If the state has chosen not to own its water, then one typically acquires a right to use a thing that is either unowned or unownable under state law.

As a practical matter, while state ownership undoubtedly empowers the state when it limits private water rights to benefit the public,[384] state ownership is not carte blanche to run roughshod over private property rights. Setting aside the political opposition that states face when they infringe on water rights, especially those held by well-organized groups,[385] there are a number of relevant legal safeguards. The same statutory and constitutional pronouncements that, as a preliminary legal matter, define the bundle of sticks in state ownership[386] should also, as a practical matter, limit the actions a state may take based upon that ownership. Among these are the concepts of "beneficial use" and "public interest" mentioned above. These usually arise in the inverse situation, ostensibly limiting a state decision that would benefit private rightsholders at the expense of public interests. However, such constraints might also counterintuitively protect private rights: for example, if a state decision without any benefit to the public harmed private rights, the decision could be challenged as contrary to the public interest. In truth, however, "beneficial use" and "public interest" are frequently, though not always, elastic or empty terms that fail to impose real constraints on

380. *See supra* notes 212-222 and accompanying text.

381. *See, e.g.*, Chatfield E. Well Co. v. Chatfield E. Prop. Owners Ass'n, 956 P.2d 1260, 1268 (Colo. 1998) ("Rights of use [to Colorado water] thereto become perfected property rights upon application to beneficial use."); Pub. Serv. Co. v. Meadow Island Ditch Co. No. 2, 132 P.3d 333, 340 (Colo. 2006) (en banc) (reiterating that "[a] decreed water right is valuable property, not a mere revocable privilege").

382. *See supra* notes 366-367.

383. *See* Foster v. Sunnyside Valley Irrigation Dist., 687 P.2d 841, 844 (Wash. 1984).

384. *See infra* Section III.A (discussing the relevance of state ownership to takings analysis).

385. *See, e.g.*, WILKINSON, *supra* note 86, at 241-42 (noting that "private interests [are] favored by western water policy," in part because water districts, which are "corporate-administrative bodies" composed of water rightsholders, can levy taxes, "build war chests," and "lobby the state and federal legislatures on water issues").

386. *See supra* notes 370-372 and accompanying text.

state actions.[387] This has led commentators[388] and voters[389] to regard the public trust doctrine as a replacement with more bite.[390] Where the doctrine exists, litigants might be able challenge state decisions with which they disagree as violations of the trust duty rather than as violations of their private rights.

More important than these public-oriented protections are the statutory or constitutional enactments that, in some states, guarantee rightsholders strong, perpetual rights to the state's water. In Colorado, for example, the same article of the state constitution that grants state ownership should also preclude the state from relying on that ownership to arbitrarily destroy private property rights. After section 5 of article XVI declares surface water and some groundwater to be state-owned,[391] it guarantees that water is "dedicated to the use of the people,"[392] and section 6 promises that private individuals' "right to divert" that water "to beneficial uses shall never be denied."[393] Clearly, these provisions would prevent the state from relying on its ownership to deny individuals the right to future diversions. But they would also bar the state from using its ownership to justify more draconian ends, such as voiding existing rights. This is because the Colorado Supreme Court has extrapolated from section 6's terms broader commitments to private water rights, including a doctrine requiring the state to permit private use of surface water and tributary groundwater to the

387. *See, e.g.*, Mark Squillace, *Restoring the Public Interest in Western Water Law*, 2020 UTAH L. REV. 627, 627, 658-74 (surveying twelve western states and concluding that they "routinely fail to meet their obligation to consider the public interest in water rights administration, despite unambiguous public interest mandates"); WILKINSON, *supra* note 86, at 240, 284 (lamenting that "[Elwood] Mead's veneration for the public interest and active government water management" failed to take root in many states, but noting that state legislatures have begun to make "real strides" toward such ends).

388. *See, e.g.*, Michelle Bryan Mudd, *Hitching Our Wagon to a Dim Star: Why Outmoded Water Codes and "Public Interest" Review Cannot Protect the Public Trust in Western Water Law*, 32 STAN. ENV'T L.J. 283, 308 (2013).

389. Coloradoans have unsuccessfully advanced ballot initiatives that would amend the state constitution to subject the state's water to the public trust doctrine. *See, e.g.*, *In re* Title, Ballot Title, Submission Clause for 2011-2012 No. 3, 274 P.3d 562, 564 (Colo. 2012) (en banc); *In re* Proposed Initiative on Water Rts., 877 P.2d 321, 324 (Colo. 1994) (en banc).

390. Just as state ownership differs from public trust ownership, *see infra* notes 236-238 and accompanying text, the "public interest" is a related but separate concept than the fiduciary duty imposed on states by the public trust doctrine, *see* Squillace, *supra* note 387, at 644-46.

391. *See supra* note 213.

392. COLO. CONST. art. XVI, § 5.

393. *Id.* § 6.

point of maximum beneficial use.[394] Relatedly, although liberal standing requirements in water adjudications are not a constitutional principle,[395] they reflect a commitment in both sections 5 and 6 to private individuals' right to use an inherently public resource.[396] In the same way the court has read these provisions' terms to more broadly secure private rights, they would constrain the ability of the state, as owner of the water, to usurp vested rights.

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In all, this conception of state ownership is modest compared to the grandiose claims that states used to make. But, as the next Part shows, rejecting its validity may dramatically impact states' ability to manage their groundwater resources.

III. REJECTING QUALIFIED STATE OWNERSHIP COULD IMPERIL STATES' ABILITY TO CONSERVE GROUNDWATER

Denying states' qualified ownership of groundwater (in states where it exists) could hinder intrastate management of groundwater, particularly under the coming strain of climate change. State ownership is legally relevant at multiple levels of management, from legislative decisions about how to define the property right in groundwater and ration its use, down to enforcement actions against polluters and water thieves. This interplay will only become more important: states have increasingly begun to impose management schemes over existing property-rights regimes, and, as these states confront a hotter, drier, more sporadic future, they may further restrict private use of groundwater. Denying state ownership is thus a doctrinal misstep that would unnecessarily

394. *See* Fellhauer v. People, 447 P.2d 986, 993-94 (Colo. 1968) (en banc) ("It is implicit in the[] constitutional provisions [of article XVI, section 6] that, along with vested rights, there shall be maximum utilization of the water of this state." (emphasis omitted)). The doctrine announced in *Fellhauer* was "tempered" by later court decisions, Gregory J. Hobbs, Jr., *Colorado Water Law: An Historical Overview*, 1 U. DENV. WATER L. REV. 1, 23 (1997), and when codified by the state legislature, *see* Water Right Determination and Administration Act of 1969, ch. 373, 1969 Colo. Sess. Laws 1200, 1200 (codified as amended at COLO. REV. STAT. § 37-92-102(1)(a) (2022)) (declaring that "the policy of the state" is to manage surface water and tributary groundwater "in such a way as to maximize the *beneficial* use of all of the waters of this state" (emphasis added)).

395. City of Broomfield v. Farmers Reservoir & Irrigation Co., 239 P.3d 1270, 1277 (Colo. 2010).

396. *See* Buffalo Park Dev. Co. v. Mountain Mut. Reservoir Co., 195 P.3d 674, 687 (Colo. 2008) (noting that the ability for any person to challenge a water adjudication "reflect[s] the overarching principle of Colorado water law, embodied in" the state constitution (citing COLO. CONST. art. XVI, § 5)); Bar 70 Enters. v. Tosco Corp., 703 P.2d 1297, 1303 (Colo. 1985) (noting that these "liberal [statutory] standing requirements . . . were calculated" in part "to assure the adjudication of water rights in accordance with [article XVI, section 6 of] the constitution . . . and other applicable laws" (citing COLO. CONST. art. XVI, § 6)).

undercut individual states' ability to assert ultimate control over their groundwater.

This Part first situates this inquiry by briefly describing the importance of state-imposed restrictions and the current landscape of state-level management schemes. It then provides three examples where state ownership impacts groundwater management: whether a state can be said to own its groundwater — in the proprietary sense — could determine whether the state can defeat takings claims or feel empowered to regulate in the first place; whether liability policies that businesses in the United States purchase will cover the cost to clean up polluted groundwater; and whether state officials could prosecute unlawful groundwater use as theft under the state's criminal code.

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Facilitating states' ability to impose restrictions on use is particularly important given the nature of groundwater. A hallmark common-pool resource,[397] groundwater is especially susceptible to destruction. When they drill straight down on their own land, neighbors — be they farmers or adjoining states — often pump from the same supply of groundwater. What one user takes diminishes the amount of water available to her neighbor because withdrawing groundwater changes the movement of water in the aquifer.[398] And individual pumping lowers the water table across the entire aquifer, thereby making present and future withdrawals more costly for everyone: it is more expensive to draw the same amount of water the ever-greater distance to the surface.[399] Absent restrictions

397. While "[t]he term commons is used in everyday language to refer to a diversity of resources . . . that involve some aspect of joint ownership or access," a common-pool resource is one that is "available to more than one person and subject to degradation as a result of overuse." Thomas Dietz, Nives Dolšak, Elinor Ostrom & Paul C. Stern, *The Drama of the Commons*, *in* THE DRAMA OF THE COMMONS 3, 18 (Elinor Ostrom et al. eds., 2002) (emphasis omitted). A common-pool resource is defined by its "subtractability" — what one person takes from the pool diminishes the amount left for other present or future users — and its scale makes it "costly" to limit access to the resource. *Id*. at 18-21; *see* ELINOR OSTROM, GOVERNING THE COMMONS: THE EVOLUTION OF INSTITUTIONS FOR COLLECTIVE ACTION 30 (1990).

398. Pumping in one location draws water toward it from surrounding areas, so aggressive pumping can disrupt the natural flow of water within the aquifer, allowing one user to "siphon[]" water from a neighbor's tract. OSTROM, *supra* note 397, at 107; *see* WILLIAM A. BLOMQUIST, DIVIDING THE WATERS: GOVERNING GROUNDWATER IN SOUTHERN CALIFORNIA 14 (1992).

399. OSTROM, *supra* note 397, at 108-09.

on use,[400] these characteristics fuel a "pumping race."[401] Groundwater's invisibility and easy accessibility exacerbates these problems and frustrates management. With surface water, users and regulators can at least see which headgates are open and closed, and they know when a river runs dry from drought or upstream use.[402] In contrast, groundwater is relatively easy to access (one need only sink a well), its use is very difficult to monitor and measure,[403] and pumping's effects on an aquifer are hidden to most users.[404] All of these features invite overdraft.[405]

Chronic overdraft has profound economic, legal, and environmental consequences. It imposes additional costs on present users and can effectively eject rightsholders whose pumps no longer reach the sinking water.[406] It speeds the demise of non-rechargeable aquifers, turns renewable groundwater reserves into

400. Without restrictions on who can access and use its bounty, a common-pool resource is an "open-access regime." Dietz et al., *supra* note 397, at 18. An open-access common-pool resource is in fact a better name for the archetypical "commons" frequently associated with Garrett Hardin's famous essay. *See id*. at 11-12. Writing about what he perceived to be the looming threat of overpopulation, Hardin conjured up a pasture — common property "open to all" — which became overgrazed to the point of ruin because each herder enjoyed more benefits from adding additional cattle but bore only some of the costs of doing so. *See* Garrett Hardin, *The Tragedy of the Commons*, 162 NATURE 1243, 1244 (1968). A key contribution of Elinor Ostrom, William A. Blomquist, and others has been to differentiate commons, common-pool resources, and common property as concepts, and to show that Hardin's pasture parable was just that: an imagined depiction that ended in tragedy because of specific circumstances and limitations built into his model. Dietz et al., *supra* note 397, at 15-18. Empirical work has shown that neither outright privatization nor centralized government ownership and control are the *sole* means of avoiding ruin of a common-pool resource. *Id*. at 15-16. Instead, "under some conditions, local groups using a common property regime [can] manage their resources quite well." *Id*. at 16.

401. OSTROM, *supra* note 397, at 108-09 (noting that no user internalizes all the costs created by her extra pumping, and the fact the water she needs tomorrow might be sucked up by her neighbor today dissuades her from leaving it in the ground).

402. Carol M. Rose, *Common Property, Regulatory Property, and Environmental Protection: Comparing Community-Based Management to Tradable Environmental Allowances*, *in* THE DRAMA OF THE COMMONS, *supra* note 397, at 233, 239.

403. Carol M. Rose, *From H2O to CO2: Lessons of Water Rights for Carbon Trading*, 50 ARIZ. L. REV. 91, 99 (2008); BENSON ET AL., *supra* note 4, at 323 (noting that unlike an appropriator who must divert surface water at a location outside her tract, a groundwater pumper can access, divert, and use the water all within her own "private, enclosed situation").

404. *See* BLOMQUIST, *supra* note 398, at 22-23.

405. *Id*. at 16-17; OSTROM, *supra* note 397, at 108-09.

406. *See supra* notes 67-68 and accompanying text; *see also* BLOMQUIST, *supra* note 398, at 20-21 (noting that the way in which users are displaced depends on the particular geography of the basin, like the Ogallala Aquifer, which "is shaped not like a bathtub but an egg carton, with its deeper parts separated by shallow ones").

wasting assets, and can permanently shrink or ruin aquifers.[407] Because of aquifers' importance as natural storage reservoirs—for example, holding water for use during droughts—their loss or diminishment carries enormous financial[408] and long-term management implications.[409]

Preventing depletion of groundwater inevitably requires state management,[410] but most states have only belatedly and inadequately begun to assert significant control over groundwater. There are a number of historical reasons why groundwater use has outpaced law and policy. Scientific ignorance of groundwater hydrology long frustrated attempts to fashion coherent private or public legal systems governing its use.[411] Then, in the 1940s and 1950s, groundwater use took another lurch forward even as the legal regimes remained largely

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407. When overextraction causes the underlying sediment (which once held water in its pores) to compact under its own weight, it permanently diminishes the aquifer's capacity, and it can allow saltwater to seep into coastal aquifers, potentially ruining them as a source of fresh water. *See* OSTROM, *supra* note 397, at 106; BENSON ET AL., *supra* note 4, at 314, 316.

408. *See* OSTROM, *supra* note 397, at 106 (noting the comparative cost of storing water above ground).

409. *See* PETER FOLGER, NICOLE T. CARTER, CHARLES V. STERN & MEGAN STUBBS, CONG. RSCH. SERV., R45259, THE FEDERAL ROLE IN GROUNDWATER SUPPLY 4 (2020) (noting the increased attention at the federal level to groundwater recharge because of aquifers' storage capacity).

