From *Mono Lake* to the Atmospheric Trust: Navigating the Public and Private Interests in Public Trust Resource Commons

Erin Ryan*

This Article partners a summary of the Mono Lake story—one of the all-time great tales of environmental, property, and water law—with additional historical context, expanded legal analysis, and new reporting on contemporary public trust developments, especially Juliana v. United States *and the unfolding atmospheric trust climate litigation. The* Mono Lake *case and its progeny—in which the public trust doctrine has been applied in contexts ranging from takings litigation to groundwater management to fracking regulation and now to climate change—prompt reflection about the way the public trust doctrine navigates complex conflicts between public and private rights in natural resource commons.*

This treatment explores the origins of the public trust doctrine in Roman and British common law through its development in American law, including the U.S. Supreme Court's 1892 affirmation of the doctrine as a background principle of state law in Illinois Central Railroad v. Illinois. *It then introduces the law of private water allocation in the eastern and western United States—riparian rights and prior appropriations, respectively. It considers how the public commons theory that underlies the public trust doctrine collides unapologetically with the privatization theory that undergirds the western doctrine of prior appropriations, enabling academic analysis of how this conflict so famously played out at Mono Lake.*

The Article summarizes the historical and judicial elements of the Mono Lake story, including the implications of the court's decision for understanding the public trust doctrine as a limit on sovereign authority. It summarizes the criticisms that followed from advocates for property rights, the constitutional separation of powers, and environmental concerns, and reviews the doctrinal progeny of the case, including the Scott River extension of Audubon Society to groundwater resources, the Pennsylvania Supreme Court's application of public trust principles to fracking regulation, and now the atmospheric trust climate litigation emerging worldwide.

* *Erin Ryan, Elizabeth C. & Clyde W. Atkinson Professor, Florida State University College of Law; J.D., Harvard Law School; M.A., Wesleyan University; B.A. Harvard University.* *I am thankful to the organizers and participants of the* George Washington Journal of Energy and Environmental Law *Public Trust Symposium for their invitation and helpful comments, and to Mallory Neumann, Jill Bowen, Taylor Schock, and Jennifer Mosquera for their research assistance in support of this project. This essay distills work previously published in* Erin Ryan, *The Public Trust Doctrine, Private Water Allocation, and Mono Lake: The Historic Saga of* National Audubon Society v. Superior Court, 45 Envtl. L. 561 (2015), *together with new historical context and reporting on subsequent developments.*

Table of Contents

Introduction

It is a pleasure to share with this symposium one of the all-time great stories of American environmental, property, and water law—the saga of *National Audubon Society v. Superior Court*, better known as the *Mono Lake* case.[1] It recounts the epic conflict over water between the city of Los Angeles and advocates for the Mono Basin, the eastern watershed of the high Sierra Nevada crest at Yosemite National Park, some four hundred miles to the north. In 1983, the California Supreme Court took the first steps toward resolving that conflict by drawing on an ancient common-law doctrine with roots in early Roman and British law—the public trust doctrine—which entrusts the state to manage certain natural resource commons for the benefit of the public. Since then, the *Mono Lake* case has remained the leading example of modern public trust litigation in the United States, inspiring a new age of public trust advocacy throughout the country and even the world.[2]

The Mono Lake story prompts reflection about the way the public trust doctrine navigates complex conflicts between public and private rights in natural resource commons, from ancient protections for waterways to contested claims for atmospheric resources. It is a wonderful tale to tell, and it is also very dear to me personally, because it includes the case that brought me into the law. During the aftermath of the California Supreme Court's decision in the case, I served as an interpretive ranger with the U.S. Forest Service (Forest Service) on the Mono Lake District of the Inyo National Forest. There, it was my job to share this story with the general public, cast as "the Water Issue," until it eventually inspired me to leave the Forest Service for law school. Some twenty years later, I had the opportunity to write the full history of the case in a law review article[3] that I was then invited to turn into a book,[4] and I am delighted to be able to share some of that work as part of this public trust symposium.[5]

In this Article, I partner a summary of the Mono Lake story with additional historical context, expanded legal analysis, and new reporting on important public trust developments, including its application in takings litigation,[6] to fracking regulation in Pennsylvania,[7] groundwater in California,[8] and the atmospheric trust climate advocacy unfolding as this piece goes to press.[9] Part I introduces the public trust doctrine itself, including its origins in Roman and British common law. I trace how the public trust doctrine has developed in American law since its reception in the early 19th century, culminating in the U.S. Supreme Court's 1892 affirmation of the public trust doctrine in *Illinois Central Railroad v. Illinois*.[10] From there, the Article briefly introduces the law of private water allocation in both the eastern and western United States, contrasting how the public commons theory that underlies the public trust doctrine intersects with the privatization theory that undergirds the western doctrine of prior appropriations. The discussion there prepares us to analyze the conflict between them that played out at Mono Lake.

Part II sets the stage for the case that followed, recounting the extension of the Los Angeles Aqueduct to the Mono Basin, the impacts of diversions on the Mono Lake ecosystem, and how they galvanized a determined group of local, state, and national plaintiffs to try and "Save Mono Lake." Part III begins the legal analysis of the *Mono Lake* case. After summarizing the parties' legal arguments, it reviews the California Supreme Court's groundbreaking conclusion and the legal aftermath that culminated in the Water Board's decision to limit water diversions as needed to protect Mono Lake.

Part IV analyzes the precedent created by *Mono Lake*. It explores the nature of the public trust doctrine as a limit on sovereign authority, highlights noteworthy legal innovations in the decision, and reviews doctrinal progeny of the case, including the recent *Scott River* case extending the *Mono Lake* rationale to groundwater resources.[11] It also summarizes the main schools of criticisms generated by the decision, primarily among advocates for property rights, the separation of powers, and environmentalists. Finally, Part V considers the next generation of public trust advocacy following in the footsteps of the *Mono Lake* case, especially *Juliana v. United States* and related climate litigation emerging worldwide.[12] The Article concludes with reflections on the role of the doctrine in helping us navigate the public and private interests in public natural resource commons more generally.

I. Legal Doctrines Governing Public and Private Interests in Water Resources

In the *Mono Lake* case, advocates invoked the public trust doctrine to protect public law interests in the environmental values associated with a navigable waterway against private

1. 658 P.2d 709, 13 ELR 20272 (Cal. 1983).
2. Nations as far distant as India have relied on the *Mono Lake* case to instantiate public trust principles in their own legal systems. M.C. Mehta v. Kamal Nath, (1996) 1 S.C.C. 388 (India), *in* I United Nations Environment Programme Compendium of Judicial Decisions in Matters Related to the Environment, National Decisions 259 (1998) (discussing the role of the public trust doctrine in Indian law and quoting the California Supreme Court's description of the doctrine in *Mono Lake*).
3. Erin Ryan, *The Public Trust Doctrine, Private Water Allocation, and Mono Lake: The Historic Saga of* National Audubon Society v. Superior Court, 45 Envtl. L. 561 (2015) [hereinafter Ryan, *The Historic Saga*].
4. Erin Ryan, The Public Trust Doctrine, Private Water Rights, and Saving Mono Lake (forthcoming 2020).
5. This is in reference to the 2018 J.B. & Maurice C. Shapiro Environmental Law Symposium, "The Public Trust Doctrine in the 21st Century" hosted at The George Washington University Law School on March 15, 2018.
6. *See infra* notes 75–79 and accompanying text, discussing use of the public trust doctrine to defend takings claims.
7. Pa. Envtl. Def. Found. v. Commonwealth, 161 A.3d 911, 47 ELR 20081 (Pa. 2017); Robinson Township v. Commonwealth, 83 A.3d 901, 43 ELR 20276 (Pa. 2013). *See infra* notes 86–90.
8. Envtl. Law Found. v. State Water Res. Control Bd., Case No.: 34-2010-80000583 (Cal. 3d App. Dist., Aug. 29, 2018) [hereinafter *Scott River* case]. *See infra* notes 284–89.
9. Juliana v. United States, 217 F. Supp. 3d 1224, 46 ELR 20072 (D. Or. 2016). *See supra* Part V.
10. 146 U.S. 387, 435 (1892).
11. *Scott River*, Case No.: 34-2010-80000583 (Cal. 3d App. Dist., Aug. 29, 2018).
12. *See Juliana*, 217 F. Supp. 3d 1224, and the other atmospheric trust cases discussed *infra* Part IV.

law claims to the actual water within it.[13] To understand how these public and private interests came into conflict at Mono Lake, it is important to understand the different legal doctrines that govern water resources in the United States. This part introduces the public trust doctrine, which establishes public rights and responsibilities in water, and more cursorily, the law of private water allocation, which assigns private rights to use the water within those waterways. And as the Mono Lake conflict demonstrates, these two sets of laws will not always play nicely.

Part I.A. introduces the public trust doctrine and its historical origins, tracing the public trust principle from ancient Rome, through early British law, to its formal reception in the United States. Because the law of private allocation also plays an important role in the Mono Lake conflict, Part I.B. provides a light introduction to the primary doctrines of private water allocation: the riparian rights doctrine of the eastern United States, inherited from British law, and the prior appropriations doctrine that evolved later in the western United States.

A. Legal Origins of the Public Trust Doctrine

Modern public trust principles, which assign state responsibility for natural resources held in trust for the public, are most famously associated with American law.[14] However, the public trust doctrine has roots in some of the oldest doctrines of the common-law tradition[15]—with many accounts dating its origins to early British law, and some all the way back to ancient Rome.[16] This section presents the conventional historical account of the development of the modern public trust doctrine.

1. The Roman and Byzantine Empires

In the Sixth Century A.D., the Byzantine Emperor Justinian I set to work codifying Roman Common Law of the previous era, for the combined purpose of fortifying legal education and restating the law for enforcement purposes.[17] In the *Institutes of Justinian*, published in 533, he documented the *jus publicum*, a principle addressing the common ownership of certain natural resources: "By natural law, these things are the common property of all: the air, the running water, the sea, and with it, the shores of the sea."[18] Thousands of years later, it is hard to know exactly how these principles helped govern the Roman Empire,[19] but this commanding early statement of public commons has redounded through common-law jurisprudence ever since, in both judicial decisions and constitutional affirmations.[20] Analogous principles of public commons ownership, especially pertaining to waterways, also appear in civil law countries with legal codes that draw on ancient Roman law, including France, Spain, and other post-colonial nations with related legal systems.[21]

In the Mono Lake story that is the focus of this Article, we will hear a lot about the intersection of these public trust principles with water resources, and indeed, the doctrine is most often invoked in application to waterways. But before moving on, we might pause here for a moment to acknowledge the very first item in Justinian's list—"the air"—because that will become an important element in the modern public trust developments reviewed toward the end of our story, now that advocates are deploying public trust principles in the context of climate governance.[22]

2. The Magna Carta and Forest Charter

Some *jus publicum* principles were later incorporated into early British law, beginning with the Magna Carta. In 1215, King John of England issued the Magna Carta (Great Charter), promising his rebellious barons that he and all future sovereigns would operate within the rule of law.[23] Although the Magna Carta was unsuccessful in the first instance, it eventually provided the foundations of the modern English legal system, and it is credited as a progenitor of Western democracy and constitutional law.[24] In addition to declaring the sovereign subject to the rule of law, the Magna Carta also set forth rights to speedy justice, to trial by jury, and against unusual punishments.[25] It also incorporated into English law certain principles of Roman common law, including elements of the *jus publicum*. For example, Chapter 23 of the Magna

13. *Mono Lake*, 658 P.2d at 726–27.
14. *See, e.g.*, M.C. Mehta v. Kamal Nath, (1996) 1 S.C.C. 388 (India), *in* I United Nations Environment Programme Compendium of Judicial Decisions in Matters Related to the Environment, National Decisions 259 (1998) (referring to the California public trust doctrine, as expressed in the *Mono Lake* case, in adopting similar public trust principles as a feature of Indian constitutional law). *See also* Alexandra B. Klass, *Modern Public Trust Principles: Recognizing Rights and Integrating Standards*, 82 Notre Dame L. Rev. 699, 701 (2006) (discussing American versions of public trust doctrine in general, and referring to various expressions of the trust as "public trust principles").
15. *See, e.g.*, Joseph Sax, *The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention*, 68 Mich. L. Rev. 471, 475 (1970) (laying the seminal academic foundations for the public trust doctrine as a tool to aid in the protection of natural resources, and crediting its origins to early British and Roman law); *but see* James L. Huffman, *Speaking of Inconvenient Truths—A History of the Public Trust Doctrine*, 18 Duke Envtl. L. & Pol'y F. 1, 21 (2007) (critiquing the conventional account of this history).
16. J. Inst. Proemium, 2.1.1. (T. Sandars trans., 4th ed. 1867) (translation from the Institutes of Justinian, by the Byzantine Emperor, Justinian I.). *But see* J.B. Ruhl & Thomas McGinn, *The Roman Public Trust Doctrine—Not Public, Not a Trust, Not a Doctrine, But Not Nothing* (forthcoming 2019) (critiquing the standard account of the Justinian roots of the doctrine).
17. Herbert F. Jolowicz & Barry Nicholas, Historical Introduction to the Study of Roman Law 492–93 (3d ed. 1972).
18. *Id.*
19. *See* Huffman, *supra* note 15; Ruhl & McGinn, *supra* note 16.
20. *See* Ryan, *supra* note 4, at Chapter VIII (The Evolving PTD) (tracing the evolution of the doctrine in the U.S. and international jurisdictions).
21. *See, e.g.*, Glenn J. Macgrady, *The Navigability Concept in the Civil and Common Law: Historical Development, Current Importance, and Some Doctrines That Don't Hold Water*, 3 Fla. St. U. L. Rev. 513, 536–45 (1975), https://ir.law.fsu.edu/cgi/viewcontent.cgi?article=1801&context=lr [https://perma.cc/E9BF-2FQD] (reviewing Roman-inspired doctrines of public ownership over navigable waterways in Spain, France, and other civil law countries).
22. *See* Juliana v. United States, 217 F. Supp. 3d 1224, 46 ELR 20072 (D. Or. 2016); discussed *infra* Part IV.
23. *See* Andrew Blick, Beyond Magna Carta: A Constitution for the United Kingdom (Bloomsbury, 2015).
24. *See* Doris Mary Stenton, Magna Carta, Encyclopedia Britannica, https://www.britannica.com/topic/Magna-Carta [https://perma.cc/6ZXC-9QQ3].
25. *Id.*

Carta required the removal of all weirs in the Thames and Medway Rivers "throughout all of England" that interfered with fishing or navigation.[26] The Magna Carta was negotiated between a proto-public commons over navigable waters for these purposes.[27]

The Charter of the Forest, added to the Magna Carta in 1217 by King Henry III, further protected public rights to access natural resources on certain undeveloped royal lands (not just forests), and it remained in effect for centuries thereafter.[28] Re-establishing traditional rights of public commons that had been eroded by William the Conqueror, the Forest Charter promised that the King would not interfere with commoners' rights to graze animals, forage, plant crops, and collect lumber on open lands subject to Forest Law.[29] Notably, this law still governs the New Forest territory in southern England.[30] While these provisions do not necessarily follow from the Justinian references to common property in air, water, and coastlines, they do express an early affirmation of what would develop into more modern public trust principles of public rights in natural resource commons.

3. British Common Law

Early British common law also made reference to public trust principles in a series of cases and authorities affirming sovereign authority over submerged tidelands.[31] In the 1611 *Royal Fishery of River Banne* case, the Kings Bench held that while the beds of nonnavigable waterways could be privately held, navigable waters were owned by the sovereign for public use.[32] Sir Matthew Hale, in his renowned 1670 Treatise on English Maritime Law later described sovereign ownership of tidelands in his account of the three different kinds of coastal land: (1) that under the royal right (or police power); (2) that available for public navigational access; and (3) that which was privately owned.[33]

Critics of this conventional historical account, including Prof. James Huffman, have pointed out that unlike contemporary statements of the public trust doctrine, Chapter 23 of the Magna Carta protected only British nobility, rather than the general public, and that the King's prerogatives under British common law did not include trust-like responsibilities until the 19th century.[34] Others, including Profs. J.B. Ruhl and Tom McGinn question the relevance of the Justinian statement of the *Jus Publicum* to actual Roman legal practice.[35] Indeed, it may be that the ideals of the Forest Charter come closer to the public trust principles that would ultimately evolve in the United States.[36] Nevertheless, the early American courts that adopted the public trust doctrine referred copiously (and perhaps defensively) to its roots in British law.[37]

B. Reception in the United States

The principle of sovereign authority over submerged lands was received in the United States through the individual states' reception of British common law, and it began making appearances in litigation in the early 19th century.[38] The American version of the doctrine expanded to embrace not only the submerged lands beneath coastal tidelands, those of principal value in Britain, but also those under other large navigable waterways to which there were no true British analogs, including America's Great Lakes and enormous rivers.[39] In this way, the American public trust doctrine developed beyond its British origins, although early American cases frequently referred back to Roman and English common law for support. This section reviews the reception of the doctrine by individual states in their common law and constitutions, and its recognition by the Supreme Court in *Illinois Central Railroad v. Illinois*.[40]

1. American Common Law

In the 1821 case of *Arnold v. Mundy*, one of the first to refer to the public trust doctrine's Roman and English roots, the Supreme Court of New Jersey quoted Justinian and the various limitations on the English Crown in holding that the land and resources beneath navigable water—here, oyster beds—were common property.[41] The plaintiff property owner had purchased a farm adjacent to a navigable river, where he planted oysters and staked off the resulting bed.[42] He subsequently sued a defendant for taking oysters from this bed, but the defendant claimed that he and all citizens of the state had the right to take oysters where they would be naturally present in a navigable riverbed.[43] The Chief Justice determined that the plaintiff must have title to the oyster

26. Magna Carta, Chapter 23 (Eng. 1215). *See also* Michael C. Blumm & Courtney Engel, *Proprietary and Sovereign Public Trust Obligations: From Justinian and Hale to Lamprey and Oswego Lake*, 43 Vt. L. Rev. 1, 8–9 (forthcoming 2019) (discussing the implementation of Justinian public trust principles in the Magna Carta).
27. Magna Carta, Chapter 33 (Eng. 1215). *See also* Blumm & Courtney Engel, *supra* note 26, at 9 (discussing the implementation of Justinian public trust principles in the Magna Carta).
28. Magna Carta, Chapter 12 (Eng. 1217). *See* Sarah Nield, *The New Forest: Ancient Forest and Modern Playground*, *in* 2 Modern Studies in Property law, 287, 294 (E. Cooke, ed. Hart 2003); Anne Bottomley, *Beneath the City: The Forest! Civic Commons as Practice and Critique*, Vol. 5(1) Birkbeck L. Rev. 1 (2018). Nicholas Robinson, *The Forest Charter and the Public Trust*, 10 Geo. Wash. J. Energy & Envtl. L. (forthcoming 2019).
29. *See* Dr. John Langton, *The Charter of the Forest of King Henry III*, *in* Forests and Chases of England and Wales, c. 1000 to c. 1850, St. John's College Research Center, http://info.sjc.ox.ac.uk/forests/Carta.htm [https://perma.cc/KLP2-M2A4].
30. *See* Nield, *supra* note 28, at 303.
31. *See* Carol Rose, *The Comedy of the Commons: Custom, Commerce, and Inherently Public Property*, 53 U. Chi. L. Rev. 711, 727–30 (1986).
32. 80 Eng. Rep. 540–43 (K.B. 1611).
33. Matthew Hale, *A Treatise* De Jure Maris et Brachiorum Ejusdem, *in* Stuart A. Moore, A History of the Foreshore and the Law Relating Thereto 370–72 (1880).
34. Huffman, *supra* note 15, at 21.
35. Ruhl & McGinn, *supra* note 16.
36. Robinson, *supra* note 28.
37. *Id.*
38. For additional historical account of the early American public trust doctrine, see Ryan, *supra* note 4, at Chapter II.
39. *See* Ill. Cent. R.R. v. Illinois, 146 U.S. 387, 453 (1892).
40. 146 U.S. 387 (1892).
41. 6 N.J.L. 1, 71–72 (1821).
42. *Id.* at 65–66.
43. *Id.*

bed to prevail in his suit,[44] but that he could not satisfy this requirement, as his private rights extended only as far as the landward side of the high-water mark.[45]

The Chief Justice found that the land under navigable water is considered common property,[46] and that proprietors have no more power than the English crown to convert lands beneath them into private property.[47] Referencing Justinian, the Chief Justice characterized common property as "the air, the running water, the sea, the fish, and the wild beasts," and held that title to these were in the sovereign, to "be held, protected, and regulated for the common use and benefit."[48] Writing with strong tones of judicial gravity, he concluded:

> The sovereign power itself, therefore, cannot, consistently with the principles of the law of nature and the constitution of a well ordered society, make a direct and absolute grant of the waters of the state, divesting all the citizens of their common right. It would be a grievance which never could be long borne by a free people.[49]

With these words, he became the first American jurist to tie the public commons element of the public trust doctrine to the orderly functioning of democracy.

2. Affirmation by the U.S. Supreme Court

The Supreme Court first formally invoked the public trust doctrine in 1842, in the case *Martin v. Waddell*, where it affirmed the sovereign ownership of navigable waters and their submerged resources, resolving another dispute over oyster beds.[50] The Court held that proprietors claiming title to New Jersey oyster beds under a charter originally dating back from the British King Charles to the Duke of York could not prevail, because even a royal grant was subject to public trust rights of common fishery for the common people.[51] In defending its conclusion, the Court referenced the presence of the doctrine in English law as far back as the Magna Carta:

> [T]he lands under the navigable waters [within the limits of the charter] passed to the grantee, as one of the royalties incident to the powers of government; and were to be held by him in the same manner, and for the same purposes, that the navigable waters of England and the soils under them, are held by the Crown.
>
> The policy of England since Magna Carta—for the last six hundred years—has been carefully preserved to secure the common right of piscary for the benefit of the public.
>
> [I]t would require plain language in these letters-patent [to the Duke of York] to persuade . . . [the Court] that the public and common right of fishery in navigable waters, which has been so long and so carefully guarded in England, and which was preserved in every other colony founded on the Atlantic borders, was intended, in this one instance, to be taken away.[52]

Three years later, in *Pollard v. Hagan*, the Supreme Court reached a similar conclusion on the basis of the same principles in resolving a dispute over the ownership of submerged lands in Alabama and Georgia.[53] The Court rejected an argument that territory in Alabama that had originally been ceded by Spain should not be subject to the British rule of sovereign ownership of submerged lands.[54] Instead, it determined that when Alabama was admitted to the Union, it entered on "equal footing" with neighboring states, such as Georgia, and thereby succeeded to all the rights of sovereignty, jurisdiction, and eminent domain as these other states.[55] The Court held that the land under navigable water was reserved to the states, and that new states have the same sovereignty and rights over navigable waters as did the original states.[56]

By the late 19th century, it was well established among American courts that the state holds navigable waterways in trust for the public.[57] The Supreme Court made its most definitive treatment of the public trust doctrine in *Shively v. Bowlby*,[58] an 1894 case quieting title to submerged lands beneath a state-sanctioned wharf on the Columbia River in Oregon.[59] The Court traced the detailed history of the doctrine from British law through the American Revolution and forward since then, affirming that:

> [T]hese submerged lands, of singular value for commerce, navigation, and fishery, were held by the English King for the benefit of the public, [and] those rights survived the settlement of the colonies, and upon the American Revolution, became vested in the original States.
>
> When territory came into the U.S. by whatever means, the same public ownership of submerged lands below the mean high-water mark passed to the U.S., held 'for the benefit of the whole people and in trust' for the new states that would be carved from this territory.[60]

In so doing, the Supreme Court affirmed the general provenance of American lands submerged in navigable waters (below the mean high-water mark) as owned by the sovereign and held in trust for the benefit of the public.

44. *Id.* at 9–10.
45. *Id.* at 67.
46. *Id.* at 71–72.
47. *Id.* at 78.
48. *Id.* at 71.
49. *Id.* at 78.
50. 41 U.S. 367 (1842).
51. *Id.* at 407–18, 423.
52. *Id.* at 413–14.
53. 44 U.S. 212 (1845).
54. *Id.* at 228–29.
55. *Id.* at 223, 228–29.
56. *Id.* at 230.
57. *See* Michael C. Blumm, *Public Property and the Democratization of Western Water Law: A Modern View of the Public Trust Doctrine*, 19 Envtl. L. 573, 580 (1989).
58. 152 U.S. 1, 57 (1894).
59. *Id.*
60. *Id.* at 14–15, 49.

3. *Illinois Central Railroad v. Illinois*

Although *Shively v. Bowlby* was the Supreme Court's most definitive treatment of the public trust doctrine, its most famous statement of the doctrine came from a decision issued two years earlier, the 1892 case of *Illinois Central Railroad v. Illinois*.[61] There, the Court provided a crisp statement of the traditional public trust principles of American law:

> [T]he State holds the title to the lands under navigable waters . . . in trust for the people of the State, that they may enjoy the navigation of the waters, carry on commerce over them, and have liberty of fishing therein freed from the obstruction or interference of private parties.[62]

In this seminal decision, the Court not only affirmed sovereign authority over submerged lands, but clarified the nature of its obligation to the public as trustee of those lands.[63] And indeed, the *Illinois Central* case demonstrates just how powerful the public trust obligation can be.

To give a sense of the enormous power packed in this seemingly simple doctrine, consider the striking facts of the case. Boiling the story down to its core: in 1869, the state legislature conveyed the bed of Chicago Harbor—the most valuable submerged lands in all of Lake Michigan—to a private railroad, presumably to spur economic development.[64] The people of Illinois were dubious. While they hoped economic development would eventually confer public benefits, the gift smacked of patronage and cronyism, and it generated considerable public outrage.[65] When both the *Chicago Tribune* and the *Chicago Times* condemned the conveyance, legislative support for the deal began to collapse, and the Illinois House and Senate created committees to investigate the possibility of corruption.[66] When the legislative session finally turned over, one of the new legislature's first acts was to repeal the old legislature's gift to the railroad.[67] Now the railroad was the outraged party, and this famous litigation ensued.

In court, the railroad argued that the new legislature lacked the authority to repeal the Chicago Harbor conveyance made by the prior legislature.[68] The conveyance was extremely valuable, and ordinarily, neither the government nor any other owner can simply "take back" a thing of value this way.[69] However, the state defended itself by deploying public trust principles as a novel legal shield. Conceding that there might have been a legal problem if there really had been a legal gift, the state argued that in this case, there was not an actual problem, because—thanks to the public trust doctrine—there had not been any actual gift.[70] The state effectively acknowledged that it may have looked as though the previous legislature had conveyed the bed of Chicago Harbor to this private party, but argued that in fact, no such thing had happened.[71] The bed of Chicago Harbor was subject to the public trust doctrine—held by the state in trust for the public—and therefore, as a matter of law, could not be conveyed this way.[72]

The state argued that the previous legislature had lacked the power to make a gift of lands encumbered by the public trust.[73] Such an act would be *ultra vires*—literally, beyond the authority of the state—at least without taking more heroic measures to clarify why such an unusual conveyance actually did accord its public trust obligations.[74] As a result, there was no actual gift, and accordingly no harm in repealing it, and therefore, no legal foul. The Supreme Court agreed with the state's argument, affirming the public trust doctrine as a foundational element of state natural resources law.[75]

In doing so, *Illinois Central* enshrined the public trust doctrine among what later Fifth Amendment takings jurisprudence would refer to as the "background principles" of state common law.[76] In the early 1990s, the Supreme Court clarified that takings liability applies whenever state regulation obstructs all economically viable use of private property, no matter what public interests are at stake—unless the challenged regulation is already among the "background principles" of state property law that limit an owner's reasonable expectations about how they should be able to use their property, such as the common law of nuisance.[77] The Court's old recognition in *Illinois Central* that the public trust doctrine is a foundational element of state law has renewed importance since its newer takings jurisprudence expanded potential

61. 146 U.S. 387 (1892) [hereinafter *Ill. Centr. R.R.*].
62. *Id.* at 452.
63. Ryan, *The Historic Saga*, *supra* note 3, at 568.
64. *Ill. Cent. R.R.*, 146 U.S. at 438–39 (making "a grant by the State, in 1869, of its right and title to the submerged lands, constituting the bed of Lake Michigan").
65. Joseph D. Kearney & Thomas W. Merrill, *The Origins of the American Public Trust Doctrine: What Really Happened in* Illinois Central, 71 U. Chi. L. Rev. 799, 805–06, 840–42 (2004).
66. *Id.* (describing public outrage over the conveyance); *id.* at 889–90 (describing legislative committees created to investigate potential corruption).
67. *Id.* at 911 (indicating the legislative turnover that followed); *Ill. Cent. R.R.*, 146 U.S. at 449 ("On the 15th of April, 1873, the legislature of Illinois repealed the act.").
68. *Ill. Cent. R.R.*, 146 U.S. at 438–39; 450–51.
69. Indeed—as any self-respecting toddler would know, "No take backsies!"
70. *Ill. Cent. R.R.*, 146 U.S. at 439.
71. *See id.* at 439.
72. *See id.* at 439, 453.
73. *See id.* at 453 ("The trust devolving upon the State for the public, and which can only be discharged by the management and control of property in which the public has an interest, cannot be relinquished by a transfer of the property. The control of the State for the purposes of the trust can never be lost. . . .").
74. *Id.*
75. *Id.*
76. *See* Erin Ryan, Palazzolo, *The Public Trust, and the Property Owner's Reasonable Expectations: Takings and the South Carolina Marsh Island Bridge Debate*, 15 Se. Envtl. L.J. 121, 123 (analyzing how the public trust doctrine operates as a background principle of law that can constrain the reasonable expectations of a property owner alleging a taking); *id.* at 137–40 (2006) (discussing use of the public trust doctrine to defend takings claims by defusing the reasonableness of claimants' expectations). *See also* John D. Echeverria, *The Public Trust Doctrine as a Background Principles Defense in Takings Litigation*, 45 U.C. Davis L. Rev. 931, 931–34 (2012) (analyzing use of the doctrine as a takings defense in light of two California cases that did not allow it); J. Peter Byrne, *The Public Trust Doctrine, Legislation, and Green Property: A Future Convergence?*, 45 U.C. Davis L. Rev. 915, 916 (2012) (suggesting that the doctrine be used as a defense to innovative regulatory takings claims and to "sustain environmental legislation against judicial hostility"). *But see* Barton H. Thompson Jr., *Judicial Takings*, 76 Va. L. Rev. 1449, 1532–33 (1990) (criticizing use of the doctrine to avoid just compensation for what otherwise looks like a taking).
77. Lucas v. S.C. Coastal Comm'n, 505 U.S. 1003, 1027–30, 22 ELR 21104 (1992). *See also* Palazzolo v. Rhode Island, 533 U.S. 606, 626–30, 32 ELR 20516 (2001).

takings liability for environmental regulations that interfere with economic use.[78] The doctrine is increasingly invoked by state and municipal parties defending takings claims against regulations involving construction on tidelands and wetlands, public access to waterways, and interference with water rights. So far, most cases have affirmed the doctrine as a defense to takings claims in these circumstances, including decisions in New Jersey, South Carolina, and the U.S. Court of Appeals for the Ninth Circuit,[79] but the Federal Court of Claims has rejected the background principle defense.[80]

More importantly, perhaps, *Illinois Central* demonstrates that the public trust doctrine functions not only as a grant of *affirmative state authority* over submerged lands, but also as a *limit on state authority* with regard to the management of those lands, because the state is required to manage them as trustee for the public benefit.[81] The public, as the beneficiary of this trust relationship, is entitled to call the state to account for errant management choices in the courts. If members of the public believe the state has failed its obligations as trustee, they can sue. Over the years, as plaintiffs across the country have litigated to vindicate and define public trust obligations, the doctrine has developed differently from one state to the next. Some states protect different resources under the doctrine and some assign different levels of protection to common trust resources,[82] but at a minimum, most share the common principle of sovereign authority over lands beneath navigable waters held in trust for the public.[83]

4. State Constitutions

Finally, it is worth noting that public trust principles have been incorporated into a number of state constitutions within the United States,[84] even where the doctrine is also part of state common law.[85] Some constitutionalized versions look very similar to the common-law statement of the public trust doctrine affirmed in *Illinois Central*. For example, Florida's Constitution includes a provision that recognizes public ownership of critical water commons and confers traditional protections for submerged lands beneath navigable waters:

> The title to land under navigable waters, within the boundaries of the state, which have not been alienated, including beaches below mean high water lines, is held by the state by virtue of its sovereignty, in trust for all the people.[86]

Alternatively, some state constitutions have taken a more modern approach, applying public trust principles to additional resources, or expanding protections for specific purposes. For example, Article I, Section 27 of the Pennsylvania Constitution states:

> The people have a right to clean air, pure water, and to the preservation of the natural, scenic, historic and esthetic values of the environment. Pennsylvania's public natural resources are the common property of all the people, including generations yet to come. As trustee of these resources, the Commonwealth shall conserve and maintain them for the benefit of all the people.[87]

Pennsylvania's super-statutory public trust doctrine, known as the Environmental Rights Amendment to the state constitution, recently played a pivotal role in a spectacular legal debate over the regulation of hydraulic fracturing (fracking), which is commonly used to extract natural gas from the rich Marcellus Shale resources of the state.[88] In a move that surprised commentators, a plurality of the Pennsylvania Supreme Court invoked the doctrine sua sponte to overturn a state statute that had prevented municipalities from regulating the location of fracking operations through zoning.[89] A few years later, a clear majority of the same court confirmed that Pennsylvania is obligated to manage its state parks and forests, including the oil and minerals therein, as a trustee in accordance with the public trust principles of the Environmental Rights Amendment.[90] They reasoned that the clear language expressly affirms both the right of the

78. *See, e.g.*, Echeverria, *supra* note 76; Richard M. Frank, *The Public Trust Doctrine: Assessing Its Recent Past & Charting Its Future*, 45 U.C. Davis L. Rev. 665, 682–84 (2012).
79. Esplanade Properties, LLC v. City of Seattle, 307 F.3d 978 (9th Cir. 2002) (affirming the city's refusal to allow construction of residences on an elevated platform above tidelands, because the public trust doctrine vitiated any entitlement by the owner to build there); McQueen v. S.C. Coastal Council, 580 S.E.2d 116 (S.C. 2003) (holding that the public trust doctrine properly blocked tidelands development without compensation, even when the lands at issue became submerged after the owner took title); Nat'l Ass'n of Homebuilders v. New Jersey, 64 F. Supp. 2d 354 (N.J. 1999) (rejecting a takings challenge to a state agency rule requiring developers of waterfront property to provide walkways along the water, because the public trust doctrine prevents owners from claiming any entitlement to exclude).
80. Casitas Mun. Water Dist. v. United States, 543 F.3d 1276 (Fed. Cir. 2008) (dismissing a takings claim by a California irrigator required to create fish passage lanes to satisfy the Endangered Species Act, but stating in dicta that the public trust doctrine would not have barred the claim); Tulare Lake Basin Water Dist. v. United States, 49 Fed. Cl. 313 (2001) (in an opinion by the same judge as *Casitas*, rejecting the state's public trust "background principle" defense against a takings claim by California irrigators after water delivery under a state contract was temporary suspended while the state complied with restrictions under the Endangered Species Act).
81. Ryan, *The Historic Saga*, *supra* note 3, at 571, 574.
82. *See* Ryan, *supra* note 4, at Chapter VIII (The Evolving PTD) (describing different versions of the doctrine in different U.S. states). For example, most states protect public access to submerged lands below the high water mark, but New Jersey protects access to dry sand beaches as well. Matthews v. Bay Head Imp. Ass'n, 471 A.2d 355, 363 (N.J. 1984).
83. *See* Ryan, *supra* note 4, at Chapter VIII (The Evolving PTD).
84. Ryan, *The Historic Saga*, *supra* note 3, at 572–73. *See also* Barton H. Thompson Jr., *Environmental Policy and State Constitutions: The Potential Role of Substantive Guidance*, 27 Rutgers L.J. 863, 866 (1996) ("[T]he 'public trust' doctrine plays a constitutional role in most states even though less than a handful of states refer to the trust in the constitution itself.").
85. Klass, *supra* note 14, at 714.
86. Fla. Const. art. X, § 11.
87. Pa. Const. art. I, § 27.
88. John C. Dernbach, *The Potential Meanings of a Constitutional Public Trust*, 45 Envtl. L. 463, 464 (2015).
89. Robinson Township v. Commonwealth, 83 A.3d 901, 43 ELR 20276 (Pa. 2013).
90. Pa. Envtl. Def. Found. v. Commonwealth, 161 A.3d 911, 47 ELR 20081 (Pa. 2017).

people to enjoy these public natural resources and the Commonwealth's obligation to maintain them.[91]

Constitutionalized versions of the doctrine have thus provided additional means of protecting public trust resources and expanded recognition for new public trust values beyond those traditionally protected at common law. However, scholars like Alexandra Klass have expressed concerns that the constitutionalization of public trust principles may displace common-law versions of the doctrine, undermining the further development of public trust principles through traditional common-law processes.[92] Some states, such as Idaho, have committed the public trust doctrine to statute specifically to prevent the further development of the common-law doctrine.[93]

C. The Law of Private Water Allocation

This introduction to the public trust doctrine reveals it as a public commons-based theory of public rights and responsibilities with regard to navigable waterways, and perhaps other critical natural resources.[94] However, at least when applied to American waterways, the public trust doctrine is inevitably destined to collide with a wholly separate body of law, and one that is often based on a contrasting theory of private rights. The law of water allocation, by which rights are granted for the use or extraction of water from public commons waterways, enables individuals and groups to claim water for specific private purposes. Especially in the western United States, these allocation laws are generally based on a privatization model.[95]

The problem becomes immediately obvious: the water governed under both sets of laws is, after all, the same exact water. The water to which individuals and other entities can obtain private rights of use under the law of water allocation is the very same water that makes up the waterways protected by the public trust doctrine. Yet, these two bodies of law—the public trust doctrine and the law of private water allocation—are doctrinally orthogonal to one another. Each developed independently of the other, as though they have neither a legal nor a substantive relationship at all.[96]

1. Riparian Rights

Like the public trust doctrine, there is regional variation in the law of private water allocation. Water allocation is a feature of state law, and there is a notably different valance to water allocation law in the eastern and western United States. Eastern states generally follow a modern version of the original British doctrine of "riparian rights," which assigns correlative rights for reasonable use of water resources among all riparians along a watercourse.[97] Under the riparian rights doctrine, reasonableness is contextual, and generally determined by the total set of individual demands for the water.[98] Many riparian rights jurisdictions have modernized the doctrine to de-privilege riparian ownership, allowing water to be exported from the riparian tract and treating all users under the same rubric for assigning claims.[99]

In most respects, however, both traditional and modern riparian rights regimes take a public commons approach to allocating the resource. These laws treat the water subject to allocation as a public commons or a common pool, allocating correlative rights in water in which users' rights are limited by the rights of other users.[100] As a rule, everybody has to share.[101] For example, in 1888, the Connecticut Supreme Court in *Mason v. Hoyle* enjoined one mill owner from impounding a stream to the detriment of other downstream mill operators.[102] Emphasizing the reciprocal nature of rights and duties among riparian claimants, the court articulated the five core principles for "reasonably" allocating water under the common-law "reasonable use" doctrine of riparian rights:

(1) All riparians have an equal opportunity to use the stream;

(2) No owner may use his own property so as to injure another;

(3) Adjudicators should consider the character and capacity of the stream;

(4) The burden of foreseeable shortages should be allocated fairly among all riparians; and

(5) Customary practices provide a foundation for evaluating "reasonableness."[103]

Modern riparianism jurisdictions continue to apply the correlative spirit of reasonable use riparianism in considering the interests of all claimants on a waterway before assigning definitive rights to any. For example, in the 2005 case of *Michigan Citizens for Water Conservation v. Nestle Waters North America*, the Michigan Court of Appeals enjoined some—but not all—of the Nestle Corporation's claims to withdraw water from a stream that also served boating,

91. *Id.* at 916.
92. Klass, *supra* note 14, at 699.
93. Idaho Code tit. 58, ch. 12 § 58-1201–1203 (1996) (Chapter 12. Public Trust Doctrine). The Idaho example is discussed fully *infra* notes 266–71. Klass, *supra* note 14, at 718–19.
94. *See* Michael C. Blumm & Mary Christina Wood, The Public Trust Doctrine in Environmental and Natural Resources Law (2013) (discussing application of the public trust doctrine to other resources, including wildlife and atmospheric resources). *See also* Juliana v. United States, 217 F. Supp. 3d 1224, 46 ELR 20072 (D. Or. 2016).
95. Ryan, *The Historic Saga*, *supra* note 3, at 576–78.
96. *Id.* at 576.
97. *See* Christine Klein et al., *Modernizing Water Law: The Example of Florida*, 61 Fla. L. Rev. 403, 406 (2009):
> The wetter eastern states . . . view the right to use water as an attribute of the ownership of riparian land. This is primarily a torts regime, prohibiting one riparian landowner from inflicting unreasonable harm upon another. In contrast, the arid western states historically have followed the prior appropriation doctrine, protecting the right to use water according to temporal priority of use.

98. *Id.* at 407.
99. Ryan, *The Historic Saga*, *supra* note 3, at 576.
100. *Id.*
101. Klein et al., *supra* note 97, at 407.
102. 14 A. 786 (Conn. 1888); 56 Conn. 255 (1888).
103. *Id.*

swimming, fishing, wildlife, and aesthetic purposes.[104] The court emphasized its responsibility to fairly allocate water to preserve as many different uses of a waterway as possible.[105]

2. Prior Appropriations

Most states in the American West, however, allocate water rights under an appropriative rights regime based on priority in time—essentially 'first come, first served.'[106] Under this pure "prior appropriations" doctrine, rights to appropriate water from the public commons are not correlative, and earlier claims are not diminished by the needs of later-comers.[107] Whoever is the first to take a defined quantity of water out of the watercourse and put it to "beneficial use"—defined as domestic or economically viable use—can claim a right to continue withdrawing the same amount of water for the same purpose, potentially indefinitely, and excluding all others who come later.[108]

In contrast to riparian rights, the prior appropriation doctrine takes a privatization approach to resource allocation—the very opposite of the public commons approach.[109] Not only does the doctrine reward early movers, granting them a protectable right to exclude those who seek to establish claims afterward, it rewards those who fully remove the water they claim from the waterway, leaving none behind for other uses. At least historically, an appropriator must literally withdraw water from the stream to perfect a claim; appropriative rights were not available for instream uses like fishing, swimming, for wildlife, or aesthetic purposes.

For example, in the 1882 case of *Coffin v. Left Hand Ditch Co.*, the first case to formally apply the new doctrine of appropriative rights, the Colorado Supreme Court affirmed the rights of an irrigator removing water from the stream over the claims of a downstream riparian farmer.[110] The irrigator was the first to actually remove water from the watercourse, creating a right to continue appropriating that water for himself regardless of the needs of a downstream user who had failed to perfect an appropriative claim.[111] Similarly, in *Empire Water & Power v. Cascade Town*, the U.S. Court of Appeals for the Eighth Circuit applied the Colorado prior appropriation doctrine to hold that the defendant hydroelectric power company could continue to divert water to its reservoir, even though it would fully dewater the Cascade Creek Canyon and waterfalls around which the plaintiff resort town economy was centered.[112]

Some modern appropriative rights jurisdictions have added additional statutory criteria, including a public interest analysis, that require consideration of additional factors before new rights are assigned, but in most respects, the heart of the analysis remains the traditional rules of prior appropriations.[113] Many jurisdictions have also provided greater statutory protections for instream flow values, mitigating the enormous pressure to withdraw from the stream in order to receive a legally protected water right—but even so, very few states treat these the same way they do conventional appropriations, and only three allow private parties to hold them.[114] A handful of especially confusing states, including California, allocate water under both riparian and appropriative rights regimes simultaneously.[115]

Accordingly, while the public trust doctrine requires the state to protect navigable waterways in trust for the public, the doctrines of private water allocation—especially Western prior appropriations—govern how the state gives away the waters within them. And while the public trust doctrine and riparian rights doctrine are grounded in a public commons theory of waterways, emphasizing correlative rights and shared duties, the prior appropriations doctrine tends toward a pure privatization model—first in time rights to exclude others.

For these reasons, a conflict between the public trust doctrine and private water allocation law was inevitable, especially in the arid West. There, state law applies a privatization approach to the allocation of water rights for water taken from waterways at the very same time that it applies a public commons approach to protect the underlying waterways—which are composed of the very same water.[116] These contrasting approaches set in motion a legal collision that was inevitable—and the conflict erupted most spectacularly at Mono Lake.

II. Building the Los Angeles Aqueduct

The *Mono Lake* case reached the California Supreme Court in the early 1980s, but the crisis that led to the case began almost a century earlier, when the growing city of Los Angeles first began to run out of water.

Potable water has long been considered "wet gold" in Los Angeles, the second most populated desert city on Earth.[117]

104. 709 N.W.2d 174, 194–95 (Mich. Ct. App. 2005).
105. *Id.*
106. Klein et al., *supra* note 97, at 406 ("[T]he arid western states historically have followed the prior appropriation doctrine, protecting the right to use water according to temporal priority of use.").
107. *Id.* at 408.
108. *Id.* at 408–09.
109. Ryan, *The Historic Saga*, *supra* note 3, at 576–77.
110. 6 Colo. 443 (1882).
111. *Id.*
112. 205 Fed. 123 (1913).
113. *See, e.g.*, Shokal v. Dunn, 707 P.2d 441 (Idaho 1985).
114. Barton Thompson et al., Legal Control of Water Resources 216 (5th ed., 2013) (noting that while most states now allow some sort of appropriation to protect instream flows, only Alaska, Arizona, and Nevada allow private entitles to claim them).
115. In California, the owners of land abutting watercourses hold some traditional riparian rights, which coexist with the more abundant appropriative rights that are unconnected to riparian land ownership but subject to similar requirements of reasonable and beneficial use. *See* Thompson et al., *supra* note 114, at 200 (discussing California's hybrid system of water law); *see also* Cal. Const. art. X, § 2 (confirming the protection of riparian rights and discussing the requirement of beneficial use). However, prior appropriations remains the defining doctrinal approach in the state. *See* Thompson et al., *supra* note 114, at 208 (explaining how the doctrines interact with one another in California); *see also* John Franklin Smith, *The Public Trust Doctrine and* National Audubon Society v. Superior Court: *A Hard Case Makes Bad Law, or the Consistent Evolution of California Water Rights*, 6 Glendale L. Rev. 201, 207–09 (1984) (outlining the history of California's dual water rights system).
116. Klein, *supra* note 97, at 406.
117. Ryan, *The Historic Saga*, *supra* note 3, at 578. Among desert cities worldwide, only the Egyptian city of Cairo boasts a larger population. *See* Marc Reisner,

Located on the southern California coast, Los Angeles is one of the largest cities in the United States, with a metropolitan population of about ten million people.[118] The Los Angeles River runs through the city, now mostly encased in concrete, but has approximately enough water to supply a population of only a few hundred thousand—a pretty large overdraft.[119] For that reason, moving water to Los Angeles has been a California state priority since the turn of the last century, when groundwater supplies began to run out.[120]

Los Angeles lies in the arid bottom of the state, far from the many Sierra Nevada rivers that furnish northern Californians with more abundant water resources.[121] However, three snaking aqueducts converge at the city, delivering redirected water to the large population centers in and around Los Angeles.[122] The Los Angeles Aqueduct, tapping the eastern slope of the Sierra Nevada and Tehachapi Mountains, runs four hundred miles north from Los Angeles all the way to Mono Lake, which is due east of San Francisco, near the California-Nevada state line.[123] Today, it is flanked by the Colorado River Aqueduct, which brings water from states to the East, and the California Aqueduct, which taps the wetter, western slope of the Sierra Nevada Range. But the Los Angeles Aqueduct is the oldest, the most colorful historically, and doubtlessly the most notorious of the three,[124] and with it begins our story.

What follows in Parts II and III summarizes the Mono Lake story, told in even greater detail elsewhere,[125] to bridge the historical and doctrinal material of Part I with further analysis of public trust issues and new litigation developments in Parts IV and V. This part recounts the arrival of the Los Angeles Aqueduct, first in the Owens Valley and then the Mono Basin. It introduces the Mono Basin ecosystem and reviews the devastating impacts of water diversions through the Aqueduct to Los Angeles.

A. The Owens Valley

The Los Angeles Aqueduct now ends at Mono Lake, but that was not always so. The first place the city looked to for water was the Owens Valley, an unlikely oasis in the southern California desert, roughly halfway between Los Angeles and Mono Lake. The first few chapters of this story center on the Owens Valley and the devastating impacts that water diversions posed for the local environment and economy there over the first half of the 20th century. I have previously chronicled these chapters in vivid detail,[126] because they are of cinematic proportions (indeed, this part of the story inspired the film noir classic, *Chinatown*,[127] starring Jack Nicholson). While this Article will not re-tell the full Owens Valley story that is detailed in prior work,[128] I'll give just enough overview to provide needed context for the Mono Lake chapters that follow.

The ten-cent overview is that state and city leaders were seeking new water supplies for Los Angeles, and they realized that there was water to be had some two hundred miles to the north, in a valley capturing rainwater from two surrounding mountain ranges.[129] The Owens Valley lies in a high-elevation desert, carved out by the improbably robust flow of the Owens River. The river winds south between the White Mountains to the east and the Sierra Nevada to the west, culminating in the vast but shallow Owens Lake.[130] A thriving agricultural community dependent on the river developed alongside it, the only sweet water in the region.[131] Los Angeles engineers realized that they could divert this water south to Los Angeles using only the force of gravity, rather than relying on the kind of expensive pumps that would be required to move water from elsewhere.[132] However, city leaders accurately predicted that the community would be unlikely to just hand the water over when Los Angeles announced its interest. Instead, they decided to trick local community members into giving up their coveted water rights.[133]

Agents for the city approached Owens Valley farmers pretending to be farmers, and they gradually bought up most of the farmland and associated water rights surrounding the Owens River. When it was too late to stop them, they started diverting all available surface water south to Los Angeles.[134] When they needed still more water, they began pumping ground water below their land and sent that south as well.[135] Before the local community had really figured out what was afoot, the vast majority of the region's water was being redirected to Los Angeles, and the Owens Valley was

Cadillac Desert: The American West and Its Disappearing Water 60 (New York: Viking Press, 1986).

118. U.S. Census Bureau, *State & County QuickFacts: Los Angeles County, California*, https://www.census.gov/quickfacts/fact/table/losangelescountycalifornia,US/PST045217 [https://perma.cc/2RCE-UQ6K].
119. *See* Kai Ryssdal, *The Aqueduct That Gave Rise to Los Angeles*, Marketplace (American Public Media), Mar. 31, 2015, http://www.marketplace.org/topics/sustainability/big-book/aqueduct-gave-rise-los-angeles [https://perma.cc/8B5M-XA7T] ("As early as 1894, the city faced severe water shortages. Engineers estimated that natural sources serving the Los Angeles basin could support a population of 200,000 or so, in typical years."); Reisner, *supra* note 117, at 61–62 (describing the Los Angeles River as the first local source of water and how reliance on it became untenable as the population grew).
120. Ryan, *The Historic Saga*, *supra* note 3, at 578.
121. *See California: Physical Features*, http://www.csun.edu/~cfe/maps/CA_Physical.pdf [https://perma.cc/H5K2-967Z].
122. *See* Cal. Nev. River Forecast Ctr., *CNRFC Interactive Map Interface: Rivers*, http://www.cnrfc.noaa.gov (last visited Apr. 17, 2015).
123. *See* Louis Sahagun, *"There It Is—Take It": A Story of Marvel and Controversy*, L.A. Times, Oct. 28, 2013, http://graphics.latimes.com/me-aqueduct/ [https://perma.cc/VJU5-NJDY] (describing the path and history of the Los Angeles Aqueduct).
124. American Society of Engineers, *First Owens River—Los Angeles Aqueduct*, ASCE.org, https://www.asce.org/project/first-owens-river-los-angeles-aqueduct/ [https://perma.cc/S9LT-P2DP].
125. For the full story, see Ryan, *The Historic Saga*, *supra* note 3, at 578–603; Ryan, *supra* note 4, at Chapters III-V.
126. *Id.* at 580–89.
127. Chinatown (Paramount Pictures 1974).
128. *See supra* note 124.
129. Reisner, *supra* note 117, at 61–63.
130. *Id.* at 61.
131. Ryan, *The Historic Saga*, *supra* note 3, at 583.
132. *Id.*
133. Eric Malnic, *The Aqueduct: DWP Smoothes Out Rough Edges on the 74-Year Old Engineering Marvel*, L.A. Times (Oct. 18, 1987), http://articles.latimes.com/1987-10-18/local/me-15046_1_los-angeles-river [https://perma.cc/7GMQ-ZL5J].
134. *Id.*
135. *Id.*

effectively divested of its water.[136] Once the local farmers did figure things out, they were enraged; they famously dynamited the Aqueduct, and the National Guard was called in to restore order.[137] Headline-making drama ensued, but at the end of the day, Los Angeles secured the water rights, the Owens River was diverted, and Owens Lake at its terminus was drawn dry.[138]

Today, there is an expansive salt sump where the majestic Owens Lake once anchored the valley and its wildlife, including vast populations of migratory birds that no longer appear.[139] The Owens Valley tragedy is compounded by the fact that the exposed lakebed is composed of fine alkali salts that are toxic to breathe. These very fine particulates are constantly being churned up by the strong winds whipping off the vertical escarpment of the eastern Sierra Nevada, forming cancer-causing alkali dust storms.[140] In fact, the Owens Valley often ranks as the most polluted place in the United States by particulate matter standards.[141]

B. The Mono Lake Basin

Some forty years after the Aqueduct first began tapping the Owens Valley, Los Angeles leaders realized that the growing city still needed more water.[142] They also realized that there was a wealth of additional, unappropriated water in the next watershed up from the Owens Valley, just two hundred miles to the north—the Mono Lake Basin. This Section briefly introduces the unique place that became the focus of the famous public trust litigation in the *Mono Lake* case.

Mono Lake drains the eastern slope of the high Sierra Nevada crest, just east of Yosemite National Park.[143] To call it a lake is almost a misnomer; it is more of an inland sea, twice the size of the city of San Francisco, five times deeper than the Great Salt Lake in Utah, and three times saltier than the Pacific ocean.[144] Estimated to be between one and three million years old, it is roughly tied with Lake Tahoe as the oldest continuous lake in North America.[145] Like Owens Lake, Mono Lake is a terminal lake, which means that water flows in, but there is no way for the water to leave except by surface evaporation.[146] For those three million years, water carrying trace elements and minerals has flowed into the basin and then evaporated off the surface, leaving those minerals behind to form a hypersaline body comparable to parts of the Great Salt Lake.[147] As a result, the Mono Lake Basin is not only a very beautiful location, it is a unique ecosystem, the site of important scientific research, and home to important communities and cultures, including the Kutzadika'a Paiute who have lived there for generations.[148]

Mono Lake is part of a unique ecosystem. The lake is too salty for fish to survive, so the enormous lake contains not a single species of fish—but they are plentiful in the feeder creeks that carry snowmelt down from the adjacent Sierra Nevada into the lake basin.[149] Instead, the lake is home to trillions of tiny brine shrimp, a species that exists only at Mono Lake.[150] Brine shrimp populate the lake so thickly that if you took a coffee cup and scooped out some summer lake water, there could be as many as ten or even twenty shrimp in your cup.[151] The lake is also home to hordes of tiny alkali flies, which are tasty as pupae and have long been a dietary staple of the local Kuzediaka'a Paiute community.[152] The ecosystem is thriving, but simple: the flies and shrimp survive on the base of the lake's food chain, benthic algae, and virtually everything else in the ecosystem—including the native people—survives by eating the flies and shrimp.[153] There is not much stabilizing redundancy if any of the basic elements are compromised.

Mono Lake is thus a giant bowl of shrimp soup, deliciously garnished with alkali flies. As such, it attracts enormous flocks of migratory birds making their way along the Pacific Flyway from as far north as the Arctic and as far

136. *Id.* ("Despite the outrage of Owens Valley farmers and the furor over Gen. Otis' potential profits, Los Angeles voters turned out on June 12, 1907, to approve construction bonds by a margin of 10 to 1. Federal approval for the municipal project was won in Congress two weeks later.").
137. *See* Scott Harrison, *Dynamite Attacks on the Los Angeles Aqueduct*, L.A. Times, Feb. 6, 2013, http://framework.latimes.com/2013/02/06/los-angeles-aqueduct-2/#/0 (last visited Apr. 17, 2015).
138. Ryan, *The Historic Saga*, *supra* note 3, at 586.
139. *See* Marith C. Reheis, *Dust Deposition Downwind of Owens (Dry) Lake, 1991–1994—Preliminary Findings*, 102 J. Geophysical Res. (Atmospheres) 25999–26008 (1997) (describing the post-aqueduct deposits of minerals accumulated in Owens Lake over thousands of years).
140. Sarah Kittle, Great Basin Unified Air Pollution Control District, *Survey of Reported Health Effects of Owens Lake Particulate Matter*, https://gbuapcd.org/District/Background/ReferenceLibrary/pmHealthEffects.html [https://perma.cc/5HMK-VU6Q].
141. U.S. Envtl. Prot. Agency, *Owens Valley, CA Particulate Matter Plan*, https://19january2017snapshot.epa.gov/www3/region9/air/owens/index.html [https://perma.cc/G5RH-7EKS] (describing Owens Lake as "the nation's worst particulate air pollution problem").
142. Ryan, *The Historic Saga*, *supra* note 3, at 596.
143. *See* Sahagun, *supra* note 123.
144. *Compare* Mono Lake Comm., *Quick Facts*, http://www.monolake.org/about/stats [https://perma.cc/PK4K-TT5M] [hereinafter *Mono Lake Facts*], *with* U.S. Census Bureau, *San Francisco County, California*, https://www.census.gov/quickfacts/fact/table/sanfranciscocountycalifornia/PST045218 [https://perma.cc/4SZ7-5QZ7] (noting San Francisco County's land area is 46.87 square miles); Univ. of Utah, *Physical Characteristics of Great Salt Lake*, http://learn.genetics.utah.edu/content/gsl/physical_char/ [https://perma.cc/KD7W-AS7M] (comparing the depths of the Great Salt Lake and Mono Lake). *See also* John Hart, Storm Over Mono: The Mono Lake Battle and the California Water Future 5–7 (1996) (Univ. Cal. Press 1996).
145. *See* Hart, *supra* note 144; Tahoe Fund, *Lake Tahoe Fun Facts*, http://www.tahoefund.org/about-tahoe/recreational-paradise/ [https://perma.cc/ZQ3U-X7ZH]; Genetic Science Learning Center, Univ. of Utah, *Physical Characteristics of the Great Salt Lake*, https://learn.genetics.utah.edu/content/gsl/physical_char/ [https://perma.cc/YFD7-Z2UE].
146. Cal. Dep't of Water Resources, The Importance of the Salton Sea and Other Terminal Lakes in Supporting Birds of the Pacific Flyway 1 (Dec. 2004), http://www.water.ca.gov/saltonsea/historicalcalendar/docs/TerminalLakes.pdf.
147. *See* Hart, *supra* note 144, at 5–7; *World's Saltiest Bodies of Water*, World Atlas, https://www.worldatlas.com/articles/the-world-s-most-saline-bodies-of-water.html [https://perma.cc/G3LD-CJUX] (noting salinity ranges of the Pacific Ocean at 3.5%, Mono Lake at 5-9.9%, and the Great Salt Lake at 5–27%).
148. *See* HART, *supra* note 144, at 22–24 (describing the traditional lifestyle and culture of the Kutzadika'a).
149. *See id.* at 16.
150. Mono Lake Comm., *Brine Shrimp: Mono Lake's Unique Species*, http://www.monolake.org/about/ecoshrimp [https://perma.cc/7HUT-D7VK].
151. Ryan, *The Historic Saga*, *supra* note 3, at 590, 592–93.
152. *Mono Lake*, 658 P.2d 711; *Brine Shrimp: Mono Lake's Unique Species*, *supra* note 150; Mono Lake Comm., *Mono's Alkali Fly the First Fly You'll Ever Love*, https://www.monolake.org/about/ecoflies [https://perma.cc/SB88-G86B].
153. Ryan, *The Historic Saga*, *supra* note 3, at 591–92.

south as Latin America.[154] The lake provides them a critical sanctuary during the vast desert expanse of their journey, allowing them to replenish themselves before continuing on for many more hundreds of desert miles.[155] Millions of individuals from some three hundred species of birds come to the lake.[156] One of the islands in the lake is the breeding ground for more than 85% of the California's population of California gulls.[157] The freshwater creeks that feed the lake are also important parts of the ecosystem, providing critical regional fisheries, riparian habitat for wildlife, and local cultural values.[158]

Just south of the lake is the youngest volcanic range in North America: the Mono Craters, a short chain of 10,000-feet-high volcanoes.[159] These volcanoes are relatively recent, and the chain ploughs right through the lake, creating the black and white islands within it.[160] The volcanically influenced chemistry and geology of the lake is so unusual that it has been an important research destination for studying underwater volcanism, and NASA has even conducted research at Mono Lake to imagine what life on other planets with unusual terrestrial profiles might look like.[161]

Unlike Los Angeles, however, the Mono Basin is not a major population center. The tiny town of Lee Vining is located on the western edge of Mono Lake, just below the 13,000-feet peaks of the High Sierra.[162] The town was home to only 300 year-round residents when I lived there, but there is some commercially valuable local industry. A nearby pumice mine harvests commercially valuable rock from the Mono Craters.[163] The brine shrimp plant on the western edge of the lake harvests Mono Lake shrimp to be sold as freeze-dried fish food.[164] But the most important regional industry of all are the surrounding public lands, including national and state parklands that bring hundreds of thousands of visitors to the Mono Basin each year from around the world, all to enjoy the stunning vistas, unique wildlife, fascinating geology, and cultural history of the area.[165]

C. The Mono Basin Extension

When I was a grunt-level Forest Service ranger at Mono Lake, I lived in the Ranger Station Barracks at the foot of Lee Vining Canyon, the glacially carved route into the High Sierra peaks at Tioga Pass. But practically across the street, there was an official and foreboding sign that warned, "City of Los Angeles—Private Property!" Indeed, many decades before, Los Angeles had already managed to acquire much of the privately available land there, in order to secure the riparian rights associated with this land and lay claim to the remaining water in the Basin under the prior appropriations doctrine.[166]

The city accomplished this feat during the 1940s, in a much less notorious way than it had acquired the Owens Valley water rights. Unlike the Owens Valley story, there were no tricks or foul play, and no city agents masqueraded as local farmers. Los Angeles simply announced its intentions to appropriate waters that had been flowing, hitherto wasted, into the useless salt lake, with plans to export it for more productive municipal use downstate.[167] This was the easy part—the water flowing into the lake had never been diverted for a beneficial use cognizable under the doctrine of prior appropriations, so it was, for all legal purposes, available for new claims by the first comer. And that comer just happened to be the city of Los Angeles.

City officials also began acquiring all riparian lands whose owners might someday lay claim to Mono Basin water. They accomplished this mostly by consensual sales, but where there was resistance, they made it known that they would invoke the powers of eminent domain that are statutorily available to California municipalities seeking additional water resources, even extraterritorially.[168] Ultimately, the city did have to resort to eminent domain to acquire the property from a few local holdouts, and it prevailed in subsequent law suits.[169]

In this way, Los Angeles was able to acquire most riparian rights in the Mono Basin and assert appropriative claims to the remaining water flowing into Mono Lake.[170] However, there was one additional obstacle before water could be sent south. Pursuant to California laws not yet in place when Los Angeles began taking water from the Owens Valley, the city also needed the State Water Resources Control Board to sanction the new withdrawals with a permit.[171] Yet, the Owens Valley tragedy left the state water board genuinely torn about allowing the same situation to take place at Mono Lake. Water board officials had just seen this sad story play out just a few hundred miles to the south. They worried

154. Kevin Neal, TED Case Studies, *The Los Angeles Aqueduct and the Owens and Mono Lakes (Mono Case)*, http://archive.today/jhRr [https://perma.cc/LX3Q-NNR5].
155. Mono Lake Comm., *Birds of the Basin: The Migratory Millions of Mono*, http://www.monolake.org/about/ecobirds [https://perma.cc/3LG7-JALJ].
156. *See generally Mono Lake Facts*, *supra* note 144.
157. *See generally id.*
158. *See generally id.*
159. *History: Evidence of Recent Eruptions*, Mono Lake Comm, http://www.monolake.org/about/geovolcanic [https://perma.cc/JR6H-N73V].
160. *Id.*
161. NASA, *Discovery of "Arsenic-Bug" Expands Definition of Life*, NASA Science News, Dec. 2, 2010, http://science.nasa.gov/science-news/science-at-nasa/2010/02dec_monolake/ [https://perma.cc/VCA8-MWNC].
162. *See Lee Vining, California*, City-Data.com, http://www.city-data.com/city/Lee-Vining-California.html (last visited Apr. 17, 2015).
163. *See* U.S. Bureau of Land Mgmt. *Map of Mono Basin*, *available at* http://www.blm.gov/style/medialib/blm/ca/pdf/bakersfield/geology.Par.25066.File.dat/ovm07_geology_maps.pdf.
164. *See, e.g.*, *Mono Lake*, 658 P.2d 719; *Brine Shrimp: Mono Lake's Unique Species*, *supra* note 150.
165. *See* Peter Fimrite, *Mono Lake Efforts May Be Undone by Park Closures*, SF Gate, July 24, 2011, https://www.sfgate.com/green/article/Mono-Lake-efforts-may-be-undone-by-park-closures-2353453.php (last visited Apr. 1, 2019) (describing Lee Vining as a "community that relies on the 271,000 annual visitors who come to the area solely because of [Mono Lake]").
166. Ryan, *The Historic Saga*, *supra* note 3, at 596–98.
167. *Id.* at 594–95.
168. *Id.* at 597.
169. *See also* Andrew H. Sawyer, *Changing Landscape and Evolving Law: Lessons From Mono Lake on Takings and the Public Trust*, 50 Okla. L. Rev. 311, 323–24 (1997).
170. Ryan, *The Historic Saga*, *supra* note 3, at 594–98.
171. *See* William R. Attwater & James Markle, *Overview of California Water Rights and Water Quality Law*, 19 Pac. L.J. 957, 972–73 (1988) (noting that the Water Commission Act required permits to establish new rights in previously unappropriated water).

openly about the same devastating harms befalling the Mono Basin, and they even memorialized these concerns in their final decision.[172]

Nevertheless, they granted the permits in full, concluding that under existing California water law, their hands were tied.[173] They believed that they had no choice but to approve Los Angeles' requested permits, because the city planned to put unappropriated waters to beneficial use—and municipal use at that, the most privileged category of beneficial use.[174] The Board read the California Constitution and water statutes to require the facilitation of municipal access to needed water resources as their highest legal obligation.[175] Accordingly, the Board issued the permits in 1940, although even as it did so, its members enshrined their grave hesitations in writing.[176]

With all legal approvals in place, the Los Angeles Department of Water and Power (DWP), the agency charged with securing and delivering water to the city, set to work completing the Mono Basin Extension of the Aqueduct. The Aqueduct would eventually extend to farthest reaches of the Mono Basin mountain streams, and then shunt the water through an eleven-mile tunnel underneath the dormant Mono Craters volcanoes that lay between Mono Lake and the upper reaches of the Owens River. Infamously, construction of the Mono Craters tunnel famously cost one man's life for each mile of tunnel—showing that water was even more valuable than gold in California, worth its weight in human blood.[177]

Water began to flow south to Los Angeles, and the lake gradually began to decline. As it had for the past three million years, water in the lake continued to evaporate off the surface, leaving dissolved salts behind. However, the fresh water that once flowed down from the mountains to replenish it was now being diverted directly from those mountain creeks into a series of mechanical intakes.[178] These intakes shepherded Mono Basin water under the Mono Crater volcanoes and into the headwaters of the Owens River, where it was routed into the original apparatus of the Los Angeles Aquifer.

Thirty years later, when continued development in Los Angeles led the city to require still more water supply, DWP realized that there was potential for yet more harvest from the Mono Basin.[179] Due to capacity limitations of the existing infrastructure, not all available water was being diverted into the Aqueduct; some was still making it into the lake. Accordingly, in the early 1970s, DWP solved this problem by building a second aqueduct—the "Second Barrel" of the Mono Basin Extension.[180] The Second Barrel was essentially another long tube paralleling the first one.[181] With it in place, Los Angeles was able to import between 12–20% of its water supply from the Mono Basin, four hundred miles away.[182]

D. The Impacts of Diversions in the Mono Basin

Mono Lake had been slowly declining ever since the arrival of the Aqueduct, but when Second Barrel was installed in 1971, the lake began to decline much more quickly.[183] In 1962, the lake had already lost twenty-five vertical feet from its original elevation before diversions began in the 1940s.[184] After the Second Barrel went in, the lake lost nearly as much height in half the time. By the time of the litigation that followed in the early 1980s, the lake had lost forty-five vertical feet and half of its entire volume to water exports through the Aqueduct.[185]

As the lake declined, limestone tufa towers that develop beneath the surface became exposed.[186] These otherworldly geological structures form at the mouth of underground springs, where calcium-rich fresh water meets the carbonates suspended in the alkaline lake water, precipitating out as calcium carbonate and growing only as high as the water level.[187] As the lake receded, the decline could be marked by how much tufa had become exposed above the surface. One famous cluster of human-height tufa towers near the north shore became known as the "Benchmark" tufa, because they provided a useful visual benchmark of Mono Lake's disappearance.[188] In 1962, when the lake had lost twenty-five vertical feet, the tops of the Benchmark tufa were just beginning to appear over the surface. By 1968, they were exposed at the base, on a tiny island of relicted lakebed near the water's edge. By 1995, after twenty years of augmented exports through the Second Barrel, they stood a mile from the new shoreline.[189]

The falling lake level caused formidable air quality problems for the region, as lakebed that had been submerged for millennia became increasingly exposed and airborne.[190] The bed of Mono Lake is similar to the toxic salt flats exposed after Owens Lake was drained, except that Mono Lake is much more alkaline, as it has been accumulating mineral deposits for exponentially more time. Satellite images from space revealed the emerging bathtub ring of white alkali salt flats as the lake declined,[191] and the same air quality problems that plague the Owens Valley began to threaten the Mono Basin. Strong winds off the steep Eastern Sierra escarpment

172. Ryan, *The Historic Saga*, *supra* note 3, at 595–96.
173. *Id.*
174. *Mono Lake*, 658 P.2d at 714.
175. *Id.*
176. *Id.* at 711, 714.
177. *See* Hart, *supra* note 144, at 43.
178. Ryan, *The Historic Saga*, *supra* note 3, at 596–97.
179. *Id.*
180. *See* Hart, *supra* note 144, at 56-57.
181. *Id.* at 42–43.
182. *Mono Lake*, 658 P.2d at 714.
183. Ryan, *The Historic Saga*, *supra* note 3, at 590, 592–93.
184. *See* Hart, *supra* note 144, at 49, 51; Mono Lake Comm., *The Mono Lake Story*, https://www.monolake.org/about/story [https://perma.cc/8D88-KHJB].
185. *Mono Lake Facts*, *supra* note 144.
186. *See* Hart, *supra* note 144, at 50–51.
187. *Id.*
188. *See id.*
189. *See* Andrew Ford, *Mono Basin: Tufa*, http://public.wsu.edu/~forda/tufa1.html (last visited Apr. 17, 2015).
190. *See* Hart, *supra* note 144, at 52–54.
191. *See* Maggie H. Villines, *NASA's Creature at Bottom of Mono Lake: Remnants of Previous Earth Inhabitants?*, Maggie's Notebook, http://www.maggiesnotebook.com/2010/12/nasas-creature-at-bottom-of-mono-lake-remnants-of-previous-earth-inhabitants/ [https://perma.cc/RHA4-GTVR].

spawned toxic dust storms that left the Mono Basin in frequent violation of the Clean Air Act.[192]

Meanwhile, the decreasing amount of water in Mono Lake caused enormous problems for its ecosystem. When the lake lost half its water volume to unreplenished evaporation, that caused the salinity of the remaining lake water to double.[193] The sharply increased salinity placed stress on the brine shrimp, who had long thrived in the lake. I remember that they began to change color, turning slightly reddish, possibly indicating parasitic infections to which they had become more vulnerable under stress. Their reproductive rate slowed down, threatening the simple Mono Lake ecosystem and portending impacts for the millions of birds who came to the lake for nourishment during their long journeys.[194] Negit Island, the small black volcano that had been the historic breeding ground for California gulls, became bridged to the north shore, exposing the gulls to the coyotes that regularly decimated the new chick populations.[195] The mountain creeks were desiccated below the diversion points, destroying critical freshwater fisheries and riparian habitat.[196]

These environmental problems led to related issues for the local community, including economic losses, threats to public health, and general quality of life impacts.[197] As it became increasingly clear that the Mono Basin ecosystem and community were on the brink of collapse, a concerned group of scientists, environmentalists, landowners, and other local citizens decided to fight back.[198] They formed the Mono Lake Committee to advocate for the protection and restoration of Mono Lake, ideally without transferring the same environmental problems to another remote location.[199] They traveled the state, raising consciousness about the importance of water conservation and the impacts of water diversions on places like the Mono Basin, and advocating for legislation to protect it.[200] "Save Mono Lake" bumper stickers became a common sight throughout California, and occasionally even farther afield.[201]

The Mono Lake Committee operated on many levels to save the lake, and one of the many ideas they pursued was the litigation that is the next chapter of the story. They centered their lawsuit on an idea inspired by a modest law review article, authored in 1970 by Prof. Joseph Sax.[202] In the pages of the *Michigan Law Review*, Joe Sax was the first to recognize that the public trust doctrine could require the protection of environmental values associated with navigable waterways.[203] His insight that state sovereign authority over navigable waterways could also imply sovereign responsibility for environmental protection was entirely new at the time, but it would soon change the landscape of natural resource management and water governance in California.[204]

III. *National Audubon Society v. Superior Court*

Drawing on the insights of Professor Sax, the Mono Lake Committee filed a lawsuit claiming that the state could not allow the destruction of Mono Lake, a navigable waterway, because it would violate the public trust doctrine.[205] Their lawsuit was eventually joined by a number of other environmental organizations and national and state agencies with interests in the case, including the National Audubon Society, which helped fund it.[206] But Los Angeles vigorously defended the suit, claiming that there was no such violation, and that California law guaranteed their ongoing rights to continue diverting Mono Basin water.[207] Reduced to their essence, and with rhetorical help from the *Illinois Central* case, here are the arguments they made.[208]

A. *The Legal Arguments*

The plaintiff argued that the state of California could not allow Los Angeles to continue water exports that were destroying Mono Lake, a navigable water held by the state in trust for the people.[209] The city claimed appropriative rights to this water, but the plaintiffs maintained that these rights had been illegally granted in violation of the public trust doctrine, which prevents the state from alienating or allowing the casual destruction of navigable waterways.[210] The doctrine acts as a limit on state sovereignty, they argued, and thus it must trump whatever appropriative rights the state might try to grant in dereliction of its duty as trustee.[211] Because the state had an obligation to protect Mono Lake in trust for the public,[212] the Water Board, acting for the state, lacked authority to permit Los Angeles to destroy it by draining it away.[213]

192. *See* Hart, *supra* note 144, at 154–55.
193. *Id.* at 69.
194. *See id.* (discussing shrimp reproductive issues).
195. *Id.* at 72, 88.
196. *Id.* at 54–56; Michael Blumm & Thea Schwartz, *Mono Lake and the Evolving Public Trust in Western Water*, 37 Ariz. L. Rev. 701, 717–18 (1995).
197. Ryan, *The Historic Saga*, *supra* note 3, at 597–98.
198. *See* Mono Lake Comm., *History of the Mono Lake Committee*, http://www.monolake.org/mlc/history [https://perma.cc/25YM-EVYG].
199. *See id.*
200. *See id.*
201. Jane Kay, *It's Rising and Healthy: Three Decades Ago, a Bunch of College Students Reported on and Worried About the Fate of Mono Lake. This Month, They Celebrated Its Recovery*, SF Gate, July 29, 2006, http://www.sfgate.com/green/article/it-s-rising-and-healthy-three-decades-ago-a-2515840.php (last visited Apr. 17, 2015).
202. Joseph Sax, *The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention*, 68 Mich. L. Rev. 471 (1970).
203. *Id.*
204. *See id.* I always make this point when teaching the *Mono Lake* case to law review editors—and especially the most beleaguered ones—to remind them that what they are doing really is important, because law review articles really can change the world!
205. *Mono Lake*, 658 P.2d at 716 ("[P]laintiffs filed suit for injunctive and declaratory relief in the Superior Court for Mono County on May 21, 1979.").
206. Mono Lake Basin Water Right Decision 1631, 7, 19–20 (State of Calif. Water Res. Control Bd. Sept. 28, 1994), http://www.waterboards.ca.gov/publications_forms/publications/general/docs/monolake_wr_dec1631_a.pdf) (hereinafter Decision 1631).
207. *Mono Lake*, 658 P.2d at 716, 727.
208. *Id.* For a fuller discussion of these arguments, see Ryan, *The Historic Saga*, *supra* note 2, at 603–15; Ryan, *supra* note 4, at Chapters VI–VII.
209. *Id.* at 716.
210. *Id.* at 712.
211. *Id.* at 712–14.
212. *Id.* at 728–29.
213. *Id.*

The plaintiffs argued that the original 1940 diversion licenses had been granted in violation of the public trust doctrine, because the Water Board had failed to consider the resulting harms to the public trust values it was obliged to protect at Mono Lake.[214] To support their contention, they pointed to the Board's own written record of its concerns at the time, in which they had wrung their hands about the apparent fact that there was nothing they could do to prevent the Owens Valley tragedy from being repeating at Mono Lake.[215] These writings either demonstrated that they had not considered their obligations under the public trust doctrine, or that if they had considered them, they ignored them.[216] By my analogy, this was like the state of Illinois giving away the bed of Chicago Harbor one hundred years earlier in the *Illinois Central* case, which the Supreme Court had pointedly affirmed the state could *not* do.

Los Angeles had a lot at stake, and it ferociously defended the lawsuit. City leaders realized that if they lost, they not only stood to lose up to 20% of their already strained water supplies. In addition, the negative precedent the case might create could threaten their ability to import other critical water supplies from other distant, out-of-basin locations.[217] From their perspective, Los Angeles had complied with both the letter and the spirit of California water law, which has always sought to facilitate municipal access to water resources for beneficial use in urban areas.[218] They were even reluctant to implement the water conservation efforts urged by the Mono Lake advocates and incentivized by offers of state and federal funding.[219] The prior appropriations regime may even have contributed to this decision, because as a "use-it-or-lose-it" system, a user who manages to conserve water risks forfeiture of their rights to use that water in the future.[220]

According to Los Angeles, then, the plaintiffs had it all wrong. The city was hardly violating the public trust doctrine, which protects only navigable waterways, and the city was drawing water not from the hypersaline lake, