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Taking Water and the Dangers of Federal Property

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Abstract. Recent events have highlighted the value of water. Drought plagues the western United States, and water management has gained the current administration's attention. Water is a resource of great public concern. But it is also a form of private property. With reservoir levels dropping, how should we evaluate government efforts to regulate the use of water as a form of property?

The Constitution's Takings Clause guarantees that the government will not take an individual's property without just compensation. The Roberts Court is attuned to state authority, but in takings law, the Court seems headed in a different direction. While a close read of Supreme Court cases may provide more questions than answers, this paper will only engage with one: How should courts define which types of property can be taken? This paper will show that the drift toward a federal definition of a property right is wrong-headed. And no more so than in the critical area of water, a valuable and controversial resource gaining importance in an era of climate crisis.

This paper will conclude that the federal-property approach is unreliable; it ignores the unique, and deserved, differences in state management of regional natural resources like water. Water highlights the important role of property federalism in the scheme of constitutional protections. Natural resource challenges vary across the nation, and regional problems cannot be solved with federal solutions. The localized nature of water rights provides a roadmap for navigating other urgent natural resources issues in the courts. Waiting until the crisis boils over will be too late.

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Introduction

“When the well’s dry, we know the worth of water.”

These words, attributed to Benjamin Franklin,¹ are more relevant today than ever before.² Water has an irreplaceable biological and ecological function. But it is also possessed as a form of private property; not only does water have *practical* worth to everyone who drinks it, water also has *economic* worth to those who own the rights to use it. These two forms of value are in tension and pose important questions for a nation battling drought: Can water be owned? If so, who owns it? And if owned, can the government seize it?

Quickly, these questions take on a legal hue. The Constitution’s Takings Clause guarantees that the government will not take an individual’s property without just compensation.³ A close read of Supreme Court cases in this area provides more questions than answers. This paper addresses one: How should courts define which types of property can be taken?

Courts and scholars advocate two different definitional approaches for taking property. The first is the state-specific-property approach, which relies on the law of the state—and only the state—where the property sits to define the contours of the property right for takings analysis. The second is the federal-property approach, which advocates a definition of property that draws on the laws of multiple states or general law conceptions of property rights. The Roberts Court is often attuned to state authority, but in the context of takings law, the Court seems headed in a different direction. Water rights provide the perfect vessel to discuss this trend.

This paper shows that the drift toward a federal definition of property rights is wrong-headed, especially in the critical area of water—a valuable and controversial resource. The federal-property approach is unreliable; it ignores the unique and deserved differences in state management of regional natural resources like water.

This paper argues that courts should not create a federal-property definition of water rights for takings purposes due to the unavoidable variation within American water law. The four forms of variance—governance, beneficial use, public trust, and groundwater integration—reveal the deep and historic differences in how states define the contours

¹ BENJAMIN FRANKLIN, POOR RICHARD’S ALMANACK 59 (The U.S.C. Publishing Co. 1914).

² Hours into his second term as President, Donald Trump signed a memorandum entitled “Putting People over Fish: Stopping Radical Environmentalism to Provide Water to Southern California” to address water reallocation in California after wildfires devastated swathes of the state. Memorandum on Putting People over Fish: Stopping Radical Environmentalism to Provide Water to Southern California, 2025 DAILY COMP. PRES. DOC. 148 (Jan. 20, 2025).

³ U.S. CONST. amend. V.

of water rights. The first form reveals that states across the Nation incorporate different levels of governance and exclusion mechanisms in their water law regimes. The second form reveals that, even among western states, states situate and define “beneficial use” at different levels of abstraction and with different prioritization. The third form reveals inconsistent adoption of and reliance on the public trust doctrine by western states. Finally, the fourth form reveals that states view groundwater in markedly different ways and, in some cases, as an entirely different breed of property right than surface water. These forms of variation are all derived from local hydrogeological conditions. And the investment-backed expectations and background principles relevant in regulatory takings analysis are all based on the state laws accounting for these forms of variation.

Additionally, courts should not entertain the project of creating a federal-property definition for water rights in the takings context for two important, normative reasons that implicate substantive litigation results as well as concepts of federalism. First, a federal-property approach to surface water rights will almost always result in a court finding a *per se* taking occurred. And second, the federal-property approach may chill state experimentation in an era of drought.

Drought in the western United States shows no sign of slowing, with states rapidly generating regulatory schemes that impose restrictions on private users for the public good and ecosystem.⁴ Meanwhile, courts disagree over whether regulations of water use constitute categorical takings of private property, and some show a disposition to uniformity in property law. If the takings umbrella expands to include a greater variety of forms of government action with respect to water, how courts choose to define water rights becomes even more important.

Courts should look to state law—and only state law—when defining property rights for takings cases. This conclusion extends beyond property theory, however—it has urgent, practical implications for natural resource management. Water highlights the important role of property federalism in the scheme of constitutional protections. Natural resource challenges vary across the nation, and federal solutions cannot solve

⁴ Consider California. In 2014, California passed the Sustainable Groundwater Management Act, an aggressive suite of groundwater pumping restrictions. The Act aimed to inject sustainable practices into California’s profitable agriculture industry. Some reports suggested the Act would fallow up to 900,000 acres of farmland, eliminate 50,000 jobs, and decrease regional economic activity by 2.3 percent. ALVAR ESCRIVA-BOU, ELLEN HANAK, SPENCER COLE & JOSUÉ MEDELLÍN-AZUARA, *THE FUTURE OF AGRICULTURE IN THE SAN JOAQUIN VALLEY* 1 (2023), <https://perma.cc/KN8D-LG2C>. For the state, the Act provided an opportunity to conserve water with drought looming on the horizon. For local farmers, the Act meant smaller water allocations, less irrigation, and the destruction of a way of life. Kerry Klein, *Nine Years in, California’s Groundwater Sustainability Overhaul is Becoming a Reality*, KVPR (Sept. 27, 2023, at 12:19 PDT), <https://perma.cc/N5RP-4WDD>; Kerry Klein, *‘Farming is a Gamble.’ In California’s Almond Boom and Bust, Growers are Hoping for a Rebound*, KVPR (July 11, 2024, at 5:25 PDT), <https://perma.cc/ST8D-A5HA>.

regional problems. Courts should not employ general definitions of natural resources property when state-specific definitions already exist. The localized nature of water rights provides a roadmap for navigating other urgent natural resources crises in the courts. Waiting until the crisis boils over may be too late.

I. Takings Property

This paper begins by presenting the problem: confusion over which laws courts should use to define property rights. This section describes the “muddle”⁵ that plagues takings law, discusses the state-specific approach and the federal-property approach, and applies the problem in the water context.

Property rights—creatures of state law—collide with federal law in the form of takings.⁶ The Takings Clause in the Fifth Amendment of the Constitution states that “private property” shall not be “taken for public use, without just compensation.”⁷ The Takings Clause rests on the intuition that when the government takes property from an individual for the public good, the individual deserves compensation.⁸

Because of its many different tests and standards, some describe the takings doctrine as “an absolutely incoherent morass.”⁹ The Court has engaged in a decades long game of whack-a-mole; as novel questions appear, the Court adds layers to the takings doctrine.¹⁰ One such complexity is *which types of property* can be taken.¹¹ While the Court’s

⁵ Nestor M. Davidson & Timothy M. Mulvaney, *Takings Localism*, 121 COLUM. L. REV. 215, 223 (2021).

⁶ Note, *Judicial Takings, Judicial Federalism, and Jurisprudence: An Erie Problem*, 134 HARV. L. REV. 808, 816 (2020); Davidson & Mulvaney, *supra* note 5, at 222.

⁷ U.S. CONST. amend. V. “[T]he clause unequivocally requires a claimant to possess ‘property.’” Note, *supra* note 6, at 816.

⁸ *Armstrong v. United States*, 364 U.S. 40, 49 (1960); *Tahoe-Sierra Pres. Council, Inc. v. Tahoe Reg’l Plan. Agency*, 535 U.S. 302, 322 (2002).

⁹ Ken Stahl, *The Power of the State Legislatures to Invalidate Private Deed Restrictions: Is It an Unconstitutional Taking?*, 50 PEPP. L. REV. 579, 609 (2022).

¹⁰ See, e.g., *Nollan v. Cal. Coastal Comm’n*, 483 U.S. 825, 837 (1987) (finding a condition placed on a land-use permit must bear a reasonable relationship to the effect of the development sought); *Dolan v. City of Tigard*, 512 U.S. 374, 386 (1994) (finding there must be an essential nexus relationship between the permit condition and the public’s alleged interest the government is protecting); *Koontz v. St. Johns River Water Mgmt. Dist.*, 570 U.S. 595, 614 (2013) (affirming that a permit condition must have an essential nexus and rough proportionality to the impact the government seeks to mitigate); *Sheetz v. County of El Dorado*, 144 S. Ct. 893, 897 (2024) (finding that *Nollan* and *Dolan* extend beyond ad hoc administrative permitting to legislative action as well).

¹¹ This paper adopts a conceptual severance framework to property. Conceptual severance “consists of delineating a property interest consisting of just what the government action has removed from the owner, and then asserting that that particular whole thing has been permanently taken.” Margaret Jane Radin, *The Liberal Conception of Property: Cross Currents in the Jurisprudence of Takings*,

frameworks explain *how* property may be “taken,” they do not explain *which types of property* can be taken.¹²

A. *The Takings Problem*

Courts must determine which types of property the government can take within the meaning of the Takings Clause.

The Fifth Amendment does not define “property.” Unsurprisingly, courts have labored to answer questions such as: What exactly is “property” within the meaning of the Takings Clause; who is responsible for that determination; and what types or elements of property can be taken. Two academic approaches dispute how courts should define property rights in the takings context. The first is the “state-specific-property” approach, and the second is a “federal-property” approach.¹³

88 COLUM. L. REV. 1667, 1676 (1988). Therefore, “just those strands that are interfered with by the regulation” are severed “from the whole bundle of rights,” and the court “construes those strands in the aggregate as a separate whole thing.” *Id.*; Daniel R. Mandelker, *New Property Rights Under the Takings Clause*, 81 MARQ. L. REV. 9, 11 (1997). This is also referred to by some as the “denominator problem”—how does a court determine how much value a regulation deprived from property if it does not define what the property entails? In numeric terms, do you know what “½” means if you do not know the meaning of “a whole”?

¹² There are two forms of takings: physical and regulatory. Physical takings involve government *occupation* of private property, while regulatory takings involve government *restriction on the use* of private property. For example, the Court has analyzed the government’s placement of a cable box in your front lawn as a physical taking, but courts would analyze the government’s regulation of how tall the grass grows in your front lawn as a regulatory taking. Physical takings are “categorical” or *per se* takings, meaning that a permanent physical invasion of private property, no matter how small, is compensable. See *Loretto v. Teleprompter Manhattan CATV Corp.*, 458 U.S. 419, 439 (1982); *Ark. Game & Fish Comm’n v. United States*, 568 U.S. 23, 31 (2012). Regulations are harder to analyze. While property “may be regulated to a certain extent, if regulation goes too far it will be recognized as a taking.” *Penn. Coal Co. v. Mahon*, 260 U.S. 393, 415 (1922). A regulation “goes too far” when it destroys property’s economic value, and it is treated as if it were a physical taking. *Lucas v. S.C. Coastal Council*, 505 U.S. 1003, 1019 (1992). Consider again the front lawn example. A government regulation limiting grass height in your front lawn may not be a regulatory taking. But, if the regulation instead stated that “you cannot use your lawn during the day,” courts may say the regulation is a taking. This standard is a judicial gut-check—the more a regulation decreases property value, the more likely it is a taking. Courts analyze regulations that do not go “too far,” however, under a complicated balancing test. The test looks at the following factors: the economic impact on the property owner, the interference with the owner’s investment-backed expectations, and the type of action the government took. *Penn Cent. Transp. Co. v. New York City*, 438 U.S. 104, 124 (1978). Returning to the front lawn example, a local government’s regulation of grass height would not have a great economic impact on the homeowner, would not implicate investment-backed expectations, and would not make a court concerned about government overreach into the world of the private citizen.

¹³ Other scholars use other descriptors for these two approaches. Timothy Mulvaney uses the terms “normativist” and “positivist” to describe what I call the “federal-property” and “state-specific-property” approaches. Under a normativist approach, “federal courts are to rely on certain core, universally recognized principles that are elicited without reference to current law and that generally predate the formation of government. In contrast, a positivist vision of property asserts that the

I. State-Specific-Property Approach

The state-specific-property approach dictates that courts apply the definition of property provided by the state where the property sits. Frank I. Michelman defines the state-specific approach as follows:

First, the term “property” in the Fourteenth Amendment denotes nothing except what some corpus of extant positive law happens to make into property. *Second*, the Federal Constitution does not itself contain the requisite corpus of positive law. *Third*, the constitutional term “property,” therefore, can denote nothing except what some extra-constitutional cadre or cadres of positive lawmakers from time to time may happen to make into property[.] *Fourth*, these cadres can be none other than the duly authorized lawmakers of the several States—their respective legislatures and common law judiciaries.¹⁴

This approach dates back to the Founding and has long been used by federal courts.¹⁵ In a 1972 case, the Supreme Court wrote that property interests “are not created by the Constitution,” but “created and their dimensions . . . defined by existing rules or understandings that stem from an independent source such as state law.”¹⁶ The Court deferred to state-specific principles out of the belief that property was inherently local—states recognize and regulate property rights in different ways.¹⁷ Property rights were “tailored to local conditions, which both increase determinacy by making the applicable rules confined to a single jurisdiction and foster experimentation by enabling states prospectively to learn from one

Constitution protects only those rights delineated by nonfederal constitutional government sources, most prominently state common law and regulation.” Timothy M. Mulvaney, *Foreground Principles*, 20 GEO. MASON L. REV. 837, 840–41 (2013) [hereinafter *Foreground Principles*].

¹⁴ Frank I. Michelman, *Property, Federalism, and Jurisprudence: A Comment on Lucas and Judicial Conservatism*, 35 WM. & MARY L. REV. 301, 305 (1993).

¹⁵ The Supreme Court generally has said that the Federal Constitution does not itself advance any particular views, or mandate any particular rules or standards, . . . concerning what precise set of legally secured advantages goes along with being granted the status of legal owner of one or another kind or piece of property. Rather, it is a commonplace of Our Federalism that these matters are left for definition by bodies of state law that the States are free to shape as they severally choose.

Id. at 310. “Yet neither the Constitution’s text nor historical research . . . provides persuasive evidence that the Framers favored one approach to defining constitutional ‘property’ over another.” *Foreground Principles*, *supra* note 13, at 840. For a discussion of the Court’s historical interpretation of the Takings Clause, see Maureen E. Brady, *Property’s Ceiling: State Courts and the Expansion of Takings Clause Property*, 102 VA. L. REV. 1167, 1218–20 (2016) [hereinafter *Property’s Ceiling*].

¹⁶ Bd. of Regents of State Colls. v. Roth, 408 U.S. 564, 577 (1972); *see also* Int’l Paper Co. v. United States, 282 U.S. 399, 404–05 (1931) (looking to acts of the New York legislature to define the petitioner’s property); *Lucas*, 505 U.S. at 1030 (citing *Roth* as informing the inquiry to define property).

¹⁷ Maureen E. Brady, *The Illusory Promise of General Property Law*, 132 YALE L.J. F. 1010, 1015 (2023) [hereinafter *Illusory Promise*].

another.”¹⁸ Property was a matter of state interest, and few sources outside of state law vindicated property rights.

Federal courts employed this approach for decades. Judges looked to the historic laws of the specific state where the contested property sat to define the scope of the owner’s rights or the constitutionality of new state legislation.¹⁹ Deference to state property law rested on two assumptions or, in Molly Brady’s words, “corollaries”: first, the property that the Constitution protected originates from state law—both common and statutory; and second, because the Constitution recognizes state-generated property laws, “there is the possibility of variation” in how property rights are defined.²⁰

But a recent shift in the takings doctrine suggests the exclusive application of state-specific law may be losing ground.²¹

2. Federal-Property Approach

The federal-property approach to takings defines property rights through multiple sources of law—not just the state where the property sits. Under the federal-property approach, courts consult “majority and minority rules, all federal, state, and local statutory law, as well as social norms.”²² Courts may look to general principles of property law to avoid considering the specifics of state property law.

¹⁸ *Id.* at 1050. Davidson and Mulvaney argue that local law should play a larger role in takings cases than it currently does. They assert that “the local democratic process [is] particularly apt for evaluating tradeoffs at the heart of takings law; moreover, local governments are well suited to respond to local preferences and innovate in the face of changing conditions.” Davidson & Mulvaney, *supra* note 5, at 221.

¹⁹ See *Lucas*, 505 U.S. at 1009.

²⁰ Maureen E. Brady, *Penn Central Squared: What the Many Factors of Murr v. Wisconsin Mean for Property Federalism*, 166 U. PA. L. REV. ONLINE 53, 59 (2017) [hereinafter *Penn Central Squared*]. Professor Molly Brady has acknowledged that the Supreme Court reacts with skepticism when positive state law declares that something that once was private property is no longer private property. *Id.* (citing *Phillips v. Wash. Legal Found.*, 524 U.S. 156, 164 (1998)). When state governments eliminate property with positive law, federal courts are loathe to recognize a pure, positivist, state-law definition of property. *Id.* at 60; see also *Property’s Ceiling*, *supra* note 15, at 1220 (noting that the Supreme Court has always given federal protection to interests that were classified as property by a state’s court).

²¹ But the tension between a general law definition of property as incorporated into a positivist Constitution is not a recent phenomenon. Some provisions of the Constitution “speak in terms of general-law categories, such as contract and property, whose delineation generally has been thought to fall within the reserved province of state lawmaking, beyond the national government’s delegated lawmaking powers. Again, the problem is anything but new.” Michelman, *supra* note 14, at 305–06. “The concern that state courts might defeat federal constitutional claims by evasive manipulation of the state general-law categories was present at the creation of federal judicial review of state court decisions and has been recurrent ever since.” *Id.* at 306.

²² *Illusory Promise*, *supra* note 17, at 1018; see Michelman, *supra* note 14, at 310, 320.

The federal-property approach has garnered academic support.²³ One of the first descriptions of the federal-property approach comes from Thomas Merrill, who wrote that a strictly state-law²⁴ approach created a “positivist trap”—when state law “generates either too little property or too much property relative to some independent norm that is important to the Court.”²⁵ Instead of relying solely on the laws of the state where the property sits, courts should identify a federal baseline and fill in the gaps by “canvassing,” or surveying, the laws of the various states. This “patterning approach” considered state law while also relying on background principles of property and societal norms spanning multiple jurisdictions.²⁶ Property law should not rely on state-specific-property definitions when courts could achieve consistency across application of the takings doctrines.

In the past eight years, the Supreme Court decided three cases that signaled a shift from the state-specific-property approach to the federal-property approach.

²³ Scholarship in other areas of law has bolstered the appeal of the federal-general property approach to takings doctrine. In a 2023 article on the Fourth Amendment, D’Onfro and Epps stated that courts should use “the tools of the common law to determine the general law of the country today.” Danielle D’Onfro & Daniel Epps, *The Fourth Amendment and General Law*, 132 YALE L.J. 910, 914 (2023) (emphasis omitted). When examining general law, “courts look for law that exists outside any one state’s understanding of common law, but their analysis remains fundamentally grounded in the common law.” *Id.* at 930. Because the Fourth Amendment and its protections were “a federal constitutional guarantee that binds law enforcement across the entire country[,] . . . courts should draw on the laws, customs, and expectations that prevail in the country as a whole.” *Id.* at 936.

²⁴ Merrill also describes it as an approach that “concentrates on the source of property and imposes little or no limit on its content.” Thomas W. Merrill, *The Landscape of Constitutional Property*, 86 VA. L. REV. 885, 892 (2000).

²⁵ *Id.* Merrill identified the source of the “trap” as when “the Court’s method effectively ceded the domain of constitutional property to governmental actors over which the Court, in its capacity as constitutional interpreter, had no control.” *Id.* at 923. He writes that “the Court does not have the intestinal fortitude to live with the consequences of the positivist trap,” and when “[f]aced with outcomes that deviate from social expectations, . . . ‘the Court has been unwilling or unable to live by its own declared rule of self-denial.’” *Id.* at 951. And since the Court lacks “any federal definition of property, . . . its response has been arbitrarily to embrace some provisions of nonconstitutional law while ignoring others.” *Id.*

²⁶ See *id.* at 928. James Stern echoed this sentiment in his article “Property’s Constitution,” and wrote that “a unified definition of property applicable in different constitutional areas is compatible with the results current doctrine produces.” James Y. Stern, *Property’s Constitution*, 101 CAL. L. REV. 277, 325 (2013). Notably, Merrill does not advocate a nationally uniform approach to property. Instead, his “idea behind patterning is to provide a baseline, uniform constitutional standard across the states . . . without having courts make a confusing national law of property specifically for federal purposes.” *Illusory Promise*, *supra* note 17, at 1015. Merrill, unlike others advocating a general law approach, sees the virtues of variation among the states to a certain extent.

In *Murr v. Wisconsin*,²⁷ the Court rejected a pure state-law approach.²⁸ There, the Court considered the “denominator” problem: When a court determines the extent to which a regulation diminishes the value of property, it must first determine the value of the property as a whole before the challenged regulation reduced its value. The Court was also concerned with state power: If states could define property rights, then what prevented states from defining certain property rights out of existence?²⁹ The Court decided that it “must consider a number of factors” in defining the private property rights at stake in the litigation.³⁰ These factors included how other state and local laws treated the property right, the property’s value, and the property’s physical characteristics.³¹ In generating these factors, the Court did not adhere to the property laws of the state where the property sat, breaking from the state-specific-property tradition. Specifically, the Court’s test permits judges to “incorporate the property law of other jurisdictions to determine the scope of the interests protected.”³² *Murr* gave courts broad authority to determine the scope of a property right based on its “reasonableness” relative to other states. Rather than look to the historic practices or statutes of the state where the property sat, judges would look to the laws and regulations of distant jurisdictions.

The Court doubled down on this approach in 2023. In *Tyler v. Hennepin County*,³³ the Court wrote that “[s]tate law is one important source” that helps define a property right, “[b]ut state law cannot be the

²⁷ 582 U.S. 383 (2017).

²⁸ *Id.* at 397.

²⁹ Davidson and Mulvaney phrased it as “a particularly sharp dilemma: If states can define property, what baseline should courts use to determine whether there has been a change in property law requiring compensation?” Davidson & Mulvaney, *supra* note 5, at 222.

³⁰ The case featured two adjacent parcels of land regulated under Wisconsin law. While state law indicated the lots should be treated separately for takings analysis, the plaintiffs argued that the Court should treat the lots as a single unit for takings analysis. In a 5-3 opinion, the majority wrote that “no single consideration can supply the exclusive test for determining the denominator,” i.e., the parcel of property at issue in the case. *Murr*, 582 U.S. at 397.

³¹ *Id.* “Before *Murr*, we could imagine the states as an uneven topographical map, in which the Constitution recognized more and different constitutional property in some jurisdictions than in others. *Murr*, on the other hand, flattens those differences in ways not hinted at in past precedent.” Penn Central *Squared*, *supra* note 20, at 66. *Murr* thereby enables the Court to “render nearly any new regulation limiting property rights reasonable if it already exists in other states, regardless of the preexisting rules within the specific jurisdiction.” *Id.* at 67. Brady argues that *Murr* leaves unanswered whether “the term ‘traditional’ afford[s] constitutional protection only to interests previously recognized within a particular state, interests reaching some federally recognized bar for what property is, or interests traditionally recognized in most states but denied in the site where the alleged taking has occurred[.]” Maureen E. Brady, *Property Convergence in Takings Law*, 46 PEPP. L. REV. 695, 715 (2019) [hereinafter *Property Convergence*].

³² Penn Central *Squared*, *supra* note 20, at 66.

³³ 143 S. Ct. 1369 (2023).

only source.”³⁴ Otherwise, states “could ‘sidestep the Takings Clause by disavowing traditional property interests’ in assets it wishes to appropriate.”³⁵ The remainder of the opinion thoroughly examined the property right at issue, with Chief Justice John Roberts tracing its origins back to the signing of the Magna Carta at Runnymede.³⁶ A discussion of state law could have resolved the question: Because Minnesota recognized the property interest elsewhere in its laws, it could not “extinguish” it in this one statutory context “to avoid paying just compensation.”³⁷ The Court did not need to stray from Minnesota-specific law to conclude the state’s seizure was an unconstitutional taking—the new law was inconsistent with the state’s common law and historic statutes. Yet, the Court went out of its way to engage with federal definitions of taxpayer surpluses, as well as general law definitions predating Blackstone.

But the federal-property approach comes with a cost: It undermines the ability of states to define property rights. *Murr* and *Tyler* represent a judicial inclination that gives courts “license to pick from a generalist tradition of property principles” to define the scope of the property interest that government action affects.³⁸ The federal-property approach lets courts “elevate some sources” of property law and “ignore others,” with unpredictable results.³⁹ While searching for consistency, the Court cherry-picked its way into doctrinal uncertainty.⁴⁰

This theoretical battle becomes a practical problem when state property law diverges. Although most states use the same basic laws to define property in land, property in vehicles, and other forms of personal property, not all forms of property are so straightforward. How courts choose to define property for takings purposes will make a critical difference.⁴¹

³⁴ *Id.* at 1375.

³⁵ *Id.* (quoting *Phillips v. Wash. Legal Found.*, 524 U.S. 156, 167 (1998)).

³⁶ *Id.* at 1376–79. Importantly, the Court noted the historical unpopularity of the Minnesota law in question: “The minority rule then remains the minority rule today: Thirty-six States and the Federal Government require that the excess value be returned to the taxpayer.” *Id.* at 1378.

³⁷ *Id.* at 1379 (citing *Phillips*, 524 U.S. at 167).

³⁸ *Illusory Promise*, *supra* note 17, at 1047.

³⁹ *Id.* at 1048.

⁴⁰ Tim Mulvaney writes that this approach “necessitates individual federal judges imposing their own values regardless of a given state’s previously made choices concerning property, which presumably are based on that state’s own distinct history, physical landscape, commercial experiences, policy choices, and views of justice.” *Foreground Principles*, *supra* note 13, at 842. Whether used to limit or bolster state definitions of property rights, a federal definition of property “threatens to blunt one of the supposed benefits of allocating authority over property rules to the states.” *Property Convergence*, *supra* note 31, at 717.

⁴¹ For another discussion of takings doctrine as applied to water rights, see Kathryn M. Casey, Comment, *Water in the West: Vested Water Rights Merit Protection Under the Takings Clause*, 6 CHAP. L. REV. 305, 306–07 (2003). Casey does not address the same issues of “can” and “should” tackled in this paper; the paper focuses on applying existing physical and regulatory takings tests to water rights and

One such form of property—a form of property taking center stage in crises throughout the American West—is water.

B. *The Problem with Water*

Characterizing water ownership is more complicated than ownership of other property, as water constantly moves *across* land as surface water, *under* land as groundwater, and *over* land as vapor and rain.⁴² Many states characterize water rights as usufructuary rights,⁴³ which protect the *use* of water but not the water molecules themselves. Two main legal systems govern the right to use surface water: the riparian regime and the prior appropriation regime.⁴⁴ This paper focuses on prior appropriation doctrine—the doctrine used in the American West⁴⁵—because of the

advocating broad application of those tests. *Id.* at 348–49. While Casey’s article predates many of the recent jurisprudential developments discussed in this paper, it provides an overview of how the state-specific-property and federal-property approaches interact with water rights. *Id.* at 328–33.

⁴² Because of its many forms and properties, water law is a complex web of mutual dependencies that involves both competing users and competing uses. Eric T. Freyfogle, *Water Rights and the Common Wealth*, 26 ENV’T L. 27, 31–32 (1996); Henry E. Smith, *Governing Water: The Semicommons of Fluid Property Rights*, 50 ARIZ. L. REV. 445, 445 (2008) (“[W]ater is among the most challenging of resources from the point of view of property law.”); Erin Ryan, *Privatization, Public Commons, and the Takingsification of Environmental Law*, 171 U. PA. L. REV. 617, 696 (2023) (“[W]ater moves through multiple, competing claims of right during its cyclical journey from sky to sea.”); John D. Leshy, *A Conversation About Takings and Water Rights*, 83 TEX. L. REV. 1985, 1986 (2005).

⁴³ Black’s Law Dictionary describes a usufruct as “[a] right for a certain period to use and enjoy the fruits of another’s property without damaging or diminishing it, but allowing for any natural deterioration in the property over time.” *Usufruct*, BLACK’S LAW DICTIONARY (12th ed. 2024).

⁴⁴ Riparian law links the right to access water with the ownership of land contiguous to the water’s edge. The riparian regime was inherited from English common law. All those who own land along a watercourse, therefore, have a right to use the *flow* of the water undiminished in quantity and quality. The water itself is not owned, and riparians (land users abutting a water source) are granted temporary rights to use the water as it journeys across their land. Riparian rights therefore recognize that water is valuable *in* the watercourse; water rights exist regardless of whether the water is diverted. This system made sense for the settlers living in the East. Rainfall was plentiful, and the need for consumptive use (like irrigation) was uncommon; water was just another stick in a landowner’s bundle of rights. See *Walker v. United States*, 162 P.3d 882, 889 (N.M. 2007). Today, many eastern states still use the common law riparian doctrine. BARTON H. THOMPSON, JR., JOHN D. LESHY, ROBERT H. ABRAMS & SANDRA B. ZELLMER, *LEGAL CONTROL OF WATER RESOURCES* 19 (6th ed. 2018).

⁴⁵ As the American population expanded westward, settlers realized water was not as prevalent as in the East. Even the judiciary acknowledged this scarcity. In 1882, the Supreme Court of Colorado settled a dispute about the legal status of water in Colorado in *Coffin v. Left Hand Ditch Co.*, 6 Colo. 443, 447 (1882). Unlike in the East, where water access was linked to land ownership, in the West, the Colorado Constitution declared that every natural stream was “to be the property of the public.” COLO. CONST. art. XVI, § 5. The court held that riparian law did not apply in Colorado. Because the climate was dry, “[w]ater in the various streams thus acquires a value unknown in moister climates.” *Left Hand Ditch Co.*, 6 Colo. at 446. Unlike the East, settlers in the West needed to move water from streams to fields. See James L. Huffman, Hertha L. Lund & Christopher T. Scoones, *Constitutional Protections of Property Interests in Western Water*, 41 PUB. LAND & RES. L. REV. 27, 28 (2019). Water

diverse legal and positive-law mechanisms it involves.⁴⁶ Prior appropriation is a “first in time, first in right” rule: Whoever used the water first had priority over those who used the water later. And individuals acquired rights to water by putting the water to beneficial use in a manner that did not impair an earlier appropriator’s use.⁴⁷

Governmental action routinely impairs these sorts of private water rights. Historically, the government had to *physically divert* water for it to constitute a compensable taking under the Takings Clause.⁴⁸ Recently, however, other courts have expanded the definition of “physical takings” or physical appropriation of water to include forms of government regulation of water use, not just diversion.

In the early 2000s, several federal cases expanded the scope of possible water takings claims by broadening what government actions qualified as “physical takings.” The U.S. Court of Federal Claims analyzed mere limitations of surface water use under the physical takings

should not stay in the watercourse, like in the East, but be put to beneficial use by individuals. THOMPSON ET AL., *supra* note 44, at 263. Today, Alaska, Arizona, California, Colorado, Idaho, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington, and Wyoming adhere in whole or in part to the prior appropriation doctrine. *Id.* at 19.

⁴⁶ Riparian law is far more uniform among eastern states than prior appropriation is among western states. See Andrew P. Morriss, *Lessons From the Development of Western Water Law for Emerging Water Markets: Common Law vs. Central Planning*, 80 OR. L. REV. 861, 865, 868 (2001). Riparian law is also more directly linked to the common law and English origins, while prior appropriation law is not. *Id.* at 868. Prior appropriation is thus more useful to study when looking at the laws states enact to regulate water rights.

⁴⁷ “[P]rior appropriation abounds in contextually richer governance rules.” Smith, *supra* note 42, at 468; see also Luis Inaraja Vera, *Takings Property and Appropriative Water Rights*, 44 CARDOZO L. REV. 271, 286 (2022) (noting that prior appropriation regimes require a new user to both use water beneficially and respect the rights of previous users). Some scholars observe that the prior appropriation regime is a “vast improvement over the riparian system,” in part due to its baseline of efficient water use. Richard Epstein, *Property Rights in Water, Spectrum, and Minerals*, 86 U. COLO. L. REV. 389, 403 (2015). The Supreme Court has likewise praised the prior appropriation regime as a way to “overcome this perversity of nature and make water available where it would be of greatest service.” *United States v. Gerlach Live Stock Co.*, 339 U.S. 725, 728 (1950).

⁴⁸ The Supreme Court has determined that when the government (1) diverted water from a user and (2) the user had a right to the water protected by state law, a physical taking occurred. *Int’l Paper Co. v. United States*, 282 U.S. 399, 404–06, 408 (1931). Other cases reflected this approach: the Supreme Court identified (1) a physical diversion of water, and (2) water use as a protected property right under state law. *Gerlach Live Stock Co.*, 339 U.S. at 729–30, 734; *Dugan v. Rank*, 372 U.S. 609, 613, 623 (1963). And these observations were often accompanied with the sentiment that “[n]o reason appears why those who get the waters should be spared from making whole those from whom they are taken. Public interest requires appropriation; it does not require expropriation.” *Gerlach Live Stock Co.*, 339 U.S. at 752–53. The Court’s analysis remained consistent for three decades—if the government physically diverted water, stopping its use by other right-holders, then it constituted a *per se* taking of private property.

framework.⁴⁹ Although there was no *physical invasion* of the private water rights (i.e., water was not rerouted through a different channel), it determined the use limitation deprived water rights of their entire economic value and constituted a *per se* taking; once the water flowed downstream, a rights holder lost the ability to put it to use.

Now generally repudiated, the U.S. Court of Federal Claims's 2001 decision in *Tulare Lake Basin v. United States*⁵⁰ held that "a mere restriction on use—the hallmark of a regulatory action—completely eviscerates the right itself since plaintiffs' sole entitlement is to the use of the water. Unlike other species of property where use restrictions may limit some, but not all of the incidents of ownership, the denial of a right to the use of water accomplishes a complete extinction of all value."⁵¹ The court later criticized this opinion as "wrong on some counts, incomplete in others and, distinguishable, at all events."⁵² The judges took issue with *Tulare's* lack of attention to the contracts at play, as well as the potential of those agreements, alongside principles of state law, to limit the water rights at issue.

In 2008, the U.S. Court of Appeals for the Federal Circuit decided *Casitas Municipal Water District v. United States*.⁵³ There, the court applied a physical takings analysis. An order to keep water instream "actively caused the physical diversion of water away from the [district's canal] . . . thus reducing Casitas' water supply."⁵⁴ The "active hand of the government" was involved; although the hand did not extract the water from the river, it directed it to another project.⁵⁵ As the court stated, "Casitas' right was to the use of the water, and its water was withdrawn from the [canal] and turned elsewhere (to the fish ladder) by the government."⁵⁶ The court emphasized the temporal element of a usufructuary right in water: "The water, and Casitas' right to use that water, is forever gone."⁵⁷ The physical takings analysis guided the court to conclude that while Casitas' right to use water was only *partially* impaired, "any impairment" of water rights qualified as a government taking.⁵⁸

⁴⁹ *Tulare Lake Basin Water Storage Dist. v. United States*, 49 Fed. Cl. 313, 318–19 (2001).

⁵⁰ 49 Fed. Cl. 313 (2001).

⁵¹ *Id.* at 319 (citation omitted).

⁵² *Klamath Irrigation Dist. v. United States*, 67 Fed. Cl. 504, 538 (2005), *modified*, 68 Fed. Cl. 119 (2005), *vacated in light of Or. Sup. Ct. decision*, 635 F.3d 505 (Fed. Cir. 2011); *see also* Dave Owen, *The Realities of Takings Litigation*, 47 *BYU L. REV.* 577, 628 (2022) (criticizing the Court of Federal Claims's approach, writing "[r]egulatory action cannot physically invade a water right.>").

⁵³ 543 F.3d 1276 (Fed. Cir. 2008), *aff'd* 708 F.3d 1340 (Fed. Cir. 2013).

⁵⁴ *Id.* at 1291–92.

⁵⁵ *Id.* at 1292.

⁵⁶ *Id.*

⁵⁷ *Id.* at 1294.

⁵⁸ *Id.* at 1292.

Since *Casitas*, some jurists on the U.S. Court of Federal Claims have followed suit.⁵⁹ In doing so, they rely on state law to identify which “property interests are constitutionally protected.”⁶⁰ And they default to a physical takings analysis, despite the fact that the contested government action was not a traditional, physical diversion.⁶¹

These cases may seem insignificant or easily discarded as outside the mainstream. But in an area of law plagued by uncertainty and prone to dramatic doctrinal shifts, even outliers should be taken seriously. And in *Tulare*, *Casitas*, and their progeny, we see an inclination among some judges to recognize water use limitations as physical takings.

If courts expand the takings umbrella to include a greater variety of forms of government action with respect to water, how they choose to define water rights—with a state-specific-property approach or a federal-property approach—becomes even more important.

* * * * *

We now turn to the first question posed in the introduction: For takings purposes, should courts distill a federal-property definition of water rights? As the next section discusses, courts should not.

II. Variation in Water Rights

Courts have historically relied on state law when defining water rights.⁶² But, given the academic appeal of the federal-property approach, the slant of recent Supreme Court cases, and the recent caselaw that widens the takings window to include government regulation of water use, the state-specific-property approach may lose traction.

Such a jurisprudential shift would be unwise.⁶³ This section provides four examples of variation within water law that prevent the creation of a

⁵⁹ See, e.g., *Sacramento Grazing Ass’n, Inc. v. United States*, 135 Fed. Cl. 168, 203 (2017), *modified on reconsideration*, 154 Fed. Cl. 769 (2021), *vacated*, 176 Fed. Cl. 204 (2025).

⁶⁰ *Sacramento Grazing Ass’n, Inc. v. United States*, 154 Fed. Cl. 769, 783 (2021), *vacated*, 176 Fed. Cl. 204 (2025); *Sacramento Grazing Ass’n*, 135 Fed. Cl. at 197 (relying on New Mexico law, the Court concluded that “a federal appropriation of a private water source does not, *per se*, constitute a taking” unless the plaintiff can show that the water could have been put to beneficial use).

⁶¹ See, e.g., *Goodrich v. United States*, 434 F.3d 1329, 1333 (Fed. Cir. 2006) (citing *Fallini v. United States*, 56 F.3d 1378, 1379 (Fed. Cir. 1995)).

⁶² See *Int’l Paper Co. v. United States*, 282 U.S. 399, 405 (1931); *Dugan v. Rank*, 372 U.S. 609, 625–26 (1963); *Ministerio Roca Solida, Inc. v. United States*, 145 Fed. Cl. 756, 771–72 (2019). The federal government acknowledged the primacy of state law in defining water rights in the Mining Act of 1866, which stated, in part, “[w]hensoever, by priority of possession, rights to the use of water . . . have vested and accrued, and the same are recognized and acknowledged by the local customs, laws, and the decisions of courts, the possessors and owners of such vested rights shall be maintained and protected in the same.” 30 U.S.C. § 51; see also *Casey*, *supra* note 41, at 323–24 (further explaining the federal government’s recognition of prior appropriation rights in some contexts).

⁶³ As Tim Mulvaney acknowledges, “given the diverse state water right rules, takings challenges to the government’s regulation of private water rights have led to, and will continue to lead to,

federal-property definition: (1) the governance variation between prior appropriation regimes in western states and riparian regimes in eastern states, (2) the beneficial use variation among western states, (3) the public trust variation among western states, and (4) the surface-ground variation among western states. It then discusses the corresponding ecological conditions that gave rise to those forms of variation. And finally, it discusses how rights-holders' investment-backed expectations—an important element in takings doctrine—are inextricably intertwined with variation.

A. *Types of Variation*

The first form of variation reveals that states across the nation incorporate different levels of governance and exclusion mechanisms in their water law regimes. The second form of variation reveals that—even among western states—states situate and define “beneficial use” differently. The third form of variation reveals that western states formulate the public trust doctrine in various strengths. Finally, the fourth form of variation reveals that—between regions of western states—various approaches to groundwater and surface water integration exist. A federal-property approach that permits courts to consult the laws of other jurisdictions is incompatible with water's intense regional and state variation.

I. Governance Variation

The legal differences between eastern and western water are stark. One way to illustrate these differences is an exclusion-governance spectrum.⁶⁴ This subsection first describes exclusion and governance principles, then shows how a federal-property approach to water law cannot capture the regional variations in water law.

Exclusion is an element of property rights that emphasizes the holder's right to exclude others from using the property. For example, you can keep other people from standing on your front lawn without your consent. Governance is an element of property rights that emphasizes collective rules to manage multiple people's use of a commons. For example, you and your neighbors create rules to control how everyone uses your shared neighborhood lot. Both management forms are valid, but they emerge from different management goals. The first example assumes

disparate results.” Timothy M. Mulvaney, *Instream Flows and the Public Trust*, 22 TUL. ENV'T L.J. 315, 371 (2009) [hereinafter *Instream Flows*].

⁶⁴ Henry Smith describes two axes on which the legal regimes of prior appropriation and riparianism operate: exclusion and governance. Smith, *supra* note 42, at 446. Note, however, that this paper does not employ Smith's approach in a normative sense, but sees it as an incredibly useful descriptive tool.

that land in the neighborhood is valuable and potentially scarce. After all, you would not fence off your front lawn and keep others from entering if you did not value the privacy of your own lot. Likewise, the second example assumes private ownership of land is less important to you and your neighbors. Perhaps a shared lot is economically feasible, or it makes the most sense given your use of the lot as a playground instead of a quiet retreat.

In this same manner, western and eastern states use exclusion and governance to meet their different management goals. Western states experience greater rates of drought and water scarcity. Irrigation became intertwined with survival. An individual cannot simultaneously use water that irrigation consumes; irrigation is a “consumptive” use of water. While the water may later run from the fields back into the stream, in the moment of irrigation, the water belongs to the farmer putting it to use. Exclusion is therefore important in western states. Strictly prioritizing use meets this need.⁶⁵ Irrigators needed parcels of water, and they needed legal guarantees that they had access to it as opposed to other users.

Eastern water relies less on exclusion and more on state governance of water rights. Historically, eastern states experienced little water scarcity. As a result of reliable rainfall, irrigation did not become a necessity until more recent years. Users primarily harnessed the flow of streams and rivers for water power and minor household consumption.⁶⁶ Parcelization does not feature prominently in eastern water law. Instead, riparianism developed as “a common property regime characterized by rules of reasonableness”—the “rule of reasonable use . . . largely prevents major consumptive diversions.”⁶⁷ While consumptive uses like irrigation led to parcelization of water in the West, an abundance of water allows eastern states to leave the watercourse intact and manage water collectively.

It is an exaggeration to say that prior appropriation *only* uses exclusion strategies and riparianism *only* uses governance strategies.⁶⁸ But the general observation remains true—that the delineation of water rights in the West and the delineation of water rights in the East differ significantly.

A federal-property approach does not account for this intense regional variation. Prior appropriation and riparianism grew from two different water landscapes—scarcity in the West and abundance in the East. The enforcement mechanisms for western water rely on different

⁶⁵ *Id.* at 452–53.

⁶⁶ *Id.* at 456.

⁶⁷ *Id.* at 452, 454–55.

⁶⁸ While riparian regimes traditionally rest on governance in the form of reasonable use restrictions, the land ownership threshold for riparian rights actually acts as an exclusive element. Similarly, while prior appropriation regimes traditionally rely on exclusion—limiting users by priority—governance emerges through beneficial use restrictions. *Id.* at 467–68, 472.

justifications and considerations than the mechanisms for eastern water parcelization in the West and collective management in the East. And the limitations on water rights developed to meet different priorities—consumption in the West and stream flow maintenance in the East.

How western and eastern states define water rights reflects these fundamental differences. Western water rights require diversion and emphasize beneficial use, while eastern water rights become limited only when one user affects the access of another to the flow of water. Prior appropriation creates a time-based hierarchy inherent in the water right itself, while riparian rights have no such restriction. And while riparian rights are linked to the land abutting a watercourse, prior appropriation rights permit the removal of water to non-adjacent parcels. A unified theory of water never existed across the United States. It strains credulity to imagine one emerging today.

2. Beneficial Use Variation

Another variation appears among western states in their legal definition of “beneficial use.” All prior appropriation states require some form of beneficial use to create a water right. But even though these states adhere to the same legal framework of prior appropriation, they define “beneficial use” differently.⁶⁹

This subsection describes the differences in how three prior appropriation states define “beneficial use”: Arizona, Colorado, and Montana. It concludes that these differences indicate that a federal-property definition of water rights is untenable.

First, examine Arizona. Arizona has tasked the judiciary with “determining ‘the nature, extent and relative priority of the water rights of all persons in the river system and source.’”⁷⁰ The courts make classification decisions in line with “Arizona’s policy of maximizing beneficial use of a scarce resource.”⁷¹ Beneficial use is the statutory metric

⁶⁹ Beneficial use also concerns contractual rights to water and has implications for the development of water rights reserved for American Indian reservations (which are currently defined and allocated according to the Practicably Irrigable Acreage standard). See Frances Williamson, *Tribal Water Rights: Private Law Alternatives to the Federal Trust Doctrine*, 61 S.D. L. REV. 407, 423–24, 441–54 (2024); Heather J. Tanana & Elisabeth Paxton Parker, *The Unfulfilled Promise of Indian Water Rights Settlements*, NAT. RES. & ENV’T Fall 2022, at 12, 15 (2022).

⁷⁰ *In re Gen. Adjudication of All Rights to Use Water in Gila River Sys. & Source*, 9 P.3d 1069, 1083 (Ariz. 2000) (quoting ARIZ. REV. STAT. § 45-252(A)). See also *id.* (“In sum, this is not an area in which we must await or necessarily defer to legislative action.”). Cf. *Law v. Superior Court*, 755 P.2d 1135, 1143 (Ariz. 1988) (“We are furthering the statutory objectives in this area, not contradicting them.”).

⁷¹ *S.W. Sand & Gravel, Inc. v. Cent. Ariz. Water Conservation Dist.*, 212 P.3d 1, 7 (Ariz. Ct. App. 2009).

for creating, measuring, and limiting water rights.⁷² Essentially, Arizona law dictates that water rights do not exist without beneficial use. Arizona's Surface Water Code, enacted in 1919, states that beneficial uses are "domestic, municipal, irrigation, stock watering, water power, recreation, wildlife, including fish, nonrecoverable water storage . . . or mining."⁷³ This list may be construed as exclusive—only the types of uses listed may count as "beneficial."⁷⁴ Arizona law creates a limited universe of water rights: The rights do not exist unless used for one of the nine named purposes.

Colorado has a slightly different approach. The Colorado Constitution states that, "[t]he right to divert the unappropriated waters of any natural stream to beneficial uses shall never be denied."⁷⁵ But the Constitution does not define exactly what a "beneficial use" entails. The Colorado Legislature passed a statute defining beneficial use as "the use of that amount of water that is reasonable and appropriate under reasonably efficient practices to accomplish without waste the purpose for which the appropriation is lawfully made."⁷⁶ Interestingly, the statute itself refers to the provision's "generality," which suggests the legislature willingly left the terms vague and adaptable.⁷⁷ Some of the examples the statute provides include impounding water for firefighting and storing water for recreational fishing.⁷⁸ It is also important to note that one of the examples listed in the statute provides the state of Colorado with the power to prescribe minimum flows "to preserve the natural environment to a reasonable degree" for the enjoyment of "future generations."⁷⁹ Once again, this language shows how vague the laws governing "beneficial use" are defined under Colorado law—what is "reasonable" and "without waste" will inevitably change with time.⁸⁰

However, amidst this ambiguous and adaptable language, the Colorado Constitution provides some clear lines. The state's Constitution sets two priority use terms in times of shortage: First, domestic purposes

⁷² ARIZ. REV. STAT. ANN. § 45-141(B) (West, Westlaw through the 1st Reg. Sess. of 57th Leg. (2025)).

⁷³ *Id.* § 45-151(A).

⁷⁴ See Frank J. Trelease, *The Concept of Reasonable Beneficial Use in the Law of Surface Streams*, 12 WYO. L.J. 1, 7 (1957); see also Tom Whitmer, *Water Management in Arizona*, BACKYARDS & BEYOND, Spring 2008, at 5, 6 ("Surface water can only be appropriated for the beneficial uses as defined in statute.").

⁷⁵ COLO. CONST. art. XVI, § 6.

⁷⁶ COLO. REV. STAT. § 37-92-103(4) (LexisNexis, LEXIS through the 1st Reg. Sess. of 75th General Assemb. (2025)).

⁷⁷ *Id.*

⁷⁸ *Id.* § 37-92-103(4)(a).

⁷⁹ *Id.* § 37-92-103(4)(c).

⁸⁰ See Michael Toll, Comment, *Reimagining Western Water Law: Time-Limited Water Right Permits Based on a Comprehensive Beneficial Use Doctrine*, 82 U. COLO. L. REV. 595, 602 (2011).

trump all other purposes, and second, agricultural purposes trump manufacturing purposes.⁸¹ While less specific than Arizona law about what beneficial uses are permitted by law, Colorado law makes certain priority determinations incredibly clear.

Finally, consider Montana law. Like all other prior appropriation states, Montana has a beneficial use requirement.⁸² And unlike Arizona, but like Colorado, the list of beneficial uses Montana law provides does not appear exhaustive.⁸³ The Montana Annotated Code states that, “[t]he development and utilization of water resources and the efficient, economic distribution thereof are vital to the people in order to protect existing uses and to assure adequate future supplies for domestic, industrial, agricultural, and other beneficial uses.”⁸⁴ And while not explicitly stated in the statute, this list of uses is understood to include “irrigation, stock water, municipal, industrial, domestic, recreational uses, instream flow, hydropower, fish and wildlife, aquifer storage and recovery, and mitigation.”⁸⁵ Yet, there is no hierarchy among the uses; the permit application date establishes a water right’s priority.⁸⁶ Montana’s definition of “beneficial use” bears similarities to that of other states, but it also differs in important ways that affect the nature of the water rights that state law creates.

Clearly, even among western states, states situate and define “beneficial use” differently. This section does not overemphasize the differences between the states; their laws contain critical similarities that are common among most prior appropriation states. But it highlights that marked differences exist between the water laws of the Western states, and these differences shrink or expand the contours of water rights in those states.

Consider recent state-court litigation in California. In *Bring Back the Kern v. City of Bakersfield*,⁸⁷ the court held that California courts must always evaluate a water use’s reasonableness before the court orders parties to comply with it.⁸⁸ The court reached this conclusion because Article X, Section 2 of the California Constitution prohibits “unreasonable

⁸¹ COLO. CONST. art. XVI, § 6.

⁸² MONT. CONST. art. IX, § 3(3).

⁸³ THOMPSON ET AL., *supra* note 44, at 220 n.60. In Montana, the term “beneficial use” means, generally “a use of water for the benefit of the appropriator, other persons, or the public.” MONT. CODE ANN. § 85-2-102(5) (LexisNexis, LEXIS through 2025 Legis. Sess.); see ADAM SIGLER & BRAD BAUER, WATER RIGHTS IN MONTANA: AN OVERVIEW 1 (2017), <https://perma.cc/H3GB-AEEZ>. Montana law further limits changes in water use, like many other prior appropriation regimes. *Id.* at 2.

⁸⁴ MONT. CODE ANN. § 85-1-101(4) (LexisNexis, LEXIS through 2025 Legis. Sess.).

⁸⁵ SIGLER & BAUER, *supra* note 83, at 1.

⁸⁶ MONT. DEP’T NAT. RES. & CONSERVATION, WATER RIGHTS AND HISTORICAL BENEFICIAL USE 1 (2015), <https://perma.cc/WVZ6-PAV7>.

⁸⁷ 331 Cal. Rptr. 3d 589 (Cal. Ct. App. 2025).

⁸⁸ *Id.* at 597.

or nonbeneficial uses of water.”⁸⁹ While the legislature possessed broad authority to control “how water is used in the state,” it is subject to the limits of the California Constitution’s “reasonableness” provision.⁹⁰ This case reveals the interplay between state common law and positive law, and it shows that state courts play an active role in determining the reasonableness of challenged water uses. The state legislature carefully tailors water law to the locality’s needs, and then the state courts spot-check the law.

It is hard to see how a federal court could cobble together a federal definition of beneficial use without simultaneously gutting a state’s historic common law and robust statutory provisions, or how the court would respect states’ sources of law while engaging in this approach. That effort would require the court to reconcile decades of divergent state caselaw in the name of a “uniform” rule.

The difference in “beneficial use” definitions indicates that a federal-property definition of water rights is untenable. Beneficial use is inherent to western water rights; the rights, by definition, do not exist without it. A federal definition for water rights would need to take beneficial use into account or risk destroying the laws of almost half the states in the country. Furthermore, state courts play a critical role in defining “beneficial use” and considering, on a case-by-case basis, how some of the vague provisions of western water law apply to certain modern uses.⁹¹ Some say that most western courts have determined that any “socially acceptable” use is a beneficial use.⁹² But what is “socially acceptable” varies by state, if not by locality. Such a geographically dependent standard does not lend itself to nationalization.

Under the federal-property approach, federal courts would interpret what qualifies as “beneficial,” picking and choosing between the plethora of state laws and court cases. In the end, some state laws will win, and others will lose. And in the meantime, the hapless water rights owner must wait while the federal court re-litigates decisions her home state already made.

3. Public Trust Variation

Another form of variation is using the public trust doctrine to narrow the contours of individual water rights. This subsection describes the differences in how western states incorporate public trust principles into

⁸⁹ *Id.* at 610.

⁹⁰ *Id.*; CAL. CONST. art. X, § 2.

⁹¹ Toll, *supra* note 80, at 604 (“The courts serve a unique role under the prior appropriation system.”).

⁹² *Id.*

water law. These differences stymie an attempt to create a uniform definition of water rights.

The public trust doctrine is a common law doctrine that “recognizes that the public has particular inalienable rights to certain natural resources and provides that these resources are held in trust for the benefit and use of all people.”⁹³ In the water context, public trust protections typically apply to instream flows and navigation—two forms of public use protected by the government.⁹⁴

Many state statutes and constitutions defining the scope of individual water rights incorporate the public trust doctrine. California’s Water Code states that “[a]ll water within the State is the property of the people of the State,” while “the right to the use of water may be acquired by appropriation.”⁹⁵ Idaho law makes “the waters of the state, when flowing in their natural channels,” the “property of the state.”⁹⁶ In these states, the public trust doctrine is a background principle of state law. And even when unwritten, state courts viewed the public trust doctrine as limiting the strength and breadth of individual water rights.⁹⁷

But this background principle is not “wide” in all states.⁹⁸ In Arizona, the public trust doctrine’s status has been a source of constant litigation, as the legislature has repeatedly tried to narrow the public trust’s applicability to bodies of water.⁹⁹ Arizona courts have halted many of these attempts, writing that “[i]t is for the courts to decide whether the public trust doctrine is applicable to the facts.”¹⁰⁰ The Arizona Supreme Court has yet to determine when the public trust doctrine applies to individual water rights, if at all.¹⁰¹

⁹³ *Instream Flows*, *supra* note 63, at 318.

⁹⁴ See Roderick E. Walston, *The Public Trust Doctrine in the Water Rights Context*, 29 NAT. RES. J. 585, 585 (1989) (“[T]he state holds its navigable waters and underlying beds in trust for certain public uses, principally navigation, commerce, and fisheries.”).

⁹⁵ CAL. WATER CODE § 102 (West, Westlaw through Ch. 103 of 2025 Reg. Legis. Sess.).

⁹⁶ IDAHO CODE § 42-101 (LexisNexis, LEXIS through Ch. 340 of 1st Reg. Sess. of the 68th Leg. (2025)).

⁹⁷ The Hawaii Supreme Court rejected a takings argument as applied to individual water rights because the public trust doctrine—and the state’s responsibility to protect water for public use—predate individual water rights. See *Instream Flows*, *supra* note 63, at 370.

⁹⁸ For an even deeper discussion on the variation between state uses of the public trust doctrine and federal court decisions refusing to or improperly applying the doctrine, see Sandra B. Zellmer & Jessica Harder, *Unbundling Property in Water*, 59 ALA. L. REV. 679, 733–42 (2008).

⁹⁹ See Ian Michael Brown, *The Public Trust Doctrine in Arizona*, in THE PUBLIC TRUST DOCTRINE IN 45 STATES 40–42 (Michael C. Blumm ed., 2014).

¹⁰⁰ *San Carlos Apache Tribe v. Superior Court*, 972 P.2d 179, 199 (Ariz. 1999).

¹⁰¹ See *id.* at 216. It is also interesting to note that the Arizona legislature, in 2012, passed a statute that said the “public trust is not an element of a water right in an adjudication proceeding.” ARIZ. REV. STAT. § 45-263 (JUSTIA through 2nd Reg. Sess. of 50th Leg. (2012)), *amended by*, ARIZ. REV. STAT. § 45-263 (2019). However, by 2023, the statute was revised to simply say that “State law, including all defenses available under state law, applies to the adjudication of all water rights initiated or perfected

Even western states, united in their effort to conserve water, disagree on the public trust doctrine's applicability to individual water rights. States that broadly view the public trust doctrine recognize the state's interest in preserving water for public use. States with a narrow view are skeptical about the government's ability to invalidate individual water rights to protect the general public's interests. The public trust doctrine can operate as a trump card during droughts, and states with this broad background principle are more likely to employ the doctrine for the public good; individual water rights exist but are subject to the state's ownership of the water for public use.

Whether the public trust doctrine limits water rights—and the state's power—varies by state. A federal-property definition for water rights would champion one approach to the public trust doctrine while extinguishing another. If the federal-property approach adopted the strong public trust view that California espoused, then the government could easily revoke private water rights. However, if the federal-property approach adopted a weak view of the public trust, then private water rights could survive, even in the face of dire public need. Unlike the federal approach, the state-specific approach provides a moderate way forward and allows states to interpret the doctrine's history—and future—as applied to water.

4. Groundwater-Surface Water Integration Variation

Variation also exists among western states in the treatment of groundwater and surface water as integrated or distinct resources. This subsection describes that variation between three states—New Mexico, Arizona, and Texas—and concludes that disrupting the state-law frameworks used to define groundwater rights would have massive consequences.

Many states drew distinctions between surface water and groundwater, in part due to the historical lack of knowledge surrounding groundwater, its flow, and its recharge.¹⁰² One of groundwater's historically elusive elements is its connection to surface water.¹⁰³ Groundwater's withdrawal does not immediately impact surface water, and the time lags complicated early attempts to generate laws for

pursuant to state law.” ARIZ. REV. STAT. ANN. § 45-263 (West, Westlaw through 1st Reg. Sess. of 57th Leg. (2025)).

¹⁰² Many states have “long drawn an artificial distinction between surface water and much groundwater, and applied different legal doctrines to each.” Leshy, *supra* note 42, at 1988–89; *see also* THOMPSON ET AL., *supra* note 44, at 445 (noting the different treatment stemmed from lack of knowledge about groundwater).

¹⁰³ *See* THOMPSON ET AL., *supra* note 44, at 517.

groundwater use.¹⁰⁴ Over time, many states developed integrated systems of water law that recognize the interplay between groundwater and surface water.¹⁰⁵ This subsection considers the laws of three western states: New Mexico, Arizona, and Texas.

New Mexico was one of the first states to recognize the connection between groundwater and surface water.¹⁰⁶ In 1962, the Supreme Court of New Mexico held that the State Engineer had the power to examine the effects on surface water flow when he determined whether to grant a groundwater pumping permit.¹⁰⁷ The court referenced the State Engineer's findings in its opinion, which included discussion of "scientific considerations" that showed "accretions from the underground reservoir constitute a major source of the fully appropriated surface water supply of the Rio Grande."¹⁰⁸ The City of Albuquerque's application to drill for groundwater from the Rio Grande Underground Water Basin would impair senior surface water rights to the Rio Grande's water. Therefore, the State Engineer properly denied the application.

Today, any proposed groundwater well application must show that groundwater pumping will not interfere with connected surface water rights.¹⁰⁹ In New Mexico, the public owns all surface water *and* groundwater, with the right to use that water as state law establishes.¹¹⁰ New Mexico also applies the law of prior appropriation—the law used to create surface water rights—to groundwater.¹¹¹ And, to obtain the regular-use groundwater permit, an applicant must show that the water will be put to a "beneficial use"—a phrase commonly used in surface water legislation.¹¹² Like surface water, the public owns the groundwater in New Mexico, state law creates use rights, and the law of prior appropriation applies. New Mexico's surface water and groundwater legal frameworks are fully integrated.¹¹³

Unlike New Mexico, Arizona subjects groundwater and surface water to different legal frameworks—they are not integrated. While surface

¹⁰⁴ See *id.* at 518.

¹⁰⁵ Christine A. Klein, *Groundwater Exceptionalism: The Disconnect Between Law and Science*, 71 EMORY L.J. 487, 494–95 (2022).

¹⁰⁶ See *New Mexico*, STANFORD: WATER IN THE W., <https://perma.cc/C5T3-KLQQ>.

¹⁰⁷ See *City of Albuquerque v. Reynolds*, 379 P.2d 73, 83 (N.M. 1962).

¹⁰⁸ *Id.* at 78.

¹⁰⁹ See *New Mexico*, *supra* note 106; M. D. SMOLEN, AARON MITTELSTET & BEKKI HARJO, WHOSE WATER IS IT ANYWAY?: COMPARING THE WATER RIGHTS FRAMEWORKS OF ARKANSAS, OKLAHOMA, TEXAS, NEW MEXICO, GEORGIA, ALABAMA, AND FLORIDA 4 (2012), <https://perma.cc/PJ9R-WCSB>.

¹¹⁰ See N.M. CONST. art. XVI, § 2.

¹¹¹ See *New Mexico*, *supra* note 106.

¹¹² See Klein, *supra* note 105, at 549.

¹¹³ "[T]here is more of an administrative capacity to recognize this hydrological overlap." *New Mexico*, *supra* note 106.

water is public property subject to prior appropriation laws, groundwater is subject to the reasonable use doctrine.¹¹⁴ However, similar to New Mexico, Arizona's passage of comprehensive regulatory legislation in the late twentieth century (the Groundwater Management Act) eliminated the private nature of most groundwater in Arizona.¹¹⁵ In areas that the Groundwater Management Act does *not* cover, however, reasonable use rules control. "Reasonable use allows overlying landowners to use as much percolating groundwater as may be put to reasonable and beneficial use on their overlying land."¹¹⁶ Groundwater pumping may continue despite its effects on surface water rights. Because each landowner situated over an aquifer is individually entitled to pump as much water as he can use out of an aquifer, his right to water is non-exclusive of other landowners. If Landowner A wants to pump 10,000 gallons, he can pump 10,000 irrespective of Landowner B's water rights.¹¹⁷ Unlike New Mexico, Arizona does not fully integrate its legal treatment of groundwater and surface water throughout the state.

The third western state to consider is Texas. The rule of capture, a unique legal doctrine that no other western state fully employs today, governs groundwater in Texas. While surface water may be the public's property, with use rights given to individuals, whoever sits atop the aquifer absolutely owns the groundwater.¹¹⁸ The "rule of capture" allows every landowner to pump as much as he or she wants without reservation. Texas has a decentralized permitting regime that delegates permitting authority to local groundwater conservation districts.¹¹⁹ But if a groundwater conservation district restricts a user's planned withdrawals, the user can sue for compensation, because the regulation and restrictions unconstitutionally interfere with his or her property rights.¹²⁰ Like in New Mexico, groundwater rights in Texas are creatures of state law. But the similarities between Texas's groundwater laws and those of other western states end there. The law of prior appropriation applies to surface water rights, while the capture rule applies to groundwater; the two systems are not integrated.

The differences in how western states handle the integration of surface water and groundwater indicate that a federal-property definition

¹¹⁴ See *Arizona*, STANFORD: WATER IN THE W., <https://perma.cc/6Y3J-SVAU>.

¹¹⁵ See *id.*; see also *Town of Chino Valley v. City of Prescott*, 638 P.2d 1324, 1328–29 (Ariz. 1981) (recognizing the Groundwater Management Act's legislative aim and mechanism).

¹¹⁶ *Arizona*, *supra* note 114.

¹¹⁷ "A landowner may exceed his/her fair share of water without facing liability to other landowners. However, a landowner is liable if his intentional and harmful use of water is unreasonable with respect to another landowner. As such, reasonable use creates a rule of capture regime among overlying landowners." *Id.* (footnotes omitted).

¹¹⁸ See *Edwards Aquifer Auth. v. Day*, 369 S.W.3d 814, 831–32 (Tex. 2012).

¹¹⁹ See *Texas*, STANFORD: WATER IN THE W., <https://perma.cc/UH2X-UXYF>.

¹²⁰ See *id.*

of water rights will be difficult, if not impossible, to create. Disrupting the legal frameworks that different states use to uniformly define groundwater rights would have major consequences. In 2012, the Texas Supreme Court determined that landowners “have a constitutionally compensable interest” in the groundwater underneath their land. This is not true of groundwater in New Mexico, the mandatory permitting regimes in Arizona, Nevada,¹²¹ or much of Colorado¹²² and California.¹²³ Water users in Texas and parts of Arizona *own* the actual groundwater beneath their land. Water users in other western states only own a right to *use* it. These laws create polar opposite definitions of what a “water right” entails—mere use of the water or the water itself.

If courts use state-specific-property definitions for takings analysis of groundwater, the diversity of state law remains intact.¹²⁴ An attempt to federalize the definition of groundwater rights will inevitably eliminate the less popular laws of states like Texas and Arizona, which recognize groundwater as outside public ownership; a unifying definition of groundwater rights does not respect the irreconcilable laws of the western states.¹²⁵ Any federal-property definition of groundwater rights must tackle the differences between the western states, especially the states on the other side of the 100th meridian. With this much intra-regional

¹²¹ “All water in Nevada, including groundwater, belongs to the public and is appropriable for beneficial use.” *Nevada*, STANFORD: WATER IN THE W., <https://perma.cc/G79Z-78UK>.

¹²² “Colorado has emerged with a complicated body of groundwater law, where property rights and jurisdiction vary depending upon the relevant aquifer.” *Colorado*, STANFORD: WATER IN THE W., <https://perma.cc/4BQS-T8QN>.

¹²³ Generally, “landowners overlying aquifers can put that groundwater to a reasonable and beneficial use on the overlying land, but they must share available groundwater with other overlying landowners.” *California*, STANFORD: WATER IN THE W., <https://perma.cc/7T27-ZJSM>. This doctrine is called the correlative rights doctrine. *See id.*

¹²⁴ In a 2013 article, Dave Owen analyzed fifty groundwater takings cases. From those sources, he concluded that the majority of state courts saw groundwater rights as forms of constitutionally protected property that is subject to a takings analysis. He also concluded, however, that the majority of plaintiffs challenging government regulation of their right to pump or use groundwater were ultimately unsuccessful. Owen, *supra* note 52, at 627–31.

¹²⁵ There does not appear to be a judicial appetite to abandon the laws of these deviating states. Recently, the Fifth Circuit affirmed the ability of Texas—an outlier in its treatment of groundwater—to define the contours of groundwater rights. The Fifth Circuit reversed a lower court dismissal of a groundwater takings claim and cited Texas law, holding that the law of the State clearly established that the plaintiff’s “rights as a property owner are a creature of state law.” *Stratta v. Roe*, 961 F.3d 340, 359 (5th Cir. 2020). The panel relied on the rulings of the Texas Supreme Court and rejected the argument that “groundwater rights by their nature are ‘too inchoate’ to merit constitutional protection: the intolerable extreme of that argument would allow a regulator to deprive the property owner of all his groundwater rights.” *Id.* (citing *Edwards Aquifer Auth. v. Day*, 369 S.W.3d 814, 832–33 (Tex. 2012)). Despite Texas’s status as an outlier state in its treatment of groundwater rights, the Fifth Circuit avoided a ruling that untethered the water right from state-specific-property law. Texas courts recognize the importance of state-law definitions of property. *Id.*

variation, scholars and jurists should hesitate to pursue the concept of a unified theory of property in water.

B. *Ecological Conditions*

These forms of variation arose from obvious and important variations in ecological conditions across the country and within regions.

Water rights evolved to reflect the needs of the locality. The history of prior appropriation law is the story of regional adaptation—when water needs changed, the law changed. The creation of appropriative rights enabled users to divert water from rivers and lakes for irrigation. Eastern states experience less water scarcity and adopted English common law riparian principles that viewed non-diverted water as valuable. The water-scarce western states, however, emphasized consumption and beneficial use, so no water goes to waste. Communities responded to scarcity, and the law adapted to the communities it served.

Variations in water supply persist on the macroscale—across the nation—but also on the microscale—within regions and states. We observe the first macro-variation in *where* water flows. Hydrology differs markedly throughout the United States. “[W]estern appropriation water rights differed fundamentally from eastern riparian water rights due to contrasting geographical conditions that dictated a different approach to allocating water among private users.”¹²⁶ As a stark example, the average annual rainfall east of the 100th meridian ranges from 60 to 100 inches per year, while western states receive, on average around 20 inches—less than half.¹²⁷ Unpredictable precipitation makes agricultural irrigation a western phenomenon.¹²⁸ In fact, many southwestern watersheds routinely consume more water than is annually renewed, often needing to import water from outside sources or to overdraft in-state groundwater.¹²⁹

There are also differences in *when* rain falls by region. For example, Tucson, Arizona, receives most of its rainfall during summer storms, while many areas in California receive rain during the winter and spring months in the form of snowmelt.¹³⁰ These patterns make the need for irrigation, especially during brutal summer months, a necessity in most western

¹²⁶ Huffman et al., *supra* note 45, at 29.

¹²⁷ See THOMPSON ET AL., *supra* note 44, at 7.

¹²⁸ See *id.*

¹²⁹ See *id.* at 8. “The USGS reports that water tables have dropped over the last 20 years in about two-thirds of the wells that it monitors nationwide. The average decline in water tables has been over ten feet, and the water table in some aquifers has declined over 100 feet.” *Id.* at 12. Some states have mitigated this issue by trying to use aquifers as storage for water received in seasons when it is not immediately needed. See *id.* at 13.

¹³⁰ *Id.* at 9.

communities.¹³¹ In contrast, during the summer, hurricanes and intense flooding batter the Gulf Coast's southeast region.¹³² While one region of the United States cannot get enough water, other regions struggle with too much.

Finally, there are differences in *how much* water is used across the nation. Groundwater usage differs between states that experience different hydrogeological realities.¹³³ For example, evapotranspiration¹³⁴ outstrips precipitation across Arizona, Texas, Nevada, and New Mexico, while California experiences some areas of high net precipitation.¹³⁵ As another example, Arizona and Texas contain areas with aquifer water-level decline in excess of forty feet, in part due to the low levels of groundwater recharge, while the same cannot be said of the nearby state of Utah.¹³⁶

¹³¹ See *id.* at 9. The U.S. Department of Agriculture Economic Research Service reported that “[b]etween 1949 and 2017, the share of total U.S. irrigated cropland in the Mountain and Pacific regions decreased from 77 percent to 44 percent, while the share of irrigated cropland in the Mississippi Delta and Northern Plains regions increased from 8 percent to 34 percent.” R. Aaron Hrozencik & Marcel Aillery, *Trends in Irrigated Agriculture Reveal Sector’s Ability to Adapt to Evolving Climatic, Resource, and Market Conditions*, USDA (Jan. 12, 2022), <https://perma.cc/4FSV-RYE5>. The irrigated acreage decline in the West reflected “increasing regional competition for available water supplies, changes in surface flow regimes largely reliant on mountain snowpack melt, and diminishing groundwater availability.” *Id.* The expansion of irrigation in the East reflected “access to relatively shallow groundwater aquifers and incentives to minimize soil-moisture deficits during critical crop growth stages, particularly during periods of drought.” *Id.* The West relies on irrigation more than the East, with about 30% more irrigated cropland relative to the East. See *id.* However, due to increasing water scarcity in the West, and changing rainfall patterns in the East, those numbers may change in the near future. See *id.*

¹³² See THOMPSON ET AL., *supra* note 44, at 10.

¹³³ “Although groundwater law concepts can be similar across the West, there is local variability of the law. Just as hydrogeology can vary significantly across regions, so can permitting regimes and the common law.” *Exploring Limits for a Precious Western Resource*, STANFORD: WATER IN THE W., <https://perma.cc/6WDH-4FLB>.

¹³⁴ “Where precipitation substantially exceeds potential evapotranspiration, one can expect a water surplus, and where potential evapotranspiration substantially exceeds precipitation (the negative numbers), one can expect a water deficit.” THOMAS E. REILLY, KEVIN F. DENNEHY, WILLIAM M. ALLEY & WILLIAM L. CUNNINGHAM, *GROUND-WATER AVAILABILITY IN THE UNITED STATES* 21 (2008).

¹³⁵ See *id.*; see also REBECCA NELSON & DEBRA PERRONE, *COMPARING LOCAL GROUNDWATER WITHDRAWAL PERMITTING LAWS IN THE SOUTHWEST AND CALIFORNIA* 1 (2016), <https://perma.cc/VGS5-HFCS> (“California is the last of the seven southwest states—Arizona, California, Colorado, Nevada, New Mexico, Texas, and Utah—to introduce a permitting power, suggesting that the other southwestern states can inform GSAs looking to promote sustainability through the use of their new power to establish extraction allocations.”). As another example, Texas and California have diverse recharge potential across the state, and both have non-prior-appropriation legal frameworks in contrast to other western states. See REILLY ET AL., *supra* note 134, at 20. Notably, the special permitting areas in California and Texas also “appear at the more locally-focused end of the spectrum,” in contrast to special permitting areas in other states. NELSON & PERRONE, *supra*, at 2.

¹³⁶ REILLY ET AL., *supra* note 134, at 19.

On the microscale, hydrological realities differ across localities. For example, regulations in California differ up and down the state; while the “northern coast and Sierra Nevada mountains enjoy the greatest precipitation . . . most people want to live along the coast from San Diego to Los Angeles to Santa Barbara, and desert communities in southeastern California rank as some of the most highly productive farming regions in the State.”¹³⁷ Some scholars observe that, while there is plenty of water in the state, “it both originates in, and flows to, the wrong places.”¹³⁸ California law has developed a hyper-local character to account for these regional discrepancies, with arid regions enforcing harsh local restrictions on use.

In sum, water rights evolved to satisfy water users’ practical needs. Those needs vary by geography, so the contours of water rights vary as well.

The “geographic” justification for the state-specific approach has intuitive appeal as well. Consider *Tyler v. Hennepin County*, which reviewed a municipality’s decision to keep profit from the sale of a house exceeding the overdue property taxes the homeowner owed.¹³⁹ The Court reasoned that, “state law cannot be the only source” used to define property rights, otherwise states could create legislative loopholes; if property is a creature of positive state law, then a state can simply change its law to erase a property right.¹⁴⁰ Indeed, “in 1935, [Minnesota] purported to extinguish [Tyler’s] property interest by enacting a law providing that an owner forfeits her interest in her home when she falls behind on her property taxes.”¹⁴¹ Minnesota did not apply the law consistently across all forms of property or all creditors. Instead, the law only applied when the excess concerned real property and the creditor was the state.¹⁴² Because Minnesota’s actions embodied the “positivist trap,” the Court relied on the principle “that a government may not take more from a taxpayer than she owes” and eschewed state law in favor of generalities and history.¹⁴³

¹³⁷ As to groundwater in California, “SGMA offers GSAs no guidance and imposes few constraints on permitting regimes, allowing GSAs to design a regime that best fits local conditions. . . . The ability to introduce localized controls on groundwater withdrawals gives GSAs opportunity to ensure that their local vision for sustainability translates into results.” NELSON & PERRONE, *supra* note 135, at 4. For a thorough investigation of California groundwater law, see generally Joseph L. Sax, *We Don’t Do Groundwater: A Morsel of California Legal History*, 6 U. DENV. WATER L. REV. 269 (2003) (discussing the judicial and statutory history of groundwater laws in California as water needs evolve).

¹³⁸ THOMPSON ET AL., *supra* note 44, at 243.

¹³⁹ *Tyler v. Hennepin Cnty.*, 143 S. Ct. 1369, 1373 (2023).

¹⁴⁰ *Id.* at 1375.

¹⁴¹ *Id.* at 1376.

¹⁴² See *id.* at 1379. “Minnesota may not extinguish a property interest that it recognizes everywhere else to avoid paying just compensation when it is the one doing the taking.” *Id.*

¹⁴³ *Id.* at 1372.

This paper rejects this approach from a theoretical perspective. But there are also practical reasons for why this federal-property approach does not make intuitive sense for natural resources property like water. Nothing about property taxes inherently changes from state to state; besides the actual percentage rate, most states follow similar property tax structures, and states uniformly recognize the ownership interest in real property. But with water, there are huge differences in how states recognize and define water rights; water *rights*—not just the economic value of water—vary with state boundaries. Furthermore, states have to actively engage with and consider hydrological differences when defining the contours of a water right, while the main difference to address when levying a tax on real property is valuation. It is unsurprising that a federal court in a country historically uneasy about aggressive taxation would see a state's positivist loophole as unconstitutional.¹⁴⁴ But *Tyler* does not require the same legal treatment for natural resources property, and, as this paper belabors, doing so would be unwise.

The general law approach obscures this form of property federalism and tries to impose a definition of water ownership not moored to a specific state's laws. Yes, certain areas of law need uniformity, and federal law provides that stability.¹⁴⁵ However, property is an inherently local enterprise; even “at the height of general law, property was the canonical example of the local.”¹⁴⁶ Despite the acceptance of general or federal common law principles in other legal areas, the task of defining and protecting property rights fell to state or local governments. And water exemplifies the argument against uniformity and global definitions of property rights. Our system emphasizes local uses and provides states with opportunities to adjust to hydrological realities; a national approach lacks the necessary nuance.¹⁴⁷

C. *Investment-Backed Expectations*

Finally, rights-holders' investment-backed expectations—an important element in takings doctrine—are inextricably intertwined with variation. The federal-property approach is unwise because state law principles inhere in landowners' reasonable, investment-backed expectations. Courts that do not endorse state law definitions may be less

¹⁴⁴ See *id.* at 1379–80.

¹⁴⁵ See Stewart E. Sterk, *The Federalist Dimension of Regulatory Takings Jurisprudence*, 114 YALE L.J. 203, 218 (2004). For example, free speech protections cannot depend on a state's definition of indecency.

¹⁴⁶ *Illusory Promise*, *supra* note 17, at 1027.

¹⁴⁷ Water rights evolved across the United States, and they continue to evolve as different states diagnose natural resources dilemmas. A general definition of water rights limits “the prospect that new interests or innovative regulations might be squelched as ‘unreasonable’ or given limited effect because of the very fact that they are outliers.” *Property Convergence*, *supra* note 31, at 718.

sympathetic to a state's arguments that a regulation has a historical analogue, as well as water users' argument that their property lacks economic value because of regulation. Once again, both governmental and private actors can manipulate a federal-property approach for their ends. It is court unpredictability and the lack of boundaries in a federal-property system, not just the outcomes reached, that cause concern.

Under the *Penn Central* test for regulatory takings (those that are not considered per se takings), courts consider three factors: the regulation's economic impact, "the extent to which the regulation has interfered with distinct investment-backed expectations," and the character of the government's action.¹⁴⁸ In *Murr*, the Supreme Court held that "a landowner's reasonable expectations should be determined based on 'the whole of our legal tradition' and made clear that both common-law property rules and governmentally enacted [property] regulations form part of the legal tradition that shapes" a property owner's reasonable expectations.¹⁴⁹ Courts focus on "what rights reasonable [property owners] would believe they actually possess based on the way the state has historically treated their property."¹⁵⁰ This test rests on the property owners' expectations in light of the state's past treatment of their property in the common law and statutes.¹⁵¹ An extensive history of state regulation of certain property rights means a property owner "reasonably anticipated restrictions on their use of the property."¹⁵² If the state routinely regulated land use, then a landowner could reasonably anticipate restrictions on how he uses his land. A new regulation that mirrors a historical common law rule that regulated property does not "take" the property owner's

¹⁴⁸ *Penn Cent. Transp. Co. v. New York City*, 438 U.S. 104, 124 (1978).

¹⁴⁹ Stahl, *supra* note 9, at 615. Mulvaney criticizes the "background principles" approach as producing "strained judicial construction of common law principles" that "both reject and support regulatory takings challenges," usually in line with judicial preferences. *Foreground Principles*, *supra* note 13, at 866. Mulvaney argues that "unearthing arguably analogous common law principles should not be the driving force in defending new regulations against takings attacks." *Id.* at 875.

¹⁵⁰ Stahl, *supra* note 9, at 616.

¹⁵¹ However, "the Court has exhibited a strong normative preference for a certain type of independent source—'background principles' of the common law—over others, namely state statutory and administrative law." *Foreground Principles*, *supra* note 13, at 837 (emphasis omitted).

¹⁵² Stahl, *supra* note 9, at 618.

property rights.¹⁵³ However, a new regulation that has no analogue to a historical regulation may implicate the Takings Clause.¹⁵⁴

The “investment-backed expectations” factor of regulatory takings analysis requires courts to examine background principles of *state* common law. In the water context, this instruction implicates the doctrines discussed earlier in this paper—beneficial use restrictions, abandonment, and public trust doctrine, among others. It may also include state legislative enactments that pre-date an individual’s acquisition of water rights.¹⁵⁵ Since state common law doctrine and local regulation of water rights abound, any court conducting the *Penn Central* analysis will have to consider the state-specific background principles limiting the scope of water rights.

Importantly, these state-specific background principles determine whether water-right absurdities will arise. Courts routinely invalidate race-based covenants in housing because they violate state and federal law and interfere with public policy.¹⁵⁶ Likewise, most states bar wasteful uses of water in state-specific definitions of “beneficial use.”¹⁵⁷ Untethering water rights from state law prevents regulatory bodies from using these state-law definitions to prevent obscene or harmful uses of water.

Consider again *Casitas Municipal Water District v. United States*, where a federal court determined that diverting water to protect an endangered fish species constituted a physical (or *per se*) taking. While the court used state-specific understanding of water rights, some scholars argue it did not properly import California’s common law and statutory principle of the public trust doctrine. In *Casitas*’s context, the “public trust doctrine preclude[d] the claim of an entitlement to act in a way that harm[ed]” the endangered fish, which were “a public trust resource.”¹⁵⁸ Essentially, “if the action . . . harms the public trust . . . , a subsequently adopted regulation seeking to prevent that harm cannot trigger a takings claim because the regulation does not restrict a vested entitlement recognized under state law.”¹⁵⁹ The federal court arguably erred in construing state-common-law

¹⁵³ A new regulation that restricts one’s use of property (either partially or completely) and decidedly mirrors what was always an old common law rule does not take ‘property’ because the definition of that ‘property’ already included this restriction via the common law rule. But every other new regulation—including those preventing harms, however serious, that would not be considered nuisances at common law—conceivably might implicate the Takings Clause.

Foreground Principles, *supra* note 13, at 849–50 (citations omitted).

¹⁵⁴ *Id.*

¹⁵⁵ See Stahl, *supra* note 9, at 621. Stahl writes that the “whole of our legal tradition” is a “hybrid of common law doctrine and statutory law.” *Id.* at 622.

¹⁵⁶ See *id.* at 623.

¹⁵⁷ See *supra* Section II(A)(2).

¹⁵⁸ *Foreground Principles*, *supra* note 13, at 859.

¹⁵⁹ *Id.* at 860.

and background principles “to support a regulatory takings challenge” even though “[t]he regulation seemed to bear a strong resemblance to a common law restriction”—the public trust doctrine.¹⁶⁰ A background principle of state common law existed, but the court failed to apply it.

This paper does not pass judgment on *Casitas*, or its holding that a physical taking occurred when the government attempted to divert water from a private party. Instead, this paper suggests that federal courts attempting to faithfully apply state definitions of water rights may improperly apply state background principles. And doing so may thwart water-rights holders’ reasonable expectations. Imagine if state law principles were *intentionally* ignored and federal courts given the authority to pick and choose which elements of state law to apply: countless *Casitas* cases, frustrated expectations of property owners, and the inevitable conclusion that regulation constituted a taking of water rights. To some, this may be the desirable result. But both advocates and courts should hesitate when faced with tests that give federal courts leeway to make (and then apply) the rules, many of which appear outcome-determinative. Adherence to state law principles helps courts accurately analyze the investment-backed expectations of water rights owners and produce results in line with the whole of our legal tradition.

III. Normative Implications for Water Rights

What are the implications of using a federal-property approach to define takings property? What are the consequences of courts accepting a methodology that enables judges to ignore state background principles of water law? This section provides two reasons why a federal-property approach in water law is misguided: (1) putting a limitation on per se takings of water rights, and (2) protecting state experimentation in water policy. These two weaknesses of the federal-property approach demonstrate that the state-specific approach is a better path despite what critics say.

Some argue there are drawbacks to taking a state-specific approach to takings.¹⁶¹ First, federal courts are not experts in state law.¹⁶² Federal courts do not know the particulars of state natural resources law and must tackle questions that state courts are better equipped to answer.¹⁶³ Second,

¹⁶⁰ *Id.* at 860–61.

¹⁶¹ See *Illusory Promise*, *supra* note 17, at 1023 (“(1) [F]ederal constitutional law demands uniformity in underlying rights or rules, either simply because it is federal or because too much deference to positive law in constitutional settings might invite manipulation; and (2) uniformity is required because law-enforcement activities might cross jurisdictional boundaries.”).

¹⁶² Sterk, *supra* note 145, at 228.

¹⁶³ *Id.* at 234 (footnote omitted) (“State judges are typically more familiar with local conditions, problems, and background state law than is the Supreme Court. And the necessary dependence of

takings claims become fact-specific when based on state law. Although Supreme Court precedent already focuses on fact-specific inquiry, relying on state law forces federal courts to delve into the details rather than rely on general pronouncements of law.¹⁶⁴ Third, focusing on state law limits the value of federal precedent, as courts cannot apply the law of one case (or one state) to another.¹⁶⁵ And finally, states may change or eliminate property rights if the federal courts do not police them; if state law defines takings property, only a state's common law background principles prevent it from "legislating away" property rights.

This "positivist trap" rightfully worries many scholars, and it is a notable downside to a state-specific approach to defining property within the meaning of the Takings Clause. A "patterning approach" may dodge this trap.¹⁶⁶ Patterning enables courts "to discover from the Constitution's traditions" the "general criteria" that define property rights.¹⁶⁷ Courts would not *abandon* the lessons of state law, but would consult state law to determine if the property right "correspond[ed] to the federal criteria for . . . constitutional property."¹⁶⁸ In the takings context, the patterning definition "would ask whether nonconstitutional sources of law confer an irrevocable right on the claimant to exclude others from specific assets."¹⁶⁹ Patterning is an intuitive, "goldilocks" approach—state law is *relevant* but courts retain the flexibility to examine history, tradition, and other general principles of property law.¹⁷⁰

Yet, despite the appeal of the cautious patterning approach or the bolder federal-property approach, state law remains the best framework to analyze takings for localized property rights like water for two normative reasons.¹⁷¹ First, a federal-property approach to surface water

takings doctrine on background state law makes the hope of nationwide uniformity little more than a chimera.").

¹⁶⁴ See *id.* at 230 ("In the typical constitutional case, any balancing test the Court develops will rest on federal constitutional values that do not vary with the content of state law.").

¹⁶⁵ See *id.* at 226. There is also an efficiency argument in favor of convergence of takings property. See *Property Convergence*, *supra* note 31, at 718 ("[T]he property interests protected and the sorts of actions that will constitute takings may be similar across state boundaries if the background law used in the analysis is multijurisdictional or national, rather than limited to a single state.").

¹⁶⁶ See Merrill, *supra* note 24, at 952; Zellmer & Harder, *supra* note 98, at 709–11.

¹⁶⁷ Merrill, *supra* note 24, at 952.

¹⁶⁸ *Id.*

¹⁶⁹ *Id.* at 969 (emphasis omitted).

¹⁷⁰ It is also questionable that state common law is as easy to change as the "positivist-trap" suggests. It is questionable that *any* change in background property principles will be permitted by state courts, especially where there is a robust common law tradition protecting the property right. There are also state constitutional provisions that would prevent state governments from legislatively eliminating property rights.

¹⁷¹ Patterning may also be a bad fit for water law for practical reasons. Patterning requires a baseline definition, which means courts must study the body of law shared by the states and reduce

rights will almost always result in a court finding a per se taking occurred. And second, the federal-property approach will chill state experimentation in an era of drought.

This conclusion does not reject the patterning approach's value. Rather, it highlights how the patterning approach still runs into trouble by granting judges the ability to pick and choose which laws to adopt. For some property rights that receive almost uniform treatment across the nation, the federal-property approach works. But for property rights that are completely different depending on the state—like water rights—that approach creates more frustration than consistency.

A. *Limiting Doctrines and Per Se Takings*

First, the federal-property framework undermines an attempt to depict water rights as narrow forms of property easily subject to state regulation.

Whether water rights are “takeable” within the Fifth Amendment’s meaning remains hotly contested. Some scholars broadly state that “water rights are generally viewed not as actual property rights subject to a taking under the Fifth Amendment” because they are usufructuary.¹⁷² Others make the narrower argument and target recent attempts by lawyers to “shoehorn” government regulations of water rights into the “judge-made category of permanent physical occupation.”¹⁷³ Critics of this tactic doubt whether regulations of water use qualify as a per se takings. Needless to

the inescapable nuances present between them. For example, nobody would say that water rights in eastern and western states should be treated with the same baseline; after all, they use two entirely different legal frameworks. So, instead of one definition, there are two baselines. But what about states with a mix of prior appropriation and riparian laws? Ok, we’ll allow for three baselines, but no more! But what about states with narrow definitions of beneficial use? Fine, only four baselines, and so on and so forth, until dozens of “baselines” exist. Does this approach provide a “simpler” path than the application of state law?

¹⁷² See Shelley Ross Saxer, *The Fluid Nature of Property Rights in Water*, 21 DUKE ENV’T L. & POL’Y F. 49, 53 (2010). Sandra Zellmer argued that water rights in prior appropriation states were not “full private property right[s].” Zellmer & Harder, *supra* note 98, at 741. Erin Ryan highlighted how the public interest in water weakens its protection under the Constitution. See Ryan, *supra* note 42, at 696, 702. Dan Tarlock opposed the broad classification of water rights as takeable property. Tarlock argued that “[w]ater rights are property rights, but they are relatively incomplete compared to land rights. Their usufructuary nature subjects users to greater risks of curtailed enjoyment compared to land owners.” A. Dan Tarlock, *Takings, Water Rights, and Climate Change*, 36 VT. L. REV. 731, 739 (2012) (footnote omitted). Instead, they are a “different form of property right” that the Constitution affords “comparatively less protection compared to land owners.” *Id.* at 740. “In short, the law of water rights is another example of a property rights system that expressly incorporates the risk of non-enjoyment of the resource as well as of physical alteration into the legal right.” *Id.* Because the water in a State is owned by the State—and the right to use it divvied up among private citizens—the private right to water is a “limited, usufructuary right[] rather than full, exclusive ownership.” *Id.* at 741.

¹⁷³ Leshy, *supra* note 42, at 2009.

say, these scholars form a formidable cohort opposing the classification of water rights as “takeable” property.

The proponents of water-as-takings-property are equally as forceful in their arguments. One recent article argues that “[p]roperty rights in water have no lesser constitutional standing than property rights in land, in easements, in intellectual property, or in mineral estates.”¹⁷⁴ The usufructuary nature of water rights does not entail a limitation on the protections they receive. The authors go so far as to argue that water use limitations should be “consistently viewed by courts as per se” takings.¹⁷⁵ Notably, the justifications each side uses relate to the question posed in this section: Should courts adopt a federal-property approach instead of a state-specific-property approach to defining water rights? Proponents of the “water-rights-are-not-takeable” cohort focus on how *state* common and positive law define the property right,¹⁷⁶ while proponents of the “water-rights-are-takeable” group use non-state-specific elements of general law to define the water rights’ scope, such as “excludability,” “specificity,” and “irrevocability.”¹⁷⁷

When applied to water rights, the latter leads courts to conclude that water rights are “takeable” forms of property.¹⁷⁸ Some states provide narrow definitions for the contours of surface water rights, which makes it more difficult for litigants to prevail on water takings claims, especially if they seek relief on a per se taking theory. Using a federal-property approach flips the paradigm by providing broad definitions for the contours of water rights from general terms untethered to state law: (1)

¹⁷⁴ Huffman et al., *supra* note 45, at 37–38 (footnotes omitted).

¹⁷⁵ *Id.* at 43. “If regulations depriving use of water rights were consistently viewed by courts as per se, physical takings as in *Tulare* . . . the analysis would be much simpler.” *Id.*

¹⁷⁶ See Owen, *supra* note 52, at 627–28.

¹⁷⁷ These words are used by others to describe the critical elements of any “takeable” form of private property. See Merrill, *supra* note 24, at 969; Zellmer & Harder, *supra* note 98, at 709–11; Huffman et al., *supra* note 45, at 45; Stern, *supra* note 26, at 304. Luis Vera applied these factors to surface water rights, and reached the conclusion that under this framework, water rights in prior appropriation regimes would be considered takings property. Vera, *supra* note 47, at 294–303. Property rights are resilient in the sense that “they cannot be destroyed.” Stern, *supra* note 26, at 306.

¹⁷⁸ Luis Inaraja Vera reached this same conclusion and wrote that “it is reasonable to conclude that common law appropriative rights meet all the necessary requirements to be considered constitutional property for takings purposes.” Vera, *supra* note 47, at 303. Shelley Ross Saxer also hinted at this conclusion in a paper she authored in 2010:

When viewed through the lens of the bundle of rights metaphor used for real property, the right to use water dons the classical characteristics of exclusivity, alienability, and utility. Through this view, “[w]ater rights are property rights and cannot be taken except for a public use and upon the payment of compensation.” However, it appears that some states view property rights in water differently than property rights in land, treating water as a communal right, rather than as private property protected against government takings without just compensation.

Saxer, *supra* note 172, at 56–57 (footnotes omitted).

excludability, (2) specificity and identifiability, and (3) irrevocability. In consulting these general principles, federal courts may choose to adhere to the law of the specific state where the water rights are held. But, as stated earlier, nothing in the federal-property approach prevents courts from becoming roving property law professors, examining the qualities and limits of water rights from multiple states, or using a general-law benchmark to measure the scope of state definitions of water rights.

I. Excludability

The first question is whether surface water rights carry with them the same right to exclude as land. The right to exclude is commonly depicted as “the single most important factor in determining the existence of private property.”¹⁷⁹ The right to exclude is often cited in Supreme Court takings cases as a critical stick in the bundle that forms private property.¹⁸⁰ A property right carries with it the right to exclude if the owner can prevent others from using or enjoying it. Exclusion means the property belongs to the owner, and nobody else; if others can claim entitlement to the property’s use, then the property does not carry with it the right to exclude.

Some scholars doubt whether usufructuary rights carry the right to exclude—unlike a parcel of land, an owner cannot build a fence around his right to use water flowing down a river. But such a linear comparison between land and water misses the exclusive elements that water rights contain: Appropriated water rights carry with them a form of *temporal* exclusion.¹⁸¹

Prior appropriation in the West is built on a “first in time, first in right” system: The first appropriator to put water to beneficial use has priority of access over other users. Priority and exclusion express the same theoretical limits, where some can use the resources, while others cannot. And when there is insufficient water to satisfy all users, the senior appropriators prevail. The right to use water, and the right to exclude others from using it, gives water economic value.¹⁸² And while water rights are perhaps more limited than other kinds of property, those limitations do not mean that water rights do not carry the right to exclude.

¹⁷⁹ Jace C. Gatewood, *The Evolution of the Right to Exclude—More than a Property Right, a Privacy Right*, 32 MISS. COLL. L. REV. 447, 448 (2014).

¹⁸⁰ See, e.g., *Kaiser Aetna v. United States*, 444 U.S. 164, 176 (1979).

¹⁸¹ Leshy opposes this argument. He writes that the usufructuary nature of water rights means that the owner of a right to use does not own the actual molecules of water. This is not true for land, where “[l]andowners own the molecules of the soil, and ordinarily have a right to prevent the government (or anyone else) from trespassing on their land, regardless of whether the landowner is actually using the land in any way.” Leshy, *supra* note 42, at 2009–10.

¹⁸² Huffman et al., *supra* note 45, at 36.

For example, the “beneficial use” limitation on appropriative water rights does not undermine their value. “Beneficial use” does not mean that the possessors of those rights cannot exclude others. A zoning ordinance limiting the potential use of a piece of land does not mean that the owner does not have the ability to exclude others from his property.¹⁸³ Likewise, a legal regime that only grants property rights in water put toward a “beneficial use” does not inherently limit the owner’s right to exclude.¹⁸⁴

For example, in a prior appropriation regime, Farmer A grows lettuce. In 1932, he began diverting water from a nearby river to irrigate his lettuce, and the state where he lives recognized his right to use 20,000 gallons of water a year for irrigation. In 1950, Farmer B began using water from the same river. In 1971, Farmer C also began using water. Because Farmer A has a right to use 20,000 gallons of water a year, he can exercise that right to the detriment of the junior appropriators—Farmer B and Farmer C. So, if a drought lowers the water table and the river only carries 20,000 gallons of water, Farmer A can use that water to the exclusion of the other Farmers. His water right has value, even though it can only be used for irrigation, because he is able to assert his right to the exclusion of others. Even with their inherent limitations, water rights maintain the traditional characteristic of excludability.

2. Specificity and Identifiability

The second question is whether appropriative water rights are specific and identifiable—or, “discrete.”¹⁸⁵ The Court does not commonly reference the element of “specificity” or “discreteness” when defining takings property, but many scholars view it as an important element in the bundle of sticks that defines takeable forms of private property.

Appropriative rights include the right to use a certain amount of water. While the right may not identify the particular molecules involved—which is outside the scope of a usufructuary right—the right does entitle its holder to a specific quantity of water from a source. Water rights can also be sold or transferred, which supports the notion that these rights carry finite value. In addition to the quantity, the water right’s priority is identifiable. The hierarchy among water users is inherent in each user’s right to use; a water right’s contours include its priority over other water rights. And many “water decrees are formulated in terms of quantity, as are opinions in cases involving change of use and transfer” of

¹⁸³ However, comparing water rights to property rights in land may not be productive, given that water experiences different ecological realities than land.

¹⁸⁴ Joseph Sax wrote that the “original definition” of a water right was “limited to beneficial and non-wasteful uses” and “impose[d] limits beyond those that constrain most property rights.” Joseph L. Sax, *The Constitution, Property Rights, and the Future of Water Law*, 61 U. COLO. L. REV. 257, 260 (1990).

¹⁸⁵ See Merrill, *supra* note 24, at 974–75.

water rights.¹⁸⁶ An appropriated water right tells the owner how much he can use, what uses are permitted, and whose rights are inferior to his own.

Consider again Farmer A, who owns the right to use 20,000 gallons of water a year for irrigation. Although he cannot point to the molecules of water he uses, or assert a right to the molecules once they flow downstream, he can identify his right as (1) a quantity of 20,000 gallons of water, (2) that is the “priority” right relative to other users, and (3) that is used for irrigation. Furthermore, if Farmer A’s state has a water market, he can potentially sell this right—20,000 gallons of water as a senior right for irrigation—to another farmer. Farmer A would not hand the buyer a 20,000-gallon bucket of water, but everyone (including the state government) would know exactly what right the buyer received. Therefore, water rights are specific and identifiable.

3. Irrevocability

The third characteristic water rights share with other classical forms of property is irrevocability. Irrevocability means the property “right is not subject to discretionary revocation for some predetermined period of time.”¹⁸⁷ Essentially, the owner gets to keep the property—someone else cannot arbitrarily revoke the right to possess the property.

Scholars consistently identify several principles inherent in appropriative water rights that make them “incomplete” property, or property subject to revocation.¹⁸⁸ These principles include the public trust doctrine, the beneficial use doctrine, the doctrine of forfeiture, and the no-waste doctrine.¹⁸⁹

The public trust doctrine connects to the idea that states assert “popular ownership of all water within the state’s borders.”¹⁹⁰ States can, therefore, restrict the scope of their water rights in order to protect the public’s access to water or other forms of protective government action used to preserve the environment or natural resources. But “the mere existence” of the public trust doctrine in certain states “does not invalidate the conclusion that appropriative rights have a ‘certain degree of security expectation’ and should therefore be considered irrevocable for *takings*

¹⁸⁶ Smith, *supra* note 42, at 453.

¹⁸⁷ Merrill, *supra* note 24, at 979.

¹⁸⁸ Leshy, *supra* note 42, at 1986 (“[T]he law qualifies the very character of [the] property right in some important ways. It is not an absolute right by any means.”). Leshy refers to the “fragility” of water rights. *Id.* at 1989.

¹⁸⁹ For a further discussion of water as a public trust resource or a public commodity, see Barton H. Thompson, Jr., *Water as a Public Commodity*, 95 MARQ. L. REV. 17, 17 (2011).

¹⁹⁰ See Leshy, *supra* note 42, at 1991. Leshy points out that the Supreme Court has taken note of the importance of state ownership of the public commons. Joseph Sax writes that “[p]rivate diversion, at least those in tidal or navigable waters and affected tributaries, have always been subject to a servitude and a trust in favor of the public.” Sax, *supra* note 137, at 269.

property purposes.”¹⁹¹ The potential for public trust protections does not leave water rights open for complete destruction by the government, nor does it render the security of the right meaningless.

Next, the fact that water must be put to a beneficial use is inherent in the usufructuary right—an appropriative water right cannot come into existence, as a matter of state law, without the owner’s beneficial use. Some scholars disagree—“when notions of beneficial use or reasonableness change, the property right itself changes.”¹⁹² This point is accurate. But the changes described only modify the right’s scope without totally destroying it. Putting water to beneficial use does not mean a water right is temporary or flimsy. It simply means that the law defines the limits of the property right to use water, and when those limitations change, certain aspects (certain sticks in the bundle) of the water right change too.

Finally, in the prior appropriation regime, a water rights holder can “lose,” or forfeit, his water rights due to lack of use. The right to use the water exists, generally, when someone actively puts the water to a beneficial use. While the owner may forfeit the water rights if the owner ceases to use them, forfeiture’s legal mechanism does not undermine the “strong degree of security of expectation[s]” that water users have in their appropriative water rights.¹⁹³ The doctrine of forfeiture is common in prior appropriation states.¹⁹⁴ But the doctrine is not entirely discretionary—the state cannot revoke the rights on a whim; instead, it must satisfy certain conditions first.¹⁹⁵ “In other words, a water right remains valid and constitutionally protected subject to the *legal grounds for forfeiture*.”¹⁹⁶ The state cannot revoke water rights “at any time” but only if the water user fails to stay within the legal confines of the right.¹⁹⁷ The government,

¹⁹¹ Vera, *supra* note 47, at 303.

¹⁹² Leshy, *supra* note 42, at 1997.

¹⁹³ See Merrill, *supra* note 24, at 969.

¹⁹⁴ As of 2015, Arizona has a five-year forfeiture period. LEON F. SZEPTYCKI, JULIA FORGIE, ELIZABETH HOOK, KORI LORICK & PHILIP WOMBLE, ENVIRONMENTAL WATER RIGHTS TRANSFERS: A REVIEW OF STATE LAWS 21 (2015), <https://perma.cc/DWF7-9D5F>. Idaho also has a five-year forfeiture period. *Id.* at 34. Utah has a seven-year forfeiture period. *Id.* at 50. Colorado has a ten-year forfeiture period. COLO. REV. STAT. ANN. § 37-92-402(11) (West, Westlaw through 1st Reg. & Extraordinary Sess. of 75th General Assemb. (2025)). Texas has a three-year forfeiture period. TEX. WATER CODE ANN. § 11.030 (West, Westlaw through legis. effective July 1, 2025, of 2025 Legis. Sess.). Colorado, Washington, and Montana have “rebuttable presumptions in abandonment cases.” THOMPSON ET AL., *supra* note 44, at 360 n.2. Some states, like Idaho and Utah, allow for extensions by water users so as to avoid forfeiture. *Id.* at 362. Arizona statute provides several defenses to forfeiture, and Washington courts have held that forfeiture of water rights without a hearing is a violation of due process. *Id.* at 363.

¹⁹⁵ See Vera, *supra* note 47, at 301.

¹⁹⁶ Huffman et al., *supra* note 45, at 34 (emphasis added).

¹⁹⁷ Vera, *supra* note 47, at 301.

despite forfeiture and waste laws, cannot terminate a water right at its pleasure.

Consider, once again, Farmer A. Farmer A lives in a state with a weak public trust doctrine and a five-year forfeiture law. Since he acquired the water right in 1932, Farmer A has put all 20,000 gallons of water to use irrigating his lettuce crop. Farmer B, however, stopped using his water rights when he began working for a tech company. Ten years passed, and the state government reclaimed Farmer B's right to use the water. However, Farmer A's water remained safe; because Farmer A did not meet the statutory requirements for abandonment, his water right was secure.

Two years later, drought hit, and the state wanted to reduce Farmer A's water use by 10,000 gallons for the benefit of the public. However, the authority to do so was unclear, and state courts could not identify a state common law source for that power. The state legislature, therefore, amended its constitution to permit the state to reclaim water rights in times of drought "for the public good," and based this authority on the state's ownership of all water within its borders. Under such a strong articulation of the public trust doctrine, Farmer A's water rights may be at risk.

The doctrine of the public trust admittedly "limit[s] a claimant's title" to water use.¹⁹⁸ Yet, notably, the public trust doctrine—as well as beneficial use and forfeiture—are background principles of *state* law; arguments relying on these principles may not be available in a federal-property approach that does not adhere to state-specific law.¹⁹⁹ An approach that ignores state law also ignores the principles that limit the scope of water rights. The following example illustrates how this approach circumvents these limiting doctrines and expands the scope of the water rights.

Under a federal-property framework, water rights are not narrow or limited forms of property subject to state regulation. Instead, they are exclusive, identifiable, and irrevocable—a robust form of property that courts will likely see as "takeable." States and the federal government impose a plethora of regulations on water use. A federal-property definition of water rights exposes these regulations to findings of per se regulatory takings claims like those seen in *Lucas v. South Carolina Coastal Council*,²⁰⁰ and *Cedar Point Nursery v. Hassid*,²⁰¹ the broader that courts define a property right, the more likely that courts will see the regulation

¹⁹⁸ Michael C. Blumm & Lucas Ritchie, Comment, *Lucas's Unlikely Legacy: The Rise of Background Principles as Categorical Takings Defenses*, 29 HARV. ENVTL. L. REV. 321, 350 (2005).

¹⁹⁹ *Id.* at 350–51; Leshy, *supra* note 42, at 1996, 2003–04 ("How the law defines a particular property right determines both its character and its compensability if the exercise of the right is restricted by the government. . . . Water rights are rich in background principles of state property law So even 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.").

²⁰⁰ 505 U.S. 1003 (1992).

²⁰¹ 141 S. Ct. 2063 (2021).

as impairing that right's value. The federal-property approach detaches water rights from state law, guides courts to view surface water rights as takings property, and increases the likelihood that water use regulations will be subject to claims of physical takings. Scholars and jurists who see the value in water regulation should not endorse such an approach.

B. *Experimentation Among States*

Water rights also exemplify the importance of property federalism through experimentation.²⁰² Property is a “fundamentally democratic institution.”²⁰³ As many scholars point out, the Supreme Court historically set a “low baseline of property protection” and sanctioned state determination of the proper balance between private needs and public good.²⁰⁴ This balancing act fell to the states, not the federal government.

The process by which states set the proper equilibrium involved the political process.²⁰⁵ Local governments play a large role in resource regulation, and property law presents countless examples of locality-driven regulation.²⁰⁶ Property owners are invested in the protection their property receives “and often have better incentives to find the most efficient use.”²⁰⁷ Therefore, some scholars describe property law “as a giant laboratory in which states vie to develop the most efficient property regime.”²⁰⁸ Federalism, and the interstate competition it enables, “places constant pressure on local legislatures to design or adopt new property regimes that are consistent with the preferences of local residents.”²⁰⁹ The

²⁰² For an analysis of the practical advantages of “states as laboratories” and competitors in the realm of property law, consider Abraham Bell & Gideon Parchomovsky, *Of Property and Federalism*, 115 YALE L.J. 72 (2005). See generally Ilya Somin, *Federalism and Property Rights*, 2011 U. CHI. LEGAL F. 53 (criticizing the “competitive federalism” and superior knowledge of state and local government rationale for judicial deference).

²⁰³ Davidson & Mulvaney, *supra* note 5, at 230. One of the main questions highlighted by Davidson and Mulvaney concerns “how to allocate authority to delineate the contours of property interests between the[] subfederal levels of government.” *Id.* at 234.

²⁰⁴ *Id.* at 230.

²⁰⁵ *Id.* (discussing the distinct “elevat[ion], within very wide outer boundaries, [of] the role of state positive law—and political process—in determining the baseline for federal constitutional protection.”).

²⁰⁶ [L]ocal governments play[] the primary regulatory role not only on questions of zoning, subdivision regulation, development permitting, and other foundational matters of land-use law, but also—more controversially—in housing law, rent regulation, environmental protection, historic preservation, and the like. All of these distinctly local regulatory regimes have generated important takings cases.

Id. at 231 (footnote omitted).

²⁰⁷ Somin, *supra* note 202, at 66.

²⁰⁸ Abraham Bell & Gideon Parchomovsky, *Of Property and Federalism*, 115 YALE L.J. 72, 75 (2005).

²⁰⁹ *Id.* at 99.

greater the diversity of community needs, the greater the diversity of state laws designed to address those needs.

Water markets represent one of the recent innovations that western states have undertaken. The typical water market uses a cap-and-trade system where water rights are bought and sold. These markets' appeal is their apparent efficiency.²¹⁰ Essentially, water markets allocate water to its highest-valued use through voluntary exchange.²¹¹ Water users will adapt their water use—typically wasting less—if they can sell unused water on the market and turn a profit.²¹²

Water markets have emerged in many western states, including Texas, Colorado,²¹³ and California.²¹⁴ Some scholars attribute the rise of water markets to the definition of water rights under the prior appropriation doctrine.²¹⁵ How states define a water right's contours provides “the foundation for water markets.”²¹⁶ There are several qualities water rights must have across all water markets: definability, enforceability, and transferability.²¹⁷ But beyond these factors, different approaches to water rights will, by necessity, produce different approaches to water markets.

The independence of the states to define water as a form of property enables states to create unique solutions to water scarcity problems.²¹⁸

²¹⁰ Jonathan H. Adler, *Warming Up to Water Markets*, REGUL., Winter 2008–2009, at 14, 16 (“Price signals provide powerful incentives for conservation while simultaneously communicating information about collective judgments about the relative scarcity of resources across time and space.”) [hereinafter *Warming Up*]; Jonathan H. Adler, *Water Rights, Markets, and Changing Ecological Conditions*, 42 ENV'T L. 93, 105 (2012) [hereinafter *Changing Ecological Conditions*].

²¹¹ *Warming Up*, *supra* note 210, at 16 (“A market system, in which users simply pay for the resource that they use enables individual water users to weigh the tradeoff between the cost of obtaining additional water, the cost of reducing or conserving water use, and other relevant factors.”). See *Changing Ecological Conditions*, *supra* note 210, at 105.

²¹² Peter Debaere & Tianshu Li, *The Effects of Water Markets: Evidence from the Rio Grande*, ADVANCES IN WATER RES. (July 30, 2020), <https://perma.cc/S5GH-VU3A>. Water markets also serve an information-gathering function by “tak[ing] advantage of localized and dispersed information about resource supplies and demands, including subjective valuations and individualized uses for different resources in different places.” *Warming Up*, *supra* note 210, at 15.

²¹³ Shelley Ross Saxer comments that “[u]nlike many other western states, it appears that Colorado recognizes strong property rights in water and vests these rights to support an active water market without much regard for public trust interests.” Saxer, *supra* note 172, at 58.

²¹⁴ For a fascinating discussion of uncertainty and California's water market, see Barton H. Thompson, Jr., *Uncertainty and Markets in Water Resources*, 36 MCGEORGE L. REV. 117, 123 (2005).

²¹⁵ *Warming Up*, *supra* note 210, at 15.

²¹⁶ *Id.* “It is the recognition and gradual expansion of rights in water that have facilitated the development of markets in water.” *Changing Ecological Conditions*, *supra* note 210, at 102.

²¹⁷ *Warming Up*, *supra* note 210, at 15.

²¹⁸ Some readers may be concerned that such a state-focused approach to water rights would allow states to use their property rules to divest the federal government of its interest in water. For example, recent litigation in Idaho has opened the door for the state to remove federal control of stock

Consider Texas. The Rio Grande water market in Texas emerged in the mid-to-late 1900s as the result of legal action to prevent overuse of water.²¹⁹ The establishment of the market was “inextricably linked with redefining water rights”;²²⁰ the way Texas law defined water rights enabled their transfer between users. Today, the Rio Grande market has “relatively frequent transactions with relatively low transaction costs,” and participation in the market shifted the types of crops grown by water users to more productive (in terms of revenue) varieties.²²¹

Water market outputs also vary across states. In a study of water markets in Texas, California, and Arizona, researchers found that agriculture required the highest volume of water across all three states.²²² However, its overall use declined at different levels: in Arizona it declined 22%, while in Texas it declined 12%.²²³ And while transfers to the municipal sector are trending upward in Texas, they are trending downward in California.²²⁴ Overall, researchers found that trends in trading activity “highlight[] the importance of the heterogeneous market, environmental, and institutional conditions across states, conditions that determine market performance.”²²⁵ Different state laws produce different market results.

State experimentation is not perfect, and there are valid critiques of water markets as institutions for combating scarcity.²²⁶ But water markets demonstrate that a state-specific approach to water rights fosters innovation and permits local governments to find solutions that satisfy local water users. The market mechanism for valuing water responds to the locality’s needs. Property federalism facilitates experimentation. For a

water rights on public lands. See *Idaho Prevails Against Biden-Harris Administration in Federal Stockwater Case*, OFF. OF THE ATTY. GEN. OF IDAHO (Sept. 3, 2024), <https://perma.cc/27MT-BT7W>. While the supremacy of federal law over state law *should* resolve conflicts of this nature, this area is certainly in need of further research. See *United States v. State Eng’r*, 27 P.3d 51, 62–66 (Nev. 2001) (Becker, J., concurring in part and dissenting in part).

²¹⁹ Debaere & Li, *supra* note 212.

²²⁰ *Id.*

²²¹ *Id.*

²²² Kurt Schwabe, Mehdi Nemati, Clay Landry & Grant Zimmerman, *Water Markets in the Western United States: Trends and Opportunities*, WATER 2021, at 61, 69, <https://perma.cc/B68H-VV3Y>.

²²³ *Id.*

²²⁴ *Id.*

²²⁵ *Id.* at 70.

²²⁶ See James E. Krier, *The Tragedy of the Commons, Part Two*, 15 HARV. J.L. & PUB. POL’Y 325, 334 (1992). And a water-market approach values water as an economic resource, potentially undermining its importance in other moral or ethical frameworks. See Gabriel Eckstein, *Precious, Worthless, or Immeasurable: The Value and Ethic of Water*, 38 TEX. TECH L. REV. 963, 964 (2006).

problem as dynamic and diverse as drought, we will need dynamic solutions and diverse definitions of water rights.²²⁷

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The Constitution does not invite federal courts to construct national definitions of property rights that states developed, crafted, and tailored for centuries.²²⁸ Relying on state law definitions of property for takings purposes provides “jurisdiction-specific tailoring and increased determinacy.”²²⁹ Rather than see state variation as “a confusing morass for multijurisdictional” approaches, courts should see variation as reflective of history, tradition, and ecology.²³⁰ Water rights must remain in the domain of the states.

Conclusion

The federal-property approach unmoors water rights from state law, giving courts free rein to respect the laws of one state while undermining the laws of another. The pursuit of a federal-property definition for water rights is a foolhardy task.

Courts should not create a federal-property definition of water rights for takings purposes due to the unavoidable variation within American water law. First, the four forms of variance—governance, beneficial use, public trust, and groundwater integration—reveal the deep and historic differences in how states define the contours of water rights. Second, these variations are all derived from local hydrogeological conditions. And finally, the investment-backed expectations and background principles relevant in regulatory takings analysis are all based on the state laws accounting for these variations.

Courts should not entertain creating a federal-property definition for water rights in the takings context for two important, normative reasons. First, a federal-property approach to surface water rights will almost always result in a court finding a *per se* taking occurred. And second, the federal-property approach may chill state experimentation in an era of drought. There are real concerns that a state-specific approach would read the Takings Clause out of the Constitution and allow state

²²⁷ “The dynamic threat posed by climate change strengthens the case for greater reliance on water markets.” *Changing Ecological Conditions*, *supra* note 210, at 109.

²²⁸ Yet Article I of the Federal Constitution confers on Congress no general power to define or regulate property rights. And the Takings Clause itself provides no foundation for developing a peculiarly federal definition of property. The strong inference, supported by the Court’s statements, is that the Federal Constitution is generally indifferent to the forms of property or contract recognized by the several states; the Constitution’s concern is with change in those rights, not with their initial form or content.

Sterk, *supra* note 145, at 225 (footnote omitted).

²²⁹ *Illusory Promise*, *supra* note 17, at 1033.

²³⁰ *Id.* at 1022.

lawmakers and courts to run roughshod over constitutionally protected property rights. But the two concerns described above are equally problematic for the role of property rights in our federalist system. And while the Supreme Court's approach to takings doctrine is open to critique, caselaw indicates that the Court does not kindly view states' attempts to legislate away property rights that the state itself has historically protected. A bulwark already exists to protect private property owners from ahistorical and intrusive state legislation. But what protects state individuality from federal-property inventions?

Natural resources like water are diverse across the nation, and so are the laws governing their use. Regional issues require regional solutions. The implications of the federal-property approach, whether it comports with the Constitution, and what it means for natural resource management across the nation require further exploration. In the meantime, water rights serve as a powerful exemplar for why courts should treat a federal-property approach with skepticism.

The question is not whether drought will persist—it is how the law will respond, and how courts will determine the worth of water.