410. Self-organized schemes have in the past proven capable of restricting groundwater use among local communities. Southern California has been the notable and much-studied site of such "polycentric" schemes comprising diverse, self-governing organizations. *See* OSTROM, *supra* note 397, at 133-37 (describing how, in two southern California water basins, "instead of one central governmental authority, a polycentric public-enterprise system . . . emerged to achieve a very sophisticated management system"). *See generally id.* at 103-42 (analyzing these schemes); BLOMQUIST, *supra* note 398, at 73-297 (analyzing the development and design of self-governing schemes in eight southern California groundwater basins). However, these boutique arrangements rely on a particular set of circumstances absent in many groundwater basins. *See* Elinor Ostrom, *Collective Action and the Evolution of Social Norms*, 14 J. ECON. PERSPS. 137, 149-54 (2000) (summarizing the social, political, legal, and economic factors necessary for "[s]uccessful self-organized resource regimes," and noting that "threats" to the "long-term viability" of these regimes include the addition of new users who do not respect local "norms," "rapid changes in technology," and "opportunistic behavior"); text accompanying *supra* notes 3-8 (describing this kind of behavior by out-of-state companies in Arizona). Moreover, climate change puts into doubt the ability to rely on such schemes in the long-term: in California, the stresses of drought led the state to start indirectly regulating groundwater withdrawals in 2015. *See infra* notes 422-430 and accompanying text.

411. *See* Owen, *supra* note 33, at 266-69. In a widely cited case, the Ohio Supreme Court concluded that the "occult and concealed" "origin, movement and course of" of groundwater made it "practically impossible" "to administer any set of legal rules" governing its use. Frazier v. Brown, 12 Ohio St. 294, 311 (1861), *overruled*, Cline v. Am. Aggregates Corp., 474 N.E.2d 324 (Ohio 1984).

unchanged: advances in pumping allowed users to pump dramatically more water from far deeper in the earth.[412] This transformed the agricultural output of huge swaths of America—namely the High Plains—where rainfall is sparse.[413] The feverish pumping and competition brought on by this "groundwater revolution,"[414] as Burke Griggs calls it, prompted many states to "develop[] and refine[]" the private property right in groundwater in order to settle disputes among pumpers.[415] But these rights were often uncalibrated to the reality of the "groundwater resource itself,"[416] and many states "largely failed to produce a regulatory regime that could effectively account for and protect" these property rights.[417] As a result, "by the early 1970s, the volumes of water claimed under hundreds of thousands of legal groundwater rights . . . vastly exceeded the long-term groundwater supplies necessary to supply those rights."[418] In response, many states over the past decades have begun to assert state- or basin-wide management schemes, either on top of existing property-rights regimes or by partially displacing those regimes when they redefine the property right itself.[419] But state regulatory regimes are often porous, and the state agencies charged with enforcing them underfunded, meaning that huge amounts of groundwater remain effectively unregulated.[420]

Just as the increased competition brought on by the groundwater revolution led to refinements of private rights and spurred regulatory overlays, the stresses of climate change will likely cause states to assert greater levels of control over aquifer systems. Thus, now and increasingly in the near future, state authority

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412. ROBERT GLENNON, WATER FOLLIES: GROUNDWATER PUMPING AND THE FATE OF AMERICA'S FRESH WATERS 24-26 (2002) (noting that a confluence of technology and infrastructure development allowed pumps to go from sucking water from only about 70 to 80 feet below the surface to at least 3,000 feet).

413. *Id.* at 26.

414. Griggs, *supra* note 37, at 1265.

415. BENSON ET AL., *supra* note 4, at 396.

416. *Id.*

417. Griggs, *supra* note 37, at 1267, 1282-96 (describing this phenomenon in three states that rely on the Ogallala Aquifer: Colorado, Kansas, and Nebraska).

418. BENSON ET AL., *supra* note 4, at 396; *see also id.* at 314 ("Across the various groundwater doctrines of American law, individualistic, property-based approaches have mostly failed to protect groundwater supplies and aquifers over the long term.").

419. *Id.* at 396-97; *see also id.* at 398-415 (describing how Arizona, Colorado, Kansas, and Texas have imposed management programs and in some cases statutorily redefined the private groundwater right).

420. *See* Owen, *supra* note 33, at 269-70; *see, e.g.*, *infra* note 435.

will be important both to protecting private property rights and to ensuring the long-term life of the nation's groundwater reserves.[421]

A. Denying State Ownership Could Lead to More Successful Takings Claims

Although it was the site of some of the country's most infamous water wars,[422] California was late to the game in regulating groundwater. For most of its history, even as it constructed hundreds of miles of modern-day aqueducts to shunt surface water across the state,[423] California allowed landowners to pump the water percolating beneath their ground mostly unchecked.[424] Throughout that time, the state could at most indirectly restrict groundwater withdrawals. Instead, local management schemes, often self-organized and implemented via interpersonal lawsuits, created a patchwork scheme that for a while "staved off the sort of crisis" that "elsewhere" had provoked "systemwide reform of traditional groundwater legal regimes."[425]

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421. This is not itself an argument for *centralized* management, which may not be the best means of regulating groundwater. *See* OSTROM, *supra* note 397, at 17-18, 21-23 (noting the deficiencies of centralized management and the ways in which it can backfire); BLOMQUIST, *supra* note 398, at 340-51 (describing the advantages of "polycentric" schemes). Even where states assert ultimate control of their waters and state regulation serves as the ultimate check on groundwater use, the state acts through a myriad of institutions, many of them localized. *See, e.g.*, Griggs, *supra* note 37, at 1289-92 (noting that while Kansas "retain[s] centralized authority over all types of groundwater," it has largely decentralized decisions about groundwater management to a variety of local organizations and officials, and in many cases relies on "locally-generated management plans," drawn up by rightsholders).

422. *See generally* REISNER, *supra* note 25, at 52-103 (recounting the conflicts in the first part of the twentieth century between Los Angeles and citizens in the Owens Valley, as Los Angeles successfully procured enough water rights and land to divert the Owens River via aqueducts to the city).

423. *See id.*

424. Joseph L. Sax, *We Don't Do Groundwater: A Morsel of California Legal History*, 6 U. DENV. WATER L. REV. 269, 270-71 (2003). The hands-off approach to groundwater forced courts to differentiate between subterranean streams (regulated by the state) and the groundwater that percolated around them (not regulated), a distinction that many contend is "meaningless" "from a technical perspective." *Id.* at 270-73 & nn.2, 5.

425. *Id.* at 271; *see also* Micah Green, *Rough Waters: Assessing the Fifth Amendment Implications of California's Sustainable Groundwater Management Act*, 47 U. PAC. L. REV. 25, 30-37 (2015) (describing the limitations of California's water regulatory regime prior to the passage of the Sustainable Groundwater Management Act (SGMA)); *see generally* BLOMQUIST, *supra* note 398 (describing the ways in which local and largely self-organized groundwater management schemes existed in southern California); OSTROM, *supra* note 397, at 103-42 (analyzing these management schemes).

A brutal dry spell appeared to break the back of that tenuous arrangement. In 2014, as California strained under another year of record drought,[426] groundwater pumping became frenetic.[427] With farmers desperate to plant or water parched almond orchards and vineyards, well-drilling companies couldn't sink holes fast enough into the Central Valley, reporting a backlog of a year for new orders.[428] In response, California enacted the Sustainable Groundwater Management Act.[429] For the first time in the state's history, the state agency that regulates water now has indirect authority to oversee, and in some cases restrict, groundwater withdrawals.[430] This development, however, raises the question: will changing the legal regime around groundwater or the exercise of new regulatory authority lead to compensable takings?[431]

Texans have been successful in establishing groundwater takings liability under a more restrictive regulatory regime. In 2012, the Texas Supreme Court settled a landowner's longstanding challenge to the increased regulation of groundwater taken by a local agency acting under authority of a twenty-year-old state

426. *See* Daniel Griffin & Kevin J. Anchukaitis, *How Unusual Is the 2012-2014 California Drought?*, 41 GEOPHYSICAL RSCH. LETTERS 9017, 9017 (2014).

427. Khokha, *supra* note 31.

428. *See id.*; Bettina Boxall, *Overpumping of Central Valley Groundwater Creating a Crisis, Experts Say*, L.A. TIMES (Mar. 18, 2015, 4:00 AM PT), https://www.latimes.com/local/california/la-me-groundwater-20150318-story.html [https://perma.cc/QAF2-NN2Y].

429. *See* Khokha, *supra* note 427; Green, *supra* note 425, at 37.

430. *See* Green, *supra* note 425, at 37-39 (describing the regulatory regime under the SGMA).

431. *Id.* at 39-48. Though libertarian groups have not yet lodged takings claims in connection with restrictions imposed pursuant to the SGMA, their eagerness to raise takings issues in groundwater-related litigation indicates the likelihood of a future such challenge. *See* Application for Leave to File Brief Amicus Curiae and Brief Amicus Curiae of Pacific Legal Foundation and California Farm Bureau Federation in Support of Appellant County of Siskiyou at 15 n.3, 25-26, 28, Env't L. Found. v. State Water Res. Control Bd., 237 Cal. Rptr. 3d 393 (Ct. App. 2018) (No. C083239) (arguing that extending the public trust doctrine to groundwater would likely constitute a judicial taking because "eliminating the existing right of use (like through public trust-inspired pumping restrictions) [would be] analogous to government regulations that are 'from the landowner's point of view, the equivalent of a physical appropriation'"; predicting the resulting takings "liability could be far-reaching"; and noting in an aside that the "takings liability" of the SGMA is "unresolved" (quoting Lucas v. S.C. Coastal Council, 505 U.S. 1003, 1017 (1992))); Brief Amicus Curiae of Pacific Legal Foundation in Support of Petitioners at 9, 11-12, Coachella Valley Water Dist. v. Agua Caliente Band of Cahuilla Indians, 138 S. Ct. 468 (2017) (Nos. 17-40 & 17-42) (arguing that the Ninth Circuit's decision extending federal reserved water rights to groundwater "threaten[ed] disastrous effects throughout the West," and that the Supreme Court should take the case because although federal reserved water rights have never before created takings liability in prior appropriation settings, "the insertion of a federal reserved groundwater right into" a groundwater regime not governed by prior appropriation raises novel takings questions because it "will frustrate the existing groundwater rights . . . substantially more than in a prior appropriation system").

law.[432] The court held that Texas "landowners . . . have a constitutionally compensable interest in groundwater" such that too-restrictive measures could trigger a regulatory taking.[433] A lower court has subsequently found just such a taking occurred when the state agency denied a landowner permits for the full amount of groundwater he could put to beneficial use.[434]

The experiences of California and, to a lesser extent, Texas[435] indicate that takings claims are the area of groundwater management where it matters most how state ownership is treated.[436] While other scholars have demonstrated that state ownership—even as a legal fiction—is important for takings analysis,[437]

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432. Edwards Aquifer Auth. v. Day, 369 S.W.3d 814 (Tex. 2012). Since 1996, the Edwards Aquifer Authority (EAA), a state agency, has been authorized to regulate groundwater withdrawals from the Edwards Aquifer, including though a permit system. *See* Edwards Aquifer Auth. v. Bragg, 421 S.W.3d 118, 124-26 (Tex. App. 2013). For background on the regulatory framework and legal challenges to it, see Torres, *supra* note 95, at 153-59; and Craig, *supra* note 378, at 541-47.

433. *Day*, 369 S.W.3d at 838. By holding that the Texas landowner had a property right in the groundwater *in place* like she might for oil or gas, *id*. at 831-32, the Texas court expanded the rule of capture, which typically allows the landowner to own water *after* capture, *see* Craig, *supra* note 378, at 543.

434. *Bragg*, 421 S.W.3d at 137-46. The owner of two orchards sought groundwater permits for each. *Id*. at 126. By statute, the permits he applied for were to be awarded based on historical use. *Id*. at 125-26. He could show historical use for only one orchard, so the EAA denied the permit for one and issued a permit for the second that was less than what he claimed he could put toward "maximum beneficial use." *Id.* Applying the balancing test from *Penn Central Transportation Co. v. New York City*, 438 U.S. 104 (1978), the state court of appeals found a taking, including because at the time the orchard owner bought the property, which was before the EAA had authority manage groundwater withdrawals, he had strong investment-backed expectations that he owned the groundwater. *See Bragg*, 421 S.W.3d at 142-44.

435. Texas's experience is perhaps less instructive because landowners' particularly strong property right in groundwater makes the state an outlier. *See supra* notes 375-378 and accompanying text. On Texas's history of groundwater management, see generally Torres, *supra* note 95. On California's transition from a loose regulatory regime to the SGMA, see Green, *supra* note 425; and Sax, *supra* note 424. There is reason to believe California's transition is incomplete: "On its face, SGMA appears to promise comprehensive groundwater management," but it regulates only 2 percent of California groundwater, thus leaving "the largest volumes of groundwater in California still vulnerable to over-extraction." Barton H. Thompson, Jr., Melissa M. Rohde, Jeanette K. Howard & Sandi Matsumoto, *Mind the Gaps: The Case for Truly Comprehensive Sustainable Groundwater Management*, STAN. WATER IN THE W. 2, 2 (Mar. 2021), https://stacks.stanford.edu/file/druid:hs475mt1364/Mind%20the%20Gaps%2C%20The%20Case%20for%20Truly%20Comprehensive%20Sustainable%20Groundwater%20Management.pdf [https://perma.cc/8824-7VJC].

436. *Cf.* Owen, *supra* note 33, at 253 (arguing that how "the Takings Clause of the Fifth Amendment, and parallel clauses of state constitutions, apply to groundwater use regulation . . . is exceedingly and increasingly important").

437. *See infra* notes 455-456 and accompanying text.

this Section makes a further contention: because it is possible for a state to literally own its water,[438] the more literally a state's ownership is understood, the more force that ownership has as a background property principle, and thus the greater latitude the state has to regulate groundwater without triggering a taking—and vice versa. Thus, rejecting state ownership would make it harder, not easier, for states to manage their groundwater resources.[439]

This is especially important because as states confront a hotter, drier future, they may decide to follow California's and Texas's examples and revamp their groundwater legal regimes or impose further restrictions within an existing regime.[440] Particularly in other states that only loosely regulate groundwater, these efforts are almost certain to prompt takings claims by altering private property interests or expectations in groundwater rights.[441] Moreover, as Dave Owen has pointed out, this potential transition of groundwater regimes comes at a time when the Supreme Court's jurisprudence appears to be trending toward treating *any* sudden alteration of property law as effecting a taking.[442]

Rather than seek to address how state ownership would intersect with the various groundwater regimes adopted by states,[443] this Section addresses two types of takings analysis—a total restriction on groundwater rights and a physical taking[444]—to demonstrate that not only is state ownership key to takings analysis, but whether that ownership is understood literally rather than figuratively matters, too.

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438. *See supra* Part II.

439. Industry groups appear attuned to this fact. *See* WATER SYS. COUNCIL, *supra* note 183, at 59 ("So, who really 'owns' the water? Property owners (or holders of water rights) come closest to 'owning' water by owning the right to use water. The states, contrary to some assertions, do not own the water. . . . Disputes over water rights will undoubtedly increase as demands on the resource increase. Many governments will attempt to overstep their bounds.").

440. *See* Owen, *supra* note 33, at 270-71 (noting that the "fitful and uneven process of [groundwater law's] legal evolution creates conditions conducive to two types of takings claims": "when legislatures or courts . . . attempt to reform groundwater laws" and "when regulators apply existing law to particular groundwater users"); Tarlock, *supra* note 187, at 732 ("To adapt to the stresses of climate change, there is likely to be more regulation of, and judicial limitations on, the use and enjoyment of water . . . [b]ut, when legislatures, administrative agencies, and courts shift titles and reduce existing rights to share these scarce resources more equitably among competing demands, there will be takings challenges.").

441. *See* Owen, *supra* note 33, at 266 ("Takings claims tend to arise where resource users can claim property interests in the contested resource and where the law governing the resource is transitioning toward more extensive regulatory control.").

442. *See id.* at 272-73 (discussing Stop the Beach Renourishment, Inc. v. Fla. Dep't of Env't Prot., 560 U.S. 702 (2010) (plurality opinion)).

443. See *supra* note 243.

444. *See* Lingle v. Chevron U.S.A. Inc., 544 U.S. 528, 537-41 (2005) (describing the different categories of regulatory and physical takings developed by the Supreme Court).

1. *State Ownership as a Stronger Background Property Principle When Read Literally*

Much of the significant academic debate over the degree to which water rights are constitutionally protected property[445] has been in the context of surface-water rights, meaning the question of takings and groundwater is "a still-underdeveloped fringe of property law."[446] In practice, however, courts have so far treated groundwater like they do any other property, subject both to constitutional protection and to government regulation.[447]

If the state's action deprived a rightsholder of all of the economic value of her groundwater right, state ownership would matter for evaluating the takings challenge under *Lucas v. South Carolina Coastal Council*.[448] A state's ownership would be an important "background principle" of property law against which the takings challenge arose.[449] *Lucas* held that no amount of "asserted 'public interests'" could prevent the government from having to compensate actions that destroy or "prohibit all economically beneficial use of land."[450] It added, however, a caveat: to avoid triggering a taking, the government-imposed "limitation" that destroys the property's economic value "must inhere in the title itself, in the restrictions that background principles of the State's law of property . . . already place upon" the private property right.[451] That is, without effecting a taking, the state cannot restrict the use of the real property like water any more than what a court could mandate rightsholders to do under existing law.[452] Whether such "background principles" exist is a matter of common law and—importantly here—the state's property law.[453]

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445. *See, e.g.*, Owen, *supra* note 33, at 280-81; *see also* Zellmer & Harder, *supra* note 259, at 680 (noting the "[j]udicial treatment of water," including for takings, "is all over the map"). *Compare, e.g.*, Tarlock, *supra* note 187, at 740 (noting the general "consensus" that "the Constitution affords water-right holders *comparatively less* protection compared to land owners"), *and* Sax, *supra* note 94, at 260 (stating same), *with* James L. Huffman, Hertha L. Lund & Christopher T. Scoones, *Constitutional Protections of Property Interests in Western Water*, 41 PUB. LAND & RES. L. REV. 27, 37-38 (2019) (arguing that "[p]roperty rights in water have no lesser constitutional standing than property rights in land").

446. Owen, *supra* note 33, at 258.

447. *See id*. at 276-92 (analyzing fifty groundwater takings cases over the past century).

448. 505 U.S. 1003 (1992). For applications of *Lucas* to water rights, see Leshy, *supra* note 334, at 1995-96; and Sax, *supra* note 334.

449. *Lucas*, 505 U.S. at 1029-32.

450. *Id.* at 1028-29.

451. *Id*. at 1029.

452. *Id*.

453. *Id*. at 1030-31.

In addition to other limitations that already "inhere" in certain water rights,[454] state ownership is another significant background principle that expands the scope of government action not subject to compensation. Indeed, as Gerald Torres has explained, "[b]eing clear about which waters are state waters and which are not is of signal importance because the distinction has crucial implications for the constitutionally permissible regulatory reach of the state and for the private value of the real property to which the water rights attach."[455] This principle is true even if "state ownership" is merely a fictive shorthand that limits private rights to usufructs and announces the importance of groundwater to the people of the state, thus warning the rightsholder of the public interest encumbering her water right.[456]

However, state ownership is an even stronger background principle if it is read to convey a literal, if qualified, possessory interest. As a question of state property law, the degree and dimensions of that ownership — and thus the "preexisting limitations[s]"[457] it imposes — will be different in each state. But, in general, to draw upon the ratio in *Sporhase*,[458] the greater the public claim to proprietary ownership, the weaker the private rights and expectations in the resource. So just as a private tract along a navigable waterway comes with an implied easement that the state can at any time "assert" without paying compensation,[459] a state's established *proprietary* ownership of groundwater could "proscribe" a broad range of "use[s]" that the state can then make "explicit" in its regulation.[460] By restricting private groundwater use, the state asserts the people's ultimate, literal ownership of the water — something different than their interest in its management. Reading state ownership literally as opposed to figuratively,

454. *See* Leshy, *supra* note 334, at 1995-96, 2003-04; Joseph L. Sax, *The Limits of Private Rights in Public Waters*, 19 ENV'T L. 473, 481-82 (1989); *see also* Sax, *supra* note 334, at 951 (noting that *Lucas*'s holding benefits Western state governments and should leave private water rightsholders "especially uneasy").

455. Torres, *supra* note 95, at 150; *see also* Edwards Aquifer Auth. v. Day, 369 S.W.3d 814, 822-23 (Tex. 2012) (discussing state ownership of surface water).

456. *See e.g.*, Torres, *supra* note 95, at 150 (noting that "[b]y making the surface waters 'state waters,' the [private] rights [to that water] . . . are both secure and subject to the regulatory reach of the state as conditions dictate, including prohibitions on use," but not elaborating on whether state ownership is a fiction or a literal possessory interest); Leshy, *supra* note 334, at 1991 (noting the importance of a "state's claim of ownership" to takings analysis but implying that such claims remain legally relevant even if they are not read literally, because a "state's assertion of popular ownership of all water within the state's borders reflects [the people's] perception of water as a communal resource with an overriding public value").

457. *Lucas*, 505 U.S. at 1028.

458. *See supra* Section II.C.1.

459. *Lucas*, 505 U.S. at 1028-29.

460. *Id.* at 1029-30.

then, makes it even more likely that a state could impose severe restrictions to protect groundwater reserves without having to compensate rightsholders.[461]

2. *State Ownership as a Safe Harbor in Physical Takings*

The Supreme Court's analysis in a 2015 physical takings case supports this point, and suggests further that state ownership could be a dispositive defense in a physical takings challenge.[462] Recall, after all, that "[r]aisins are not like oysters."[463] In *Horne II*, Chief Justice Roberts's opinion noted that a state can own certain natural resources like wild oysters in the proprietary sense by virtue of its property laws. Moreover, the Court suggested, state actions that would otherwise effect a *physical* taking do not require compensation if the object is state-owned.

To do so, *Horne II* drew a distinction between raisins (which required compensation) and Maryland oysters (which did not), because the former were "private property" while the latter "belonged to the State under state law."[464] Consequently, the Supreme Court said, when the government takes "the fruit of the growers' labor," it effects a taking.[465] But if state property law makes those natural resources "public things subject to the absolute control of the state," a taking does not occur.[466] Thus, restrictive actions that would otherwise effect a *physical* taking might not do so if a state's property law means that groundwater belongs to the state.[467]

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461. *Cf.* Leshy, *supra* note 334, at 2004 ("[E]ven where the government totally thwarts the exercise of a water right, state law restrictions inherent in the title can immunize the government from a duty to provide compensation."); Torres, *supra* note 95, at 150-51 (noting that the "question" prompted by Texas's decision to empower conservation districts to manage groundwater "is whether the power is plenary—like the power to control the use of surface waters," which are "state waters" in Texas—"or whether it is something less," and that "[t]he nature of the private interest in groundwater is necessarily the limiting factor").

462. *See generally* Dave Owen, *The Realities of Takings Litigation*, 47 B.Y.U. L. REV. 577, 626-31 (2022) (documenting how in water-rights takings cases against the federal government, litigants consistently try to frame the case as a physical rather than regulatory taking, and criticizing the notion that a "[r]egulatory action" can "physically invade" or "appropriate" a water right).

463. Horne v. Dep't of Agric., 576 U.S. 350, 367 (2015).

464. *Id.*

465. *Id.*

466. *Id.* (quoting Leonard v. Earle, 141 A. 714, 716 (Md. 1928)).

467. It is perhaps an irony of this case that while the Court strengthened private property rights over non-natural resources, it did so at the expense of private rights over natural resources. This section of the majority opinion was an effort to parry the dissent's argument, which noted that in 1929 the Court had upheld a state action that physically took oyster shells. *Id.* at

Accordingly, a state with no tradition of state ownership in groundwater might not be able to assign itself a property interest in groundwater without incurring takings liability,[468] especially in a state where landowners have vested rights in unregulated groundwater. But *if* state ownership exists, treating it as an actual proprietary interest—rather than merely an expression of "public value"[469] in the groundwater—forms an even more significant background property principle against which these takings challenges arise. Thus, rendering "state ownership" statements to be null or even merely fictive shorthand would constrain the regulatory authority of the state.[470]

366-67. As noted in the text above, the Court distinguished *Horne* from the oyster case based on the distinction that raisins were not publicly or state-owned, while wild oysters were. But the dissent persuasively disputed that the oyster case hinged on this distinction. *See id.* at 383 n.1 (Sotomayor, J., dissenting) (noting that the majority opinion relied on the state court opinion in the oyster case, not the Supreme Court's decision). Thus, by perhaps reinterpreting the Court's precedent to benefit raisin-growers, the Chief Justice's opinion may have bolstered states' regulatory power over natural resources. *See, e.g.*, John D. Echeverria & Michael C. Blumm, Horne v. Department of Agriculture*: Expanding Per Se Takings While Endorsing State Sovereign Ownership of Wildlife*, 75 MD. L. REV. 657, 658 (2016) (arguing that the case has a "remarkable silver lining from the point of view of government regulators responsible for enforcing wildlife regulations" because it contains a "ringing affirmation of the venerable but sometimes misunderstood doctrine of sovereign ownership of wildlife").

468. In *Lucas*, the Court said, as it had before, that "a 'State, by *ipse dixit,* may not transform private property into public property without compensation.'" Lucas v. S.C. Coastal Council, 505 U.S. 1003, 1031 (1992) (quoting Webb's Fabulous Pharmacies, Inc. v. Beckwith, 449 U.S. 155, 164 (1980)). But this oft-repeated line may be more aspirational than historically accurate, especially in the case of water. *See* Sax, *supra* note 94, at 268-69 (providing examples from history demonstrating that "change is the unchanging chronicle of water jurisprudence," such that "[n]ew needs have always generated new doctrines and, thereby, new property rights," even while "water's capacity for full privatization has always been limited"); Joseph L. Sax, *Property Rights and the Economy of Nature: Understanding* Lucas v. South Carolina Coastal Council, 45 STAN. L. REV. 1433, 1446-49 (1993) (providing "[e]xamples of property law's adaptation to social changes"). Even *Lucas* acknowledged "that 'changed circumstances or new knowledge' might permit the legislature to proscribe conduct that previously had not been prohibited by the common law." Brady, *supra* note 232, at 1445 (citing *Lucas*, 505 U.S. at 103). Just as the aerial portion of the common-law ad coelum doctrine ceded to the public's interest in air travel, *see* STUART BANNER, WHO OWNS THE SKY?: THE STRUGGLE TO CONTROL AIRSPACE FROM THE WRIGHT BROTHERS ON 75-101 (2008), so too might advents in pumping technology, the ability for forever chemicals to leach into groundwater, or perpetual climate-induced scarcity argue for states' ability to modify existing groundwater regimes without incurring takings liability.

469. Leshy, *supra* note 334, at 1991.

470. *But see* Klein, *supra* note 45, at 476 (suggesting that recognizing sovereign ownership of water would make it "less susceptible to regulation").

It is possible to overstate the importance of state ownership for takings.[471] As Professor Owen has documented, states have generally fended off groundwater takings claims without leaning on state ownership.[472] Moreover, state ownership is awfully muddied.[473] States, and the courts in which they argue, are often quite unclear as to what it actually means. So, the confused nature of the concept limits its utility to either litigants or judges in the takings context.

However, there are a few reasons to believe that state ownership is more important than these critiques suggest.[474] First, clarifying state ownership, as this Note aims to do, might lead states and courts to rely on the concept more often than they currently do. The coming pressures of climate change might encourage that clarification. Indeed, property concepts often become refined in response to scarcity and other challenges.[475] Second, the shifting legal landscape may require states to lean more heavily on state ownership arguments than they do now or have in the past. The Supreme Court's takings jurisprudence has increasingly strengthened private property interests,[476] and the Court seems correspondingly skeptical of arguments that were important in defending past groundwater takings cases.[477] Unable to rely on arguments that worked in the past, states may need to innovate.[478] And, even if the Court has not created a sort of safe harbor for regulating state-owned natural resources, it has indicated they are a special category.[479] Finally, looking narrowly at state ownership's overt appearances in takings litigation underappreciates its importance to states' ability to manage

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471. I am grateful to Professor Owen for raising the points in this paragraph.

472. *See* Owen, *supra* note 33, at 284-92 (cataloguing groundwater takings claims).

473. *See supra* Section I.B.

474. Many of the ideas in this paragraph derive from a helpful exchange with Professor Pappas.

475. *See, e.g.*, *supra* notes 412-419 (describing how water rights in certain western states were refined in response to the scarcity brought on by advances in groundwater-pumping technology); *see also* Rose, *supra* note 21, at 577-78 & n.7 (recounting scholars' invocation of this "scarcity story," including its application to water rights in the nineteenth-century American West, but noting that it is not universally true, as demonstrated by subsequent examples showing how "crystalline" concepts became "muddied").

476. *See, e.g.*, Cedar Point Nursery v. Hassid, 141 S. Ct. 2063 (2021); Knick v. Township of Scott, 139 S. Ct. 2162 (2019); *supra* note 467.

477. *See* Owen, *supra* note 33, at 289-91 (noting that while a 1955 Arizona Supreme Court decision relied on the government's compelling interest, the U.S. Supreme Court has increasingly—though not totally—"back[ed] away from this sort of reasoning," instead focusing on the impact upon the regulated party and her property).

478. *See id.* at 288, 291 (noting there is reason to believe "future cases" may not rely on the "analytical methods" of past cases, and "[t]he fact that our legal and political culture has traditionally supported regulatory oversight of groundwater . . . does not mean it will be nearly so deferential in the future").

479. *See supra* notes 463-467 and accompanying text.

groundwater. This is because fear of provoking takings claims influences government decisions about whether to regulate in the first place.[480] Thus, anything that incrementally increases a state's confidence in its regulatory authority—like clarifying its ownership of water—would avoid *over*deterring government action, thereby enabling appropriate regulation.

Even so, there is perhaps a separate reason to be skeptical of embracing the importance of state ownership to takings: doing so creates—or endorses—a type of historical determinism.[481] If a state like Colorado can restrict groundwater usage because in 1876 it announced water was state-owned, that implies that states that failed to make such pronouncements could be handicapped if they try to reform their groundwater laws or restrict groundwater pumping. Emphasizing state ownership thus limits the states without a tradition of state groundwater ownership.[482]

This outcome arguably rewards mistakes. Even if the drafters of the Colorado Constitution were right by contemporaneous standards, their understanding of *absolute* state ownership is no longer wholly valid. Why should we credit this ownership claim if we now know it does not mean exactly what they thought it did 150 years ago? Indeed, this is perhaps the best counterargument to treating state water ownership literally in any context. It instead argues for regarding

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480. The takings literature has focused on the compensation requirement's actual and preferred upstream effect on government regulation. For example, Michael Heller and James Krier's widely cited economic account of takings suggests that "deterrence" is the best way "to think about" the second of the two "aims" ("efficiency" and "justice") of the takings limitation. Michael A. Heller & James E. Krier, *Deterrence and Distribution in the Law of Takings*, 112 HARV. L. REV. 997, 997, 998-99 (1999). The compensation requirement serves justice (the "equitable" allocation of resources) because making the government pay to use its takings power deters it from overregulation that would transfer "resources from higher to lower valued uses" and from making choices that "exploit politically vulnerable groups and individuals." *Id*. at 999. Taking a different view, a number of scholars have noted that the quirks of takings jurisprudence, and the imperfect way in which governments internalize costs and benefits, means the threat of takings challenges can lead to arbitrary decision making and overdeter government regulation. *See, e.g.*, Michael Pappas, *Singled Out*, 76 MD. L. REV. 122, 152-53 (2016) (arguing that takings doctrine's widely shared prohibition against "singling out" "inflat[es] agencies' perceived takings liability," "magnif[ies] bureaucratic risk aversion," and "chills otherwise rational, non-compensable regulatory efforts"); Christopher Serkin, *Big Differences for Small Governments: Local Governments and the Takings Clause*, 81 N.Y.U. L. REV. 1624, 1628, 1632, 1637-79 (2006) (drawing on public-choice theory to establish that local governments are where the economic account of takings should have particular purchase, but arguing that local governments' risk aversion and other "systemic pressures" mean the threat of takings challenges can "over-deter" and thus "paralyze" local governments).

481. I am grateful to Professor Rose for this turn of phrase and for raising this objection.

482. Indeed, *Day* demonstrates as much: Texas did have a tradition of state surface-water ownership, but groundwater was not state-owned. *See* Edwards Aquifer Auth. v. Day, 369 S.W.3d 814, 822-23 (Tex. 2012).

these statements as legal artifacts of early statehood: even if they played an important historical role allowing new states to depart from common-law regimes and assert greater control over water,[483] today such pronouncements should at most express fuzzier notions of water's public value, not true state ownership. Admittedly, by asserting these statements remain legally valid and relevant by modern standards, this Note seeks to reinterpret and rehabilitate them.

But the lock-in is, at root, the result of the Supreme Court's modern takings jurisprudence. The Court's takings analysis emphasizes original definitions of property over subsequent state practice,[484] sharply penalizes any abrupt alterations of property law,[485] and suggests a dispositive divide between state-owned natural resources and other forms of property that result from private toil.[486] If states increasingly invoke state ownership under the strain of climate change, the Court might give it less weight — or might sample from its Commerce Clause approach, looking past the state's paper definitions to its de facto state practice.[487] But at least under the Court's current approach to takings, state ownership is a crucial factor.

B. Denying State Ownership Could Let Insurance Companies Avoid Pollution Remediation

Almost half of California gets its drinking water from the ground, but last year, much of it was too poisonous to use.[488] Fifteen percent of wells the state tested showed unsafe levels of so-called "forever chemicals."[489] State and local water agencies shut down wells across the state.[490] But many communities — like that serving migrant farmworkers outside Santa Cruz — remained reliant on wells known to contain elevated levels.[491] Much of the litigation over the contamination of forever chemicals has been directed at manufacturers of these

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483. *See supra* Section I.A.; Torres, *supra* note 95, at 150.

484. *See supra* notes 334-335 and accompanying text.

485. *See supra* note 442 and accompanying text; *supra* note 468.

486. *See supra* notes 463-467 and accompanying text.

487. I am grateful to Professor Pappas for this suggestion.

488. Rachel Becker, *Well Water Throughout California Contaminated with 'Forever Chemicals*,' CALMATTERS (Dec. 4, 2020), https://calmatters.org/projects/california-water-contaminated-forever-chemicals [https://perma.cc/G22S-G7AQ].

489. Per- and polyfluoroalkyl substances are a group of chemicals that "have been linked to kidney cancer and other serious health conditions," and that are known as "forever chemicals" because they do not break down through natural processes. *Id.*

490. *Id.*

491. *Id.*

chemicals.[492] But what if Californians sued the airports, landfills, and industrial polluters who appear to have leaked these chemicals into the groundwater in the first place?[493]

If so, a central legal issue might be how to read the California Water Code's statement that "[a]ll water within the State *is the property of the people* of the State."[494] As this Section describes, that is because many businesses' liability insurance bars coverage if the damage is not caused to the property of another. As we increasingly rely on groundwater, whether insurance companies must pay to clean up groundwater pollution may hinge on the existence or absence of state

492. *Id.*

493. *Id.*

494. CAL. WATER CODE § 102 (West 2021) (emphasis added). California and federal courts have come to divergent conclusions over section 102's meaning for insurance purposes. In an action under the federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. §§ 9601-9675 (2018), the California Supreme Court relied on section 102 to conclude that the "release of hazardous waste into groundwater and surface water constitutes actual harm to property in which the state" has "an ownership interest," thus satisfying a statutory element. AIU Ins. Co. v. Superior Ct., 799 P.2d 1253, 1269 (Cal. 1990) (en banc). Relying on this decision and section 102 itself, the Ninth Circuit concluded California groundwater was property of the state, so the owned-property exclusion did not apply. *See* Intel Corp. v. Hartford Accident & Indem. Co., 952 F.2d 1551, 1565 (9th Cir. 1991). However, a California state court of appeals essentially ignored the California Supreme Court and Ninth Circuit and came to a contrary conclusion. Perhaps it did so because state ownership would have *barred* coverage—the property-owner seeking coverage was the state, which ran a toxic waste facility. *See* State v. Superior Ct. (*Underwriters at Lloyd's of London*), 93 Cal. Rptr. 2d 276, 279 (Ct. App. 2000). Relying in part on *Sporhase*, the court of appeals sidestepped the seemingly contrary statement by the California Supreme Court, *id.* at 284-87, in order to conclude that the state "owns all of the groundwater present under the surface of the state" but that ownership was *not* possessory and thus not of the kind that "necessarily . . . trigger[s] an 'owned property' exclusion," *id.* at 279. There is a simpler resolution that simultaneously holds that California's state ownership *is* possessory but that the state entity did not pollute its own water. Recall the difference between ownership by the state as the governmentally organized public versus a state agency's ability to exercise a property right in water like any private user. *See* text accompanying *supra* note 83. Seen in this way, the state acting as a government entity polluted groundwater that was owned not by that state entity, but by the state as an embodiment of the public—thus, the groundwater *was* "property of another." *See* CAL. PENAL CODE § 484(a) (West 2021). Although *Underwriters at Lloyd's of London* gestured toward this distinction, *see* 93 Cal. Rptr. 2d at 281-82, it could have relied on it more fully instead of basing its decision on *Sporhase* and water's "evanescent . . . character," *id.* at 286.

Underwriters at Lloyd's of London's *Sporhase*-influenced holding has proven influential: it led two other state courts of appeals to conclude California's statutory pronouncement does not mean what it says. *See infra* note 526; Cent. & W. Basin Water Replenishment Dist. v. S. Cal. Water Co., 135 Cal. Rptr. 2d 486, 496 (Ct. App. 2003) ("California owns all of the groundwater in California, not as a proprietary owner, but in a manner that empowers it to supervise and regulate water use." (citing *Underwriters at Lloyd's of London*, 93 Cal. Rptr. 2d at 282)), *as modified on denial of reh'g* (July 9, 2003).

ownership. Denying that states can have a limited proprietary interest in natural groundwater gives the insurance companies grounds to contest that they should have to pay. Based on the arguments its members press in court, it is the insurance industry that fears state groundwater ownership.

The importance of state ownership arises from what is known as the "owned property" exclusion. Many liability policies contain one.[495] Most importantly, this exclusion in the standard version of the comprehensive general liability (CGL) policy means that insurance will not pay to cover damage to property that is "owned" by the insured or that is in her "care, custody, or control."[496] Businesses buy CGL policies to insure against damages they cause to third parties, and this standard form is ubiquitous. "[M]ost CGL insurance written in the United States is written on these forms," which are formulated and promulgated to "each State's insurance regulators" by "an association of approximately 1,400 domestic property and casualty insurers."[497]

In spite of a prevalent provision that is a more formidable bar to coverage in cases of groundwater pollution,[498] the owned-property exclusion is a flashpoint in insurance disputes.[499] In the large majority of cases that confront the exclusion, courts find that natural groundwater is not the property of the insured, so

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495. 3 ALLAN D. WINDT, INSURANCE CLAIMS AND DISPUTES § 11:19 (6th ed. 2021).

496. 2 TOD I. ZUCKERMAN & MARK C. RASKOFF, ENVIRONMENTAL INSURANCE LITIGATION: LAW & PRACTICE § 10:8 (2021).

497. Hartford Fire Ins. Co. v. California, 509 U.S. 764, 772 (1993).

498. Many liability policies, including comprehensive general liability (CGL) policies, erect a significant barrier to coverage that would have to be surmounted in order for the owned-property exclusion to be important in a case of groundwater contamination. Since 1986, and in response to growing number of claims for liability under statutes like CERCLA, standard-form CGLs now include a so-called "absolute pollution exclusion"; it bars coverage for third-party property damage "arising out of the actual, alleged or threatened discharge, dispersal, seepage, migration, release, or escape of pollutants," which includes a broad array, including "chemicals" and "waste." Jeffrey W. Stempel, *Reason and Pollution: Correctly Construing the "Absolute" Exclusion in Context and in Accord with Its Purpose and Party Expectations*, 34 TORT & INS. L.J. 1, 1-5 (1998) (quoting a CGL policy). Some insurers deviate from this post-1986 standard version, and policies with the pre-1986 version of this exclusion—that contains a proviso allowing for coverage when the discharge is "sudden and accidental"—remain in force. *Id*. at 1 n.1, 2 n.3. But where either the pre- or post-1986 exclusion applies, it bars "'classic' pollution claims involving widespread discharge of contaminants giving rise to claims of environmental degradation," *id*. at 3, like that described in the opening of this Section. As a result, businesses sometimes buy specialized environmental insurance policies. *See* 2 ZUCKERMAN & RASKOFF, *supra* note 496, § 29.1.

499. 2 ZUCKERMAN & RASKOFF, *supra* note 496, § 10.1.

insurance must pay to clean it up.[500] Most courts resolve this question by looking to states' constitutions, water codes, and other statutes to conclude that groundwater is the property of the public or the state.[501]

However, several courts have concluded that the state does *not* own the water. Thus, there is no third-party damage, and the insurance company need not pay. Some courts reach this conclusion because the state's water laws give the insured property rights in the groundwater underlying her land.[502] In such cases, some courts can find that even if the state heavily *regulates* that groundwater, it still lacks an *ownership* in it sufficient to trigger coverage.[503] Others have looked to the absence of any positive state declaration of ownership as a reason to find that none exists.[504] Even without reaching the conclusion that the groundwater is state 'property,' some of these cases still find that the exclusion does not apply,[505] and insurance companies do not always contest state ownership.[506]

That said, most cases addressing the owned-property exclusion's effect hinge on whether the state has a proprietary interest in the groundwater. Thus, denying that a state's laws and constitution can give it a proprietary interest in groundwater would confuse this area of law and create ambiguity that insurance companies could leverage to contest and perhaps defeat coverage claims. Insurers argue, and some courts agree, that to avoid the exclusion, it is not enough that the property is not owned by the insured—they say it must be affirmatively owned by a third-party.[507] By that logic, damage to *unowned* or *unownable* groundwater will not be covered under a CGL. A number of courts find that

500. *See id*. (noting the "minority rule" that coverage is barred when the groundwater "is located in a state which deems that the property (not the citizenry) owns the groundwater"); *see also id*. § 10.8 (fifty-state survey); Reliance Ins. Co. v. Armstrong World Indus., Inc., 678 A.2d 1152, 1159-62 (N.J. Super. Ct. App. Div. 1996) (collecting cases).

501. *See Reliance Ins. Co.*, 678 A.2d at 1159-60 (collecting cases); *see, e.g.*, Intel Corp. v. Hartford Accident & Indem. Co., 952 F.2d 1551, 1565 (9th Cir. 1991) (discussing the state's water code); Olds-Olympic, Inc. v. Com. Union Ins. Co., 918 P.2d 923, 929 n.15, 930-31 (Wash. 1996) (en banc) (discussing the state's water code and constitution).

502. *See* Am. States Ins. Co. v. Hanson Indus., 873 F. Supp. 17, 24 (S.D. Tex. 1995); Boardman Petrol., Inc. v. Federated Mut. Ins. Co., 498 S.E.2d 492, 495 (Ga. 1998); Allstate Ins. Co. v. Dana Corp., 759 N.E.2d 1049 (Ind. 2001).

503. *See, e.g.*, *Dana Corp*., 759 N.E.2d at 1055 n.5; Walsh v. Hingham Mut. Fire Ins. Co., No. CA041061, 2008 WL 2097384, at *6 (Mass. Super. Feb. 29, 2008).

504. Bausch & Lomb Inc. v. Utica Mut. Ins. Co., 625 A.2d 1021, 1033-35 (Md. 1993).

505. *See Reliance Ins. Co.*, 678 A.2d at 1160-61 (listing cases).

506. *See, e.g.*, *Olds-Olympic*, 918 P.2d at 923.

507. *See, e.g.*, Yale Univ. v. Cigna Ins. Co., 224 F. Supp. 2d 402, 407 n.4 (D. Conn. 2002); *cf.* Bost. Gas Co. v. Century Indem. Co., 708 F.3d 254, 264-65 (1st Cir. 2013); Indus. Enters., Inc. v. Penn Am. Ins. Co., 637 F.3d 481, 486-90 (4th Cir. 2011).

insurance policies require that the thing damaged be "property,"[508] or that the government be "seeking redress" as a property-owner rather than enforcing its "police powers,"[509] such that general environmental damage or regulatory liability does not trigger coverage. A conclusion that no one can own uncaptured groundwater would allow insurers to argue it is not property, so no coverage exists.[510]

Two public-interest ramifications flow from whether insurers must cover the cost to clean up groundwater. On first glance, it might seem that insurance coverage would create a moral hazard by freeing polluters of the cost to pay themselves.[511] But significant research indicates that insurers frequently function as "surrogate" or quasi-regulators, so much so that sometimes they more than offset any moral hazard created by coverage: when the cost for cleanup falls on the insurers, they often impose ex ante conditions on the insured that reduce the risk of accidents.[512] There is reason to believe this regulation-by-insurance scheme has net benefits in the environmental and hazardous-waste context.[513] But if insurers do not have to pay for remediation, they have less incentive to impose these constraints on the insured. Second, if the polluters become insolvent but no insurance coverage exists, the public would be left to foot the bill for cleanup.

The owned-property exclusion will not feature in every liability dispute, and, as liability policies evolve, so too may the interplay between the exclusion and state groundwater ownership analyzed in this Section. Even so, this example demonstrates how groundwater management will continue to intersect with

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508. *See, e.g.*, *Bausch & Lomb*, 625 A.2d at 1033-35; *Olds-Olympic*, 918 P.2d at 930 n.18.

509. Wampold v. Safeco Ins. Co. of Am., 409 F. Supp. 3d 962, 967-69 (W.D. Wash. 2019), *aff'd*, 820 F. App'x 598 (9th Cir. 2020) (unpublished).

510. In what appears to be a particularly rare case, state ownership would have *precluded* insurance coverage. *See supra* note 494.

511. *See* Omri Ben-Shahar & Kyle D. Logue, *Outsourcing Regulation: How Insurance Reduces Moral Hazard*, 111 U. MICH. L. REV. 197, 199 & n.3 (2012) (raising this intuitive view and collecting sources).

512. *Id.* at 199-202 (discussing the literature supporting this position and making the further contention that "private insurance markets can and sometimes do out-perform the government in regulating conduct because of both superior information and competition").

513. *See* Haitao Yin, Howard Kunreuther & Matthew W. White, *Risk-Based Pricing and Risk-Reducing Effort: Does the Private Insurance Market Reduce Environmental Accidents?*, 54 J.L. & ECON. 325, 326-28 (2011) (comparing the effect of a government- versus insurance-imposed constraint on underground gas-tank storage, and concluding that insurer's "risk-based pricing" likely promoted "risk-reducing activity" that led to fewer underground gas leaks); Jeffrey Kehne, Note, *Encouraging Safety Through Insurance-Based Incentives: Financial Responsibility for Hazardous Wastes*, 96 YALE L.J. 403, 420, 425 (1986) (arguing based upon "theoretical considerations and the performance of existing regulatory policies" that the "the release of hazardous wastes" is the type "of harm[] that can be deterred effectively by insurance-based incentives").

bodies of law that ask who has proprietary ownership of the water, not just a right to control it.

C. *Denying State Ownership Could Thwart States' Ability to Stop Groundwater Theft*

No source of water was safe last summer in California. Water thieves hit lakes, rivers, groundwater wells, fire hydrants, homes, and unmonitored tanks.[514] Some sold the stolen water on the thriving black market.[515] However, the "most common culprit of water theft"—illegal marijuana growers—were using it to water their own crops.[516] By one calculation, illicit pot operations in just three counties stole 5.4 million gallons of water per day—the same amount that could support a nearby town of 70,000.[517]

Can California officials prosecute this for what it is—theft? Such prosecutions would inevitably confront whether the water is the "property of another."[518] In cases where water has been sucked from fire hydrants, storage tanks, and homes, it is almost surely the case that the water had been diverted or captured and thus reduced to possession.[519] But what about *uncaptured* groundwater, stolen from its natural state in the earth? Here, again, it would matter how a court read California's pronouncement in its water code that "[a]ll water within the State *is the property of the people* of the State."[520]

A decade earlier, California prosecutors attempted to prosecute theft of uncaptured water, but were stymied by the court's misunderstanding of state water ownership. In *People v. Davis*, prosecutors charged Kenneth Davis, a small-time marijuana farmer, with petty theft for stealing naturally flowing surface water.[521] A state court of appeal reversed his conviction for misdemeanor theft, holding that uncaptured water cannot be the subject of larceny.[522] The court said no one

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514. Cart, *supra* note 16.

515. *Id*.

516. *Id*.

517. *Id*.

518. *See* CAL. PENAL CODE § 484(a) (West 2021) ("Every person who shall feloniously steal, take, carry, lead, or drive away the personal property of another . . . is guilty of theft.").

519. If the water was the product of the utility company, then the theft might have to be prosecuted under the more specific provision criminalizing theft of utility services. *See id.* § 498(a)(4), (b)(1), (e).

520. CAL. WATER CODE § 102 (West 2021) (emphasis added).

521. 208 Cal. Rptr. 3d 39, 40-43 (Ct. App. 2016). To irrigate his fields, Davis had constructed a series of diversions and pumps to take uncaptured water without a permit from a neighbor's land. *Id*. at 41.

522. *Id*. at 41.

had a possessory interest in the water at the time Davis took it without a permit.[523] Rather than give the California Water Code's declaration its plain meaning, the court said that this ownership language could only convey the state's "regulatory"—not "possessory"—interest.[524] In part, it reached this conclusion by effectively (and incorrectly, in this Note's view[525]) relying on language from the *Sporhase* line of Commerce Clause cases.[526]

In the hotter decades ahead, states may be inclined to do what these California prosecutors attempted: rely on simple theft statutes as a means to prosecute unauthorized use of natural groundwater.[527] This would result from a bind state officials might find themselves in: to deter widespread unlawful water use, they would feel an increasing need to use criminal charges; but water politics, particularly in the West, make it difficult or impossible to convince state legislatures to enact stiffer criminal penalties; this would force state officials to turn to laws already on the books. Rejecting state ownership would take the theft statute off

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523. *Id.* at 43-47.

524. *Id.* at 44. Note that in this case, the state did not argue California owned the water, but instead "assert[ed] the state's authority over waterways [was] sufficient to establish this element because this demonstrate[d] [the] defendant's *absence* of a possessory interest." *Id*. at 43.

525. *See supra* Section II.B.

526. *Davis* is a good demonstration of how the overbroad language in *Sporhase* and other Commerce Clause opinions finds its way into the decisions of lower courts, leading them astray on whether a state can own its water for purposes of state law. Although the *Davis* court did not directly cite this line of Commerce Clause cases, it relied on their "legal fiction" phrasing without indicating it knew the narrow context in which this language was relevant. The *Davis* court concluded the California Water Code's pronouncement was "merely a legal fiction of the 19th century expressing the state's police power over its resources," which "do not have *any* owner until lawfully captured," *Davis*, 208 Cal. Rptr. 3d at 44. For this, the court cited two cases. *Id.* at 43-44. First, it relied on *Underwriters at Lloyd's of London*, which directly cites *Sporhase*. *See* State v. Superior Ct. (*Underwriters at Lloyd's of London*), 93 Cal. Rptr. 2d 276, 285 (Ct. App. 2000); *see also supra* note 494 (discussing *Underwriters at Lloyd's of London*). The *Davis* court also relied on *Brady*. *See Davis*, 208 Cal. Rptr. 3d at 44 (citing People v. Brady, 286 Cal. Rptr. 19, 21 (Ct. App. 1991)). *Brady* in turn cited *Hughes v. Oklahoma*, 441 U.S. 322, 334-35 (1979), and quoted from *Douglas v. Seacoast Products, Inc*., 431 U.S. 265, 284-85 (1977). In quoting the latter, *Brady* replaced with ellipses the portion of the *Seacoast Products* quote that importantly indicated the Court was talking specifically about Commerce Clause cases. *See Brady*, 286 Cal. Rptr. at 21 ("The 'ownership' language . . . must be understood as no more than a 19th-century legal fiction expressing 'the importance to its people that a State have power to preserve and regulate the exploitation of an important resource.'" (alteration in original)).

527. Theft would occur when someone used water in the absence of a water right. But it could also arise when a user pumped groundwater *in excess of* an existing legal right. This would be most clear-cut in states that require permits quantifying the amount of water the user is entitled to. In states that allow for use rights according to what is "beneficial," it would be much harder to establish that use exceeded that standard and was thus unlawful.

the table because if uncaptured water has no owner, it cannot be the subject of larceny.[528]

To start, there is reason to doubt that states will be tempted to (further) criminalize unlawful use of uncaptured water. Many states already have the option of prosecuting unauthorized water use under their water codes, typically as misdemeanors.[529] Agencies tend to resolve matters without litigation.[530] And prosecutors might face significant political opposition.

However, there are a number of reasons to believe state officials might indeed look to criminal charges. First, as regions experience greater scarcity, unlawful water use will likely become more widespread. Unauthorized use is difficult to measure, but the limited data indicate that it is on the rise in the West.[531] States may feel increasing pressure—including from lawful water users—to prominently punish and deter unlawful water use with criminal sanctions.[532] In 2015, during the height of a drought, prosecutors in the Central Valley set up a task force directly focused on water theft.[533]

Second, criminal charges could deter unlawful water use in a way that existing civil penalties typically fail to do.[534] In the West, in part due to administrative constraints, civil fines are rare and low,[535] sometimes only a fraction of the money that the illicitly watered harvest produces. For example, in Washington State, three landowners who illegally pumped 500 million gallons of groundwater were issued $618,000 in fines, but the "value of crops grown on the illegally

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528. By that logic, someone could be charged for theft for stealing sixty gallons from a utility but not for stealing six million gallons from a depleting aquifer.

529. *See, e.g.*, OR. REV. STAT. §§ 537.130(2), 537.535, 537.990 (2021); WASH. REV. CODE §§ 90.03.400, 90.03.410 (2021). Davis was also convicted of diverting the natural course of a stream, which is a misdemeanor. *See Davis*, 208 Cal. Rptr. 3d at 40 (citing CAL. FISH & GAME CODE § 1602 (West 2021)).

530. CASTELLANO, *supra* note 26, at 86.

531. *Id.* at 5, 63-64; *see also* Bernton, *supra* note 20 (describing how both farmers and federal officials in eastern Washington reported widespread instances of theft).

532. *Cf.* CASTELLANO, *supra* note 26, at 156-58 (concluding the low deterrent effect of fines and increased public pressure are reasons states can and likely will consider using stronger criminal sanctions to deter unlawful use of water).

533. Sasha Khokha, *The Next Crime Wave in Farm Country: Stealing Water*, KQED (Apr. 9, 2015), https://www.kqed.org/science/29094/the-next-crime-wave-in-farm-country-stealing-water [https://perma.cc/7CXB-W36S].

534. *Cf.* David M. Uhlmann, *After the Spill Is Gone: The Gulf of Mexico, Environmental Crime, and the Criminal Law*, 109 MICH. L. REV. 1413, 1443 (2011) (noting that in the environmental context, "[c]orporate officials are more likely to comply with the law when they fear that they may go to jail if their violations are discovered").

535. CASTELLANO, *supra* note 26, at 5, 124 tbl.1, 155-58.

irrigated lands [was] more than $1 million."[536] Last summer, the California State Water Resources Board's fines for water theft—$1,000 per day—were not "an effective deterrent to offset the rewards for a multi-billion[-]dollar criminal industry."[537] This led local authorities in California to petition the state legislature for stronger penalties and the authority to prosecute the theft.[538]

But even if state officials and the public wanted to impose stiffer criminal charges, that desire would run headlong into a simple reality: state legislatures, particularly in the West, will be unwilling to enact a new criminal water-theft statute. While much of day-to-day groundwater management is delegated to local management districts, often run by irrigators themselves,[539] statewide administrative agencies or attorneys general often enforce restrictions. A state agency, attorney general, or even governor, and the public they serve, might want harsher penalties. But translating that sentiment into law will typically be a challenge, as state legislatures are frequently the branch of state government least likely to reflect popular sentiment.[540] On top of that, industrial and corporate agricultural interests, which might be opposed to such penalties, hold particular sway in many Western state houses.[541] Such a measure would also likely fail if the state's irrigation community—or, rather, some of the state's irrigation communities[542]—opposed it.[543] Indeed, although states have in the past decades

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536. *Landowners Fined for Illegally Pumping 500 Million Gallons from Odessa Aquifer*, WASH. STATE DEP'T ECOLOGY (Dec. 19, 2017), https://ecology.wa.gov/About-us/Get-to-know-us/News/2017/Dec-19-Landowners-fined-for-illegally-pumping-500 [https://perma.cc/LJ5G-UJK4].

537. Cart, *supra* note 16.

538. *Id.*

539. *See, e.g.*, Griggs, *supra* note 97, at 32-33 (describing Colorado and Kansas); BENSON ET AL., *supra* note 4, at 404-05 (describing California).

540. Miriam Seifter, *Countermajoritarian Legislatures*, 121 COLUM. L. REV. 1733, 1735-41, 1756-59 (2021) (arguing that because of contemporary "geographic, legal, and political" conditions, "state legislatures are typically a state's least majoritarian branch"—defining majoritarian to mean that the party with the most collective votes wins the most seats—leading to a widespread "disconnect between popular support and electoral victories in state legislatures").

541. CASTELLANO, *supra* note 26, at 140-42.

542. Such a proposal might expose cleavages between water users. *Cf.* Griggs, *supra* note 97, at 23-28, 34-36 (noting how surface-water and groundwater "irrigation communities" often have different "political cultures," including that "groundwater irrigation communities usually view water law not as something that protects property rights, but rather as governmental regulation that limits and interferes with their water use").

543. *Cf.* William N. Eskridge, Jr., *Politics Without Romance: Implications of Public Choice Theory for Statutory Interpretation*, 74 VA. L. REV. 275, 288-89, 290 tbl.1 (1988) (drawing on public-choice theorists to argue that where legislation creates "distributed benefits" (like groundwater conservation) but imposes "concentrated costs" (like criminal penalties on water users), the coordinated, motivated opposition it provokes will outweigh any support).

asserted greater control of their water resources, new water regulation often comes in spurts, as compromise packages made in response to crises.[544] Each state is different, and these dynamics should not be overstated: Oregon's legislature recently passed a bill making it a misdemeanor punishable by a year in prison to deliver water to illicit marijuana grows,[545] which consume vast amounts of it.[546] But water politics, layered atop the baseline minoritarian nature of many state legislatures, could mean that state officials would have to rely on the statutes that already exist on the books—as some states already do in the context of wild game.[547]

As written, simple theft statutes offer a number of advantages to enforcement officials. Particularly egregious theft could be charged as a felony under many

544. *See, e.g.*, James & O'Dell, *supra* note 3 (noting how in Arizona in 2015, the state legislature declined to act in response to rural communities' efforts to enact voluntary regulations on themselves and impose limits on pumping by corporate farms); BENSON ET AL., *supra* note 4, at 399-400 (noting that the "final impetus" for various groups in Arizona to agree to overhaul its groundwater regime in 1980 was the fact that it would be deprived of a "federal bailout" in the form of diversions from the Colorado River as part of the Central Arizona Project); Dellapenna, *supra* note 243, at 309 ("In each state in which a regulated riparian statute was enacted for either surface waters or groundwater, the immediate cause of the enactment was a perceived crisis . . . caused by an extraordinary shortage of water relative to demand . . . ."); *supra* notes 426-430 and accompanying text (discussing California's SGMA).

545. H.B. 4061 §§ 4, 6, 81st Leg. Assemb., Reg. Sess. (Or. 2022) (enrolled).

546. Chris Lehman, *Oregon's Illegal Marijuana Operations Targeted by Lawmakers*, OREGONIAN (Feb. 20, 2022, 3:30 PM), https://www.oregonlive.com/politics/2022/02/lawmakers-approve-measures-aimed-at-cracking-down-on-illegal-marijuana-grows.html [https://perma.cc/Z9XQ-UB3H].

547. In these cases, state ownership often determines whether the game falls within the scope of the state law. *See, e.g.*, State v. Fertterer, 841 P.2d 467, 470-71 (Mont. 1992) (rejecting that *Hughes v. Oklahoma*, 441 U.S. 322 (1979), was "controlling" absent a "federal question," and finding "that Montana has an ownership interest in wild game held by it in its sovereign capacity for the use and benefit of the people" such "that wild animals are public property within the meaning of Montana's criminal mischief statute"), *overruled on other grounds by* State v. Gatts, 928 P.2d 114 (Mont. 1996). *But see* State v. Dickerson, 345 P.3d 447, 450, 453-55 (Or. 2015) (upholding a criminal-mischief conviction as valid because even though the state's ownership of wild game was a "sovereign," that is, not a "possessory or proprietary," interest—and citing *Toomer v. Witsell*, 334 U.S. 385, 399-400 (1948), to support this conclusion—that interest was sufficient for the criminal-mischief statute, which now defined "property of another" as "property in which anyone other than the actor has a *legal or equitable interest*," in contrast with the prior definition which had required a "possessory or proprietary interest" (discussing OR. REV. STAT. ANN. § 164.305(2) (West 2021))).

larceny statutes,[548] whereas water-specific crimes are typically misdemeanors.[549] And although proving unlawful use in a criminal court might be even harder, the statutes of limitations for theft are frequently longer than for water-code violations.[550] This is important when detecting unlawful water use can be time-consuming, expensive,[551] and challenging for understaffed agencies: last summer, California had only eighty investigators to "track water diversion and theft" statewide.[552]

Making this admittedly speculative argument is not to say that states necessarily *should* pursue water-theft charges. I have not addressed the myriad issues that doing so raises, and sound water management ultimately requires the support of those whose livelihoods depend most on water.[553] However, as states confront the need to account for their water, particularly during extended periods of scarcity, theft prosecutions might play a small but salient role in keeping water in the ground.

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Surely, water law is chiefly concerned with who gets to control and regulate water—not who owns it. But this Part has provided three examples where water management meshes with law that speaks in property terms and looks for ownership. Each example conveys why we should clarify state ownership of water. The notion that *no one* can own our precious water may have a certain poetic appeal. But that concept, when taken literally by courts, can frustrate the very conservation ends that motivate it.

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548. This fact was one reason the California attorney general's office asked the state supreme court to depublish the *Davis* opinion, which it argued would be an obstacle to further prosecutions of illegal water use as larceny. The office explained that water theft was a "particular concern," and that while under the penal code such theft could be charged as a felony, alternative misdemeanors—such as trespass or illegal diversion of a stream—were less availing. Letter from Max Feinstat, Deputy Att'y Gen., Cal. Dep't of Just., to Jorge E. Navarette, Adm'r & Clerk, Sup. Ct. of Cal. 1-2 & n.2 (Nov. 14, 2016) (on file with author). However, the attorney general's office did not argue that the *Davis* court erred by finding that California was not the owner of the water. *Id.* at 2. Instead, it faulted *Davis* for rejecting an alternative theory, not raised during trial, that Davis had stolen water from his neighbor by severing that neighbor's realty. *Id.* (citing CAL. PEN. CODE § 495 (West 2021)). Thus, the office appeared more interested in pursuing theft charges where the owner is another private entity, not the state. *See id.*

549. *See supra* notes 529, 545.

550. *See, e.g.*, WASH. REV. CODE § 9A.04.080 (2021) (six years for theft, one year for a misdemeanor).

551. *See* Cart, *supra* note 16 (describing technology that water agencies rely upon to track unauthorized use); CASTELLANO, *supra* note 26, at 85-86 (same).

552. Cart, *supra* note 16 (noting that they "[could not] begin to keep up with the epidemic of stolen water").

553. CASTELLANO, *supra* note 26, at 23-24.

But even if we accept that denying this modest form of state ownership might handicap states from managing their groundwater under the stress of climate change, might recognizing that ownership lead to a host of other, greater problems?

IV. ACKNOWLEDGING QUALIFIED STATE OWNERSHIP WILL NOT IMPAIR GROUNDWATER LAW OR POLICY IN OTHER WAYS

Embracing state ownership will not muck up water law or empower states toward unproductive ends. First, speaking of water "ownership" will not disrupt or prevent the development of water doctrine, particularly around state-federal relations. While ownership is not necessary to resolve most questions of water law, the preceding analysis demonstrates the greater risks of dismissing all such talk as fictive. Second, the state ownership advanced by this Note will not enable states to wrongfully deprive Native American tribes of their water rights. On this critical issue, showing why states today can only assert a *qualified* state ownership — and in doing so, clarifying its limits — will prevent states from laundering antiquated claims of absolute, territorial ownership to the detriment of tribes. And finally, qualified state ownership — starkly different than the outmoded claim Mississippi made in *Mississippi v. Tennessee* — would neither fuel nor complicate interstate water conflicts. In fact, this Note's analysis clarifies much of the confusion around state ownership and interstate disputes — confusion the Supreme Court's opinion failed to clear up.

This Part makes each of these points in turn, thereby responding to actual or anticipated objections to this Note's argument.

A. Recognizing State Ownership Will Not Muddy Water Doctrine

Some worry that discussing state water ownership is a distraction from — or, worse, a hindrance to — crafting coherent water doctrine. Because state ownership is not a fictive shorthand for the state's regulatory power, we should clarify its nature, not banish ownership talk entirely. In addition, the much-limited form of ownership this Note advances should assuage fears that recognizing state ownership would disrupt water federalism.

One strain of this critique largely traces back to a seminal article on state ownership by Frank Trelease.[554] Writing in 1957, Professor Trelease argued that the concept of state (or federal) ownership was unnecessary to resolving water

554. *See* Trelease, *supra* note 84. For citations to Trelease on this point, see, for example, Kelley, *supra* note 56, § 36.02 n.16; Klein, *supra* note 45, at 510 nn.208-09, 511 nn.212-15, 512 nn.217-18; and Tarlock, *supra* note 187, at 740 n.45.

disputes.[555] He canvassed a number of cases—including conflicts between states, between a state and its citizens, and among private citizens—where the same "results could be accomplished without the concept of state ownership."[556] He suggested that legislators, courts, and academics grasped for state ownership as a concept because they viewed it as a useful "vessel"[557] to convey the more complicated assortment of the state's regulatory powers and duties.[558] But to him, "ownership" was an unnecessary shorthand, and one that had no inherent meaning.[559] A nonsensical word—"tu-tu"—would be just as good.[560]

The bigger problem, however, was that relying on "state ownership" as a stand-in for these regulatory concepts was not just superfluous—it was potentially counterproductive. The "danger," as Trelease saw it, was in forgetting that ownership was simply a "middle term"[561] and thereby giving it "some independent meaning of its own."[562] Doing so—that is, treating state ownership literally, as I argue in this Note we should—would lead to "absurd results."[563] For example, it would lead us to try in vain to resolve complex questions of state and federal control over water "on the basis of who 'owns' the water."[564] Doing so would gum up the sound development of water federalism, because the only questions that matter are the scope "of the power of the federal government" and the "appropriateness of the exercise of that power."[565]

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555. Trelease, *supra* note 84, at 643-45, 651. He made a related critique of the then-emerging use of "trust" language in water law, which he viewed as similarly unnecessary. *See id.* at 645-59.

556. *Id*. at 644.

557. *Id*. at 639.

558. *Id.* at 648 ("State ownership means that the state has power to control the allocation of water rights by permits, that the state may adjudicate rights among appropriators, that it may take an active part in seeing that the water laws are obeyed, and that it may enact forfeiture laws. Why does it mean this? Because we use the words to express the complex of these legal consequences of the fact that the state is the organization set up to regulate and control the allocation of scarce things among the people. State trusteeship means that in so allocating waters, the state authorities must act in the public interest.").

559. *Id*. at 645 ("[C]an we not eliminate the middle term altogether? Why is it better to say 'The state owns the water, therefore it may regulate its use' instead of 'The state may regulate the use of water?'").

560. *Id*. at 639, 645.

561. *Id*. at 648-49.

562. *Id*. at 649.

563. *Id.*; *see also supra* notes 156-158, 256 and accompanying text (discussing how theories of absolute water ownership produce contorted and contradictory legal positions).

564. Trelease, *supra* note 84, at 649.

565. *Id*. at 652.

Although I have sought to show why state ownership has independent meaning, Trelease was certainly right that talk of ownership can confuse litigants, judges, and legislators. Indeed, a premise of this Note is that courts misunderstand or misapply state ownership principles when it comes to water.[566]

But there are three reasons why, on balance, we should seek to clarify state ownership rather than eliminate it as a concept in water law. First, doing so would reflect established jurisprudence and practical reality: state ownership is not a mere fiction, and courts do not treat it that way.[567] Second, because state ownership enables sounder state water management,[568] we should flesh it out as a concept, not reject its validity. And third, we should be far less concerned than Trelease was that state ownership can disrupt state-federal relations.[569] He wrote at a time when absolute ownership claims still stalked about and federal-state relations were less clearly defined than they are now.[570] Since then, the Supreme Court has established that state ownership claims are subject to federal supremacy.[571] From the perspective of federal law, the state ownership proposed herein is a diminutive version of the one that loomed over water law seven decades ago.[572]

If that is the case, what is the value of discussing state ownership that would be valid only for state-law purposes? "In view of the Supremacy Clause," asks Amy Kelley, "[w]hy bother arguing over ownership?"[573] After all, "Congress can exert its powers" over the country's waters, "state ownership or not, to whatever

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566. See *supra* Part I, which describes the continuing confusion over state ownership.

567. See *supra* Part II, which argues the intrastate portion of the state ownership doctrine remains valid.

568. See *supra* Part III, which demonstrates that courts rely upon state ownership in the context of takings and insurance claims, and which suggests that they could do so in the context of water theft (just as they do when evaluating criminal prosecutions involving state-owned wildlife).

569. *See* Trelease, *supra* note 84, at 649-53.

570. Trelease wrote two decades before *Hughes* and *Sporhase* definitively clarified that state ownership claims were subject to federal supremacy. *See supra* Section II.B. In his article, the federal-state conflict Trelease appeared most concerned about was the scope of federal reserved water rights: at the time, many "fear[ed] that if the principle of Indian water rights [were] extended to all such reserved parts of the public domain, water rights that ha[d] existed for many years [would] be endangered." Trelease, *supra* note 84, at 652. Six years later, in *Arizona v. California*, Trelease's fears came to pass: the Supreme Court held that the federal government could reserve water for any land reserved for federal use, not just Native American reservations. 373 U.S. 546, 597-98 (1963).

571. Thus, as Trelease suggested it should, *see supra* notes 564-565 and accompanying text, federal-state conflicts focus on which entity has the right to regulate and control the water, not questions of absolute ownership, *see supra* notes 161-178 and accompanying text.

572. See *infra* Sections IV.B-C, which discuss how qualified state ownership does not upend settled doctrine.

573. Kelley, *supra* note 56, § 36.02 n.19.

extent it is willing" to bear the political fallout and "pay just compensation."[574] I do not disagree that this is true. But in this Note I have sought to show why state ownership matters in spite of the Supremacy Clause: it underpins many states' ability to manage a critically important source of water in the hot decades ahead.[575]

B. Recognizing State Ownership Will Not Empower States to Deprive Tribes of Their Water

Some opponents speculate that allowing states to claim any kind of proprietary interest in water above or below ground will help them strip Native American tribes of their rightful share of water.[576] Clarifying this point is crucial. In frequent, heated conflicts with tribes over water and other resources, states have a propensity to rely on territorial ownership arguments as trump cards,[577] and climate change will surely make groundwater an increasing focus of such contests.

But the limited state ownership this Note advances would be a worthless card for states to play in disputes with tribes. As this Section explains, a state-law-based ownership claim is preempted by any water right created by federal law, including Indian reserved water rights.[578] This Section examines a case from Wyoming to demonstrate how this Note's analysis helps cleave valid state-law-based state ownership from defective territorial claims that might threaten tribal rights. So treating state ownership literally need not and should not empower states to harm tribal rights. Just the opposite: justifying state ownership's basis illuminates its limits.

The Supreme Court has not explicitly ruled that federal and Indian reserved water rights extend to groundwater itself. In *Cappaert v. United States*, the Court held that the reserved-rights doctrine protects federal surface-water rights from

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574. *Id.*

575. *See supra* Part III.

576. *See, e.g.*, Regalia & Hall, *supra* note 187, at 59-60 (noting that a diversion scheme in Nevada will come "at the expense of less water for . . . Native American tribes," and suggesting that "if a similar proposal were floated in" Wyoming, whose "self-declaration of water ownership sounds like it gives the state fundamentally different rights over water," then "the state could allocate and reallocate water . . . at will so long as it serves some general governmental purpose").

577. *See, e.g.*, *infra* notes 598-605 and accompanying text; *cf.* Torres, *supra* note 180, at 229-30 n.3 (lamenting that in conflicts with tribes over natural resources, states rely on claims of state ownership premised on the equal-footing doctrine).

578. *See infra* notes 581-593 and accompanying text. Like in much of Federal Indian law, the use of "Indian" here is part of a term of art for the type of reserved water right that Native American tribes can possess.

depletions due to groundwater pumping.[579] Lower courts are divided as to whether *Cappaert* means federal reserved water rights can attach to groundwater itself, but the Ninth Circuit and the Arizona Supreme Court both convincingly concluded that they can.[580] In those jurisdictions, and eventually across the country if and when the Court agrees with them, federal supremacy means that any state proprietary interest in groundwater would be legally meaningless in the face of an Indian reserved right to groundwater.

This is so because federal reserved water rights are a creature of federal law. They are based upon the federal government's powers under the Commerce Clause and, more so, the Property Clause, which allow the federal government to regulate land that it sets aside for federal use and, when it does so, to reserve for itself enough water to support the primary purpose of that land.[581] In addition to these authorities, Indian reserved water rights—commonly known as *Winters* rights[582]—are based upon the federal government's Treaty Power.[583]

When the federal government or a tribe asserts a federal or Indian reserved water right, that assertion displaces state law: whether such a right exists is itself a question of federal law, and if any water *is* found to be reserved, that water is property that is defined by federal—not state—law. To convey as much, because nearly all adjudications of federally reserved water rights have taken place in the

579. 426 U.S. 128, 143 (1976). In *Cappaert*, the Ninth Circuit concluded that federal reserved water rights do apply to groundwater, United States v. Cappaert, 508 F.2d 313, 317 (9th Cir. 1974), but the Supreme Court decided the case without having to squarely address that question. As a factual matter, it concluded that the water at issue was *surface* water, which, because of hydrological continuity, was being depleted by ranchers' groundwater pumping. *Cappaert*, 426 U.S. at 142.

580. *See* Agua Caliente Band of Cahuilla Indians v. Coachella Valley Water Dist., 849 F.3d 1262, 1270 (9th Cir.), *cert. denied*, 138 S. Ct. 468 (2017); *In re* Gen. Adjudication of All Rts. to Use Water in Gila River Sys. & Source, 989 P.2d 739, 745-48 (Ariz. 1999), *cert. denied*, 530 U.S. 1250 (2000); *In re* CSRBA Case No. 49576 Subcase No. 91-7755, 448 P.3d 322, 350-51 (Idaho 2019), *reh'g denied* (Nov. 4, 2019). *But see In re* Gen. Adjudication of All Rts. To Use Water in the Big Horn River Sys. (*Big Horn I*), 753 P.2d 76, 99-100 (Wyo. 1988) (rejecting the application of *Winters* rights to groundwater), *aff'd by an equally divided court sub nom.* Wyoming v. United States, 492 U.S. 406 (1989) (per curiam).

581. United States v. New Mexico, 438 U.S. 696, 702 (1978); *Cappaert*, 426 U.S. at 138-40; Arizona v. California, 373 U.S. 546, 597-98 (1963).

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

583. A. Dan Tarlock, James N. Corbridge, Jr. & David H. Getches, Water Resource Management: A Casebook in Law and Public Policy 881-82 (5th ed. 2002).

West,[584] one way to describe these rights are as a belated "revo[cation],"[585] "exception,"[586] or "implied repeal"[587] of a series of federal laws, most notably the Desert Land Act of 1877,[588] that apply to eleven Western states. As construed by the Supreme Court fifty years after its enactment, the Desert Land Act severed unappropriated water from the public domain in these states and, in turn, authorized those states to allocate that water according to their own water laws.[589] That is, the Act allowed states to define public and private rights in their water. But by asserting federal reserved water rights, the government in effect retracts "its permission for the state to allocate rights in [that] water"[590] as it normally would via its state property law. Thus, state law no longer controls the property character of the water that has been federally reserved. The same logic applies to states not subject to the Desert Land Act.[591] As noted earlier, that state law controls allocation of a state's water is a matter of deference,[592] and the federal government has the power to preempt these state laws.[593] When it does so by reserving water for itself or for Native American tribes, that water becomes not just federal or tribal property, but *federally defined* property.[594]

If a state's ownership in groundwater can arise *only* from its ability to define the property character of water it has a right to use and allocate to its citizens,[595] an Indian reserved water right withdraws the only authority that *can* underpin that ownership interest. Put another way, when asserted, the Indian reserved

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584. Judith V. Royster, *Winters in the East: Tribal Reserved Rights to Water in Riparian States*, 25 WM. & MARY ENV'T L. & POL'Y REV. 169, 169-70 (2000).

585. TARLOCK ET AL., *supra* note 583, at 882.

586. RASBAND ET AL., *supra* note 4, at 835.

587. Goldberg, *supra* note 58, at 20.

588. Desert Land Act of 1877, 19 Stat. 377 (codified as amended at 43 U.S.C. §§ 321-323, 325, 327-329 (2018)).

589. California Oregon Power Co. v. Beaver Portland Cement Co., 295 U.S. 142, 158, 162 (1935).

590. TARLOCK ET AL., *supra* note 583, at 882.

591. *See* Royster, *supra* note 584, at 195 ("The fundamental principles of the federal reserved rights doctrine of tribal water rights thus should apply in the eastern United States as well as in the West.").

592. *See supra* notes 254-257 and accompanying text.

593. On federal preemption of state water law, see RASBAND ET AL., *supra* note 4, at 846-47; and TARLOCK ET AL., *supra* note 583, at 883.

594. *See* Michael C. Blumm & Bret C. Birdsong, *Reserved Water Rights*, *in* 2 WATERS AND WATER RIGHTS, *supra* note 56, § 37.01; Cappaert v. United States, 426 U.S. 128, 145 (1976) ("Federal water rights are not dependent upon state law or state procedures and they need not be adjudicated only in state courts."); Royster, *supra* note 584, at 193 (noting that "tribal reserved rights are" a "distinct type of water right reserved as a matter of *federal* law").

595. *See supra* Section II.A.

water right not only subtracts the water from the state's share,[596] but it transforms the water at issue into property that the state no longer has authority to define. As such, the state can no longer assign any state ownership in that water, and so such ownership vanishes.[597]

Therefore, treating state ownership seriously in order to define its basis and limits would help to clarify why territorial claims should be worthless in state-tribal disputes. To show how the principles this Note advances could help refute faulty state ownership arguments, consider *Big Horn III*.[598] In that case, the Wyoming Supreme Court repeatedly relied on a misunderstanding of state ownership to rule against the tribes.

Big Horn III was part of a decades-long contest between Wyoming and the Eastern Shoshone and Northern Arapahoe tribes over the water in the Wind-Big Horn Basin.[599] This third installment of the dispute arose because the tribes sought to use a portion of their reserved water rights, which had already been quantified in earlier adjudications, for present instream flows.[600] When the state

596. *See, e.g.*, Arizona v. California, 373 U.S. 546, 596-97, 601 (1963) (rejecting the argument that in state-tribal water disputes the tribe's share should be determined by equitable apportionment, and holding that "all uses of . . . water within a State," including "uses" by the federal government or a tribe, "are to be charged against that State's apportionment"); Arizona v. California, 460 U.S. 605, 627-28 (1983) (reiterating this point and adding that "Indian water rights [do] not diminish other federally reserved water rights," meaning the two are not "in direct competition").

597. Although a state's property-law-defining power does not reach water reserved to Native American tribes, other state laws or processes might impact that water. For example, state courts may hear lawsuits to resolve Indian reserved water rights. Michael C. Blumm & Bret C. Birdsong, *Adjudication and Regulation of Indian and Federal Reserved Water Rights*, *in* 2 WATERS AND WATER RIGHTS, *supra* note 56, § 37.04. Moreover, so as to mesh with existing state-law-based rights to the same supply of water, Indian reserved rights adopt aspects of the corresponding state's water-rights regime: for example, Indian reserved water rights in prior-appropriation states are pegged to a priority date. Michael C. Blumm & Bret C. Birdsong, *Indian Reserved Water Rights*, *in* 2 WATERS AND WATER RIGHTS, *supra* note 56, § 37.02. However, while these federally defined property rights may *mirror* a state system like prior appropriation, that does not mean that they are state-law based. They remain "federal rights . . . unaffected by state water laws" such as those that determine what event establishes the priority date or what constitutes beneficial use. *Id.*

598. *In re* Gen. Adjudication of All Rts. To Use Water in Big Horn River Sys. (*Big Horn III*), 835 P.2d 273 (Wyo. 1992).

599. For a helpful analysis of the case, and its relationship to the wider adjudication, see Jason A. Robison, *Wyoming's* Big Horn *General Stream Adjudication*, 15 WYO. L. REV. 243, 288-93 (2015).

600. *Big Horn III*, 835 P.2d at 276, 291-92. The tribes' water rights had been quantified using the standard Practicable Irrigable Acreage formula, and the tribes argued that just because "agricultural purposes" were the basis of that quantification, those were not the only ends to which the tribes could put the water. *Id.* at 276-77. Thus, the tribes sought to "convert" a portion of

water agency obstructed this effort, the tribes sued in Wyoming court, seeking a declaration that they did not need state permission to use their federal water rights "as they deemed advisable."[601] Moreover, they requested that the court empower the tribes rather than the state to administer water rights — both state and federal — on the Wind River Indian Reservation.[602]

In rejecting the tribes' arguments, the Wyoming Supreme Court invoked a territorial conception of state ownership either to support or to confirm its flawed conclusion that the tribes' reserved water rights were *carved out of* Wyoming-owned water. Throughout the opinion, the majority erroneously said that all water within the state's borders is "Wyoming water"[603] — that is, owned by Wyoming — because the state's constitution says so.[604] This appeared to support its incorrect conclusion that state law, not federal law, governed Indian reserved water rights, as well as its additional finding that under Wyoming law, only the state could own an instream flow right.[605] Later in the opinion, the majority concluded that the state constitution's separation of powers prevented the judiciary from "remov[ing] or replace[ing] the state engineer" from his position administering water on the Wind River because *all* water within the reservation was "Wyoming water."[606]

In reaching these conclusions, the Wyoming high court overlooked or ignored that the tribes' water — a creature of *federal* property law — was not Wyoming's to define as property, and, thus, not its to claim as state property. These principles were all legible a decade prior in *Sporhase*.

Some, like Trelease, would likely point to *Big Horn III* as a case-in-point for why allowing *any* talk of "ownership" in water law confuses courts.[607] But the case also demonstrates that courts continue to treat state ownership as more than a mere fiction. So rather than banish "ownership" language from water law, clarifying — as this Note seeks to do — that state ownership ends where Indian reserved water rights begin will prevent states and state courts from wielding mistaken ownership concepts to the detriment of their tribal neighbors.

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their water rights (which was "reserved for future agricultural projects") into an "instream flow" on the Wind River to support fisheries and for other nonconsumptive purposes. *Id* at 276.

601. *Id*.

602. *Id.*

603. *Id*. at 276, 278, 279, 280, 282, 283.

604. *Id*. at 279-81; *see* WYO. CONST. art. VIII, § 1.

605. *Big Horn III*, 835 P.2d at 279.

606. *Id*. at 282.

607. *See* Trelease, *supra* note 84, at 648-49.

C. *Recognizing State Ownership Will Not Exacerbate Interstate Water Conflicts*

Silt. Fog. Wild burros. The oral argument in *Mississippi v. Tennessee* featured a parade of natural resources, and apparent confusion over who had a right to control—or even own—them.[608]

This Section returns to the dispute between Mississippi and Tennessee to address a third anxiety relating to recognizing state water ownership: that doing so would fuel interstate conflicts over groundwater, or make them hopelessly more complex.[609] Instead, this Section argues, articulating the validity of qualified state water ownership helps resolve much of the confusion that percolated throughout *Mississippi v. Tennessee*—confusion left unresolved by the Supreme Court's decision. Some fifteen years after Mississippi first sued its neighbor, a unanimous Supreme Court rejected the state's assertion of its "absolute" ownership of the groundwater within its borders.[610] In doing so, the Court did not purport to foreclose that states could have some sort of ownership in their water. But it did not fully explain how Mississippi's invalid ownership claim differed from a valid one. The Supreme Court missed a valuable opportunity to clarify the doctrine of state ownership of water and natural resources more broadly.

1. *Background on* Mississippi v. Tennessee

Mississippi, Tennessee, and five other states overlie a series of overlapping aquifers in the Southeast.[611] For its drinking water, Memphis pulls out of the deeper sections, while Mississippi famers rely on the upper portion for irrigation.[612] In 2005, Mississippi sued the City of Memphis and its utility, accusing it of deliberately overdrawing groundwater from its side of the border, such that the city was in effect pumping water that would have otherwise stayed within

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608. *See* Transcript of Oral Argument at 53-55, Mississippi v. Tennessee, 142 S. Ct. 31 (2021) (No. 22O143) (discussing silt); *id*. at 23, 46-48 (discussing fog); *id*. at 19, 46-48 (discussing burros).

609. As noted earlier, *see supra* note 182, it is sometimes hard to determine whether commentators reject just the outward-facing portion of Mississippi's claim, or whether they also reject state ownership's validity for state-law purposes, *see* Law Professors' Amicus Brief, *supra* note 184, at 4 (arguing that in addition to exacerbating interstate water conflict, "Mississippi's legal theory would also upend our nation's water law jurisprudence generally, from private disputes to regulatory takings claims"). To the extent that these commentators have in mind an absolute ownership claim that Mississippi made, I agree.

610. *Mississippi v. Tennessee*, 142 S. Ct. at 38, 40-42.

611. *See* Boyce Upholt, *An Interstate Battle for Groundwater*, ATLANTIC (Dec. 4, 2015), https://www.theatlantic.com/science/archive/2015/12/mississippi-memphis-tennesee-groundwater-aquifer/418809 [https://perma.cc/Q2CS-88C8].

612. *Id.*

the borders of Mississippi.[613] Relying in part on its water code's "declaration" that all water above and "underneath the surface of the ground . . . belong[s] to the people of this state," Mississippi argued it owned all water that would naturally remain within the state.[614] Thus, Mississippi's neighbor was "wrongful[ly] taking and conver[ting]" Mississippians' property.[615]

In 2010, the Fifth Circuit dismissed the case[616] and the Supreme Court rejected Mississippi's attempts to invoke the Court's original jurisdiction to sue Tennessee.[617] In 2015, however, the Court reversed course, allowing the case to go forward as an interstate dispute.[618] That decision led some to speculate that it would take Mississippi's ownership claims seriously,[619] thus treating groundwater differently than it treats surface water in interstate contests.[620] For five years, the case was tried by a Special Master in the Sixth Circuit.[621]

Throughout the dispute, Mississippi denied that the aquifer is an interstate resource and instead continued to argue that it owns all groundwater that would remain within its borders absent human activities. Tennessee accused Mississippi of advancing this ownership argument as a way to get damages that are otherwise unavailable in interstate water disputes.[622] That is, in Tennessee's view, Mississippi *had* to argue it owns part of the aquifer outright in order to

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613. *Mississippi v. Tennessee*, 142 S. Ct. at 38; Petition for Writ of Certiorari at 3, Mississippi v. City of Memphis, 559 U.S. 904 (2010) (No. 09-289); First Amended Complaint at 7, Hood *ex rel.* Mississippi v. City of Memphis, 533 F. Supp. 2d 646 (N.D. Miss. 2008) (No. 05CV0032).

614. Petition for Writ of Certiorari at 16-17, *City of Memphis*, 559 U.S. 904 (No. 09-289) (quoting MISS. CODE ANN. § 51-3-1 (2021)).

615. *Id.* at 3.

616. The Fifth Circuit concluded that Tennessee was an indispensable party such that the case was an interstate conflict, which meant that the Supreme Court had exclusive original jurisdiction. *Hood*, 533 F. Supp. 2d at 649.

617. The Supreme Court denied certiorari after the Fifth Circuit dismissed the suit against Memphis, *see City of Memphis*, 559 U.S. 904, and rejected Mississippi's leave to file a bill of complaint against Tennessee, *see* Mississippi v. City of Memphis, 559 U.S. 901 (2010).

618. Mississippi v. Tennessee, 135 S. Ct. 2916 (2015).

619. Hall & Regalia, *supra* note 45, at 162 ("The Supreme Court's grant of leave suggests the Court will consider Mississippi's arguments of absolute ownership of the groundwater within its borders, or it presumably would have rejected this case like it did in 2010.").

620. Before the case, the Supreme Court-created federal common-law remedy of equitable apportionment applied to rivers, *Kansas v. Colorado*, 206 U.S. 46 (1907), and fish, *Idaho ex rel. Evans v. Oregon*, 462 U.S. 1017 (1983), that move across state lines.

621. For the full docket, see *Special Master*, U.S. CT. APPEALS FOR THE SIXTH CIR., http://www.ca6.uscourts.gov/special-master [https://perma.cc/E2BT-Z8UT].

622. Exception in Part of Defendants State of Tennessee, City of Memphis, and Memphis Light, Gas & Water Division to Report of the Special Master and Brief in Support of Exception at 14, 25, Mississippi v. Tennessee, 142 S. Ct. 31 (2021) (No. 22O143).

then argue that the aquifer is not an interstate resource; conceding that the aquifer *is* interstate, the thinking went, would have essentially conceded that the only remedy available to Mississippi would be equitable apportionment, thus foreclosing the possibility of damages.[623]

Without explicitly rejecting the validity of Mississippi's territorial ownership argument, the Special Master determined as a matter of law that a state's ownership claim is inapplicable when the water is an interstate resource, and determined as a matter of fact that the aquifer was an interstate resource.[624] Like many commentators and the defendants,[625] he thus recommended that the Supreme Court apply equitable apportionment to the aquifer,[626] just as it does to rivers[627] and fish[628] that move across state lines.

The Supreme Court did exactly that.[629] It reasoned that both states tap into the same aquifer, not different aquifers, making it a "transboundary resource"; that the water within the aquifer "flows naturally" across state lines; and that Tennessee's pumping on its side affected the aquifer's composition on the Mississippi side, an "interstate effect[]" that is a "hallmark of [the Court's] equitable apportionment cases."[630]

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623. *Id.*

624. Report of the Special Master, *supra* note 41, at 2, 28-29.

625. *See, e.g.*, Klein, *supra* note 45, at 521 (suggesting that in the absence of "negotiated settlement," "the Court could apply the equitable apportionment doctrine to determine the limits of each state's use of the shared groundwater"); Memphis and MLGW Reply, *supra* note 185, at 15 n.5 (compiling citations to "[w]ater law scholars [who] agree that equitable apportionment should govern the allocation of groundwater between states overlying a common aquifer").

Before the decision, Noah Hall and Joseph Regalia suggested that the Supreme Court could turn to its doctrine of interstate nuisance (rather than equitable apportionment) to resolve the dispute. *See* Hall & Regalia, *supra* note 45, at 198-202. They note the comparative value of such an approach: "Equitable apportionment assumes that the entire resource is available for division and allocation. This reflects the historically prevailing values towards natural resources, which assume a goal of total consumption and consider any remainder economic waste. Modern conservation and preservation values . . . have been left out of the equitable apportionment equation . . . Interstate nuisance was developed not to divide and allocate a shared resource, but to balance harms of use and interests in preservation of a shared resource." *Id.* at 202.

626. Report of the Special Master, *supra* note 41, at 2.

627. *See, e.g.*, Kansas v. Colorado, 206 U.S. 46 (1907).

628. *See, e.g.*, Idaho *ex rel.* Evans v. Oregon, 462 U.S. 1017 (1983).

629. *See* Mississippi v. Tennessee, 142 S. Ct. 31, 39-41 (2021).

630. *Id.* Because Mississippi never requested that the aquifer be equitably apportioned, nor sought leave to file an amended complaint doing so, the Court dismissed the case. *Id.* at 41-42.

2. *Mississippi's Claim*

To decide that equitable apportionment applied, the Supreme Court rejected Mississippi's argument that its alleged ownership disposed of the case.[631] But Mississippi's conception of groundwater ownership differed—both in its basis and the limits it recognized—from the state water ownership this Note suggests is valid. Clarifying this shows why qualified state ownership will not confuse interstate relations.

Mississippi did not rely on the limited state ownership this Note advances—valid for state-law purposes, but subject to federal supremacy. Instead, to thwart or evade federal law (equitable apportionment),[632] Mississippi claimed that its inherent sovereignty gave it an absolute, unqualified ownership of all groundwater within its borders.

To the extent that Mississippi advanced a coherent theory for the source of its ownership,[633] it demonstrated persistent confusion over the difference between sovereignty, police power, and state ownership. In earlier stages of the litigation, Mississippi explicitly claimed to "own" its groundwater.[634] In later stages, perhaps recognizing this was a losing argument, it framed this ownership argument in terms of its "territorial sovereign authority . . . to preserve, protect and control" the "groundwater located within its borders to the exclusion of Tennessee."[635] But the underlying basis for what remained an absolute, territorial ownership claim was largely unchanged: Mississippi asserted that at statehood, and by virtue of the equal-footing doctrine, "title" to and control of all "water resources," including groundwater, transferred to and "vested" in the state as an automatic function its sovereignty.[636] And, Mississippi said, its legislature "codified" that sovereign, territorial ownership in its water code.[637] Recall that the equal-footing doctrine does not give states ownership of waters themselves, and that equal-footing-based ownership arises from a different authority than the

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631. *Id*. at 40-41.

632. *See* On Exceptions to Report of the Special Master Filed by Plaintiff Mississippi at 26-31, *Mississippi v. Tennessee*, 142 S. Ct. 31 (No. 22O143) [hereinafter Mississippi's Exceptions] (rejecting the applicability of equitable apportionment to groundwater claims).

633. *See* Klein, *supra* note 45, at 487-89 (documenting how "Mississippi's ownership theory evolved during the course of the litigation").

634. *See, e.g.*, State of Mississippi's Post-Hearing Brief at 9-12, *Mississippi v. Tennessee*, 142 S. Ct. 31 (No. 22O143) [hereinafter Mississippi's Post-Hearing Brief].

635. Mississippi's Exceptions, *supra* note 632, at 2.

636. *Id*. at 3-4, 22.

637. *Id*. at 22 (quoting MISS. CODE ANN. § 51-3-1 (2003)). This argument echoes that made when Mississippi more explicitly asserted "ownership" of the groundwater. *See* Mississippi's Post-Hearing Brief, *supra* note 634, at 9-12; Mississippi Complaint, *supra* note 355, at 3.

water ownership advanced by this Note.[638] As ostensible further evidence that the aquifer is not an interstate resource, Mississippi pointed out that Tennessee has a nearly identical statute, which means that *it* owns all of the groundwater up to *its* side of the border.[639]

Mississippi's claim was thus a misguided throwback to the kinds of surface-water ownership claims the Supreme Court rejected early in the twentieth century.[640] And it echoed Nebraska's failed assertion in *Sporhase*.[641] For this reason, the Court variously described Mississippi's claim to be asserting an "absolute,"[642] "sovereign," "unfettered," or "exclusive" ownership.[643]

The critical differences between this antiquated conception of state water ownership and the one advanced by this Note demonstrate why the latter will not confuse interstate doctrine. This Note's conception of state water ownership is not based on a vague invocation of sovereignty, much less the equal-footing doctrine; instead, it arises from a state's ability to define the property character of its share of water. As such, it admits of dramatically different limits — notably, federal supremacy. It may be preempted by any means of dividing interstate resources: not just the federal common law of equitable apportionment, but also by any congressional act or congressionally approved compact. And, as a creature of state property law, it is worthless in any kind of cross-border dispute over water resources.[644]

3. A Missed Opportunity to Clarify State Ownership

Even as the Supreme Court and Special Master rejected Mississippi's ownership claim, they did so for vague and partial reasons, thus missing a chance to clarify the unsettled doctrine of state water ownership. Doing so not only invites the kind of confusion this Note contends hinders state groundwater management,[645] but it leaves open the possibility that states could invoke versions of

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638. *See supra* Section II.C.2.

639. Mississippi's Exceptions, *supra* note 632, at 41-43 (referencing TENN. CODE ANN. § 68-221-702 (2021)).

640. *See supra* notes 159-162 and accompanying text; Law Professors' Amicus Brief, *supra* note 184, at 3 ("Mississippi's atavistic claim recombines legal and technical arguments that the Court has consistently rejected for over a century." (citing Griggs, *supra* note 248, at 161-63)).

641. *See supra* notes 277-289 and accompanying text.

642. Mississippi v. Tennessee, 142 S. Ct. 31, 38 (2021).

643. *Id.* at 40.

644. *See* Kansas v. Colorado, 206 U.S. 46, 97 (1907) (noting that "[e]ach State stands on the same level with all the rest" and so "can[not] impose its own legislation on" any of "the others").

645. *See supra* Part III.

absolute ownership in other contexts—if not against states, perhaps against tribes.

To begin with, the Special Master's report was unclear as to why Mississippi's ownership claims may be internally valid but externally irrelevant. The Special Master was right that if as a factual matter the aquifer is an interstate resource, any state ownership claim is preempted by the federal common law of equitable apportionment.[646] But even as the Special Master rejected the "applicability" of Mississippi's ownership claim, the Special Master seemed to imply Mississippi's misguided sovereign ownership argument was otherwise valid.[647]

The Supreme Court failed to inject needed clarity. Troublingly, it implied absolute ownership was invalid because there was an *interstate* resource at issue.[648] Citing earlier interstate disputes, the Court said that "each State has full jurisdiction over" the "waters" "within its borders,"[649] but "such jurisdiction does not confer unfettered 'ownership or control' of . . . *interstate* waters."[650] It then framed the problem with Mississippi's "ownership approach" around the fact it implicated "a water resource . . . shared between several states."[651] This framing was perhaps necessary to justify the Court's extension of equitable apportionment to a new context.[652]

But this only partially explains why Mississippi's claim is invalid and draws the limits of that ownership too loosely. The problem with Mississippi's theory was not just that there was an interstate resource involved. Mississippi does not have absolute ownership over entirely *intra*state water, either: even for those waters, any ownership claim is ultimately subject to federal supremacy. It would have been cleaner for the Supreme Court to say simply that state water ownership is only a function of state property law, so Mississippi's claim is preempted by *any* federal law and its ownership extends only to its *share* of groundwater (whose property character it can define). These principles were apparent in

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646. Report of the Special Master, *supra* note 41, at 2, 28-29.

647. *See id*. at 28-29 (agreeing with Mississippi that "the doctrine of equal footing" means the state "has full jurisdiction over the lands" and "'waters within [its] own territories,'" but qualifying that this "sovereignty" cannot "subsume an entire interstate resource" (quoting *Kansas v. Colorado*, 206 U.S. at 93)).

648. Mississippi v. Tennessee, 142 S. Ct. 31, 40-41 (2021).

649. *Id*. at 40 (quoting *Kansas v. Colorado*, 206 U.S. at 93).

650. *Id*. (emphasis added) (quoting Wyoming v. Colorado, 259 U.S. 419, 464 (1922)).

651. *Id*. at 40-41.

652. *See id*. at 41 (noting that, if adopted, Mississippi's theory "would allow an upstream State to completely cut off flow to a downstream one, a result contrary to [the Court's] equitable apportionment jurisprudence").

Sporhase,[653] and the Court gestured toward them when it initially declined to hear the case a decade ago.[654]

Making this point clearly would have revealed why parties on both sides misunderstood the importance of states' statutory or constitutional claims to own groundwater. Mississippi urged the Supreme Court to find "dispositive" both states' "legislative pronouncements" to own their respective groundwater.[655] To rebut this point, Memphis pointed out that Mississippi's own high court has rejected the notion that groundwater is "susceptible to absolute ownership."[656] And law professors supporting Memphis and Tennessee emphasized the purported dissonance between Mississippi's claim to own all water within the state and how it allocates that water internally according to "equitable principles, not ownership."[657] This exchange overlooked why a state's ownership claim has no relevance for interstate disputes. Regardless of whether Mississippi groundwater is state-owned (like in Nebraska, Washington, and Montana) or is not (like in Texas), any ownership is a function of state property law and so is preempted by federal common law. So, as Tennessee alludes,[658] the state's ownership only matters insofar as it defines the relationship of the state to the users of its groundwater and impacts their potential private rights in that water. It does not affect the state's relationship with other *states*.

The confusion left in place by *Mississippi v. Tennessee* has real stakes. On the one hand, the opinion did not dispel the prevalent idea that the Supreme Court has announced a categorical rule foreclosing state groundwater ownership in *any* context.[659] Indeed, Tennessee, Memphis, and the United States all argued as much to the Court, relying on an incorrect reading of *Sporhase* to do so.[660] As

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653. *See supra* Section II.B.2.

654. When the Court first rejected Mississippi's leave to file a bill of complaint against Tennessee, it provided only two citations to two footnotes from previous cases. *See* Mississippi v. City of Memphis, 559 U.S. 901 (2010). One of those footnotes included the following proposition: "Federal common law governs interstate bodies of water, ensuring that the water is equitably apportioned between the States and that neither State harms the other's interest in the river." Virginia v. Maryland, 540 U.S. 56, 74 n.9 (2003).

655. Mississippi's Exceptions, *supra* note 632, at 42.

656. Memphis and MLGW Reply, *supra* note 185, at 24 (quoting Dycus v. Sillers, 557 So. 2d 486, 501-02 (Miss. 1990)).

657. Law Professors' Amicus Brief, *supra* note 184, at 12 (emphasis omitted).

658. Tennessee Reply, *supra* note 185, at 32 ("[A]s Mississippi recognizes . . . the public-trust doctrine defines the relationship between a State and 'its citizens.' That doctrine does not apply to disputes among States over the use of interstate water resources . . . .").

659. *See supra* notes 192-193 and accompanying text.

660. *See* Memphis and MLGW Reply, *supra* note 185, at 23; Tennessee Reply, *supra* note 185, at 30; United States Amicus Brief, *supra* note 362, at 24-25 n.3.

this Note has shown, such a sweeping assertion is legally incorrect[661] and was unnecessary to demonstrate the irrelevance of Mississippi's ownership claim. More importantly, imprecision on this point might hinder sound groundwater management[662] in ways that the parties making this argument appeared not to recognize. On the other hand, the Court did not draw the limits of state ownership tightly enough: though the opinion now precludes states from using ownership arguments against other states in *any* interstate water dispute, greater clarity would have cautioned states from trying to employ ownership as a trump against Native American tribes. The opinion thus allows mistaken notions of state ownership to rear their head elsewhere.

CONCLUSION

This Note has demonstrated that the people of a state in their governmentally organized form can — for matters of state law — own the water they use, similar to how they might own the oysters in their beaches, the timber stock in their forests, or the water-bearing gaps in sediment beneath private land. By articulating this qualified ownership, this Note has sought to crystallize an area of property law that has been muddied by overbroad or vague Supreme Court opinions and the crabwise way in which jurists and scholars discredited absolute state water ownership over the twentieth century.

Focusing specifically on groundwater, and with an apprehensive eye toward the near future, this Note has inventoried the important and often overlooked stakes of embracing or rejecting state ownership. The climatic stresses that await will make managing groundwater more difficult and more important. Increased scarcity will demand doctrinal evolution, and may require even more dramatic changes, like greater federal control or jettisoning stubborn but obsolete components of water law. But, for the time being, courts should be careful to preserve one of the original innovations of American water law — state ownership, qualified as it may be today. Given its capacity to keep the people in control of their groundwater and thereby protect their collective interests as well as those of the smallest pumps, it is yet worth retaining.

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661. *See supra* Part II.

662. *See supra* Part III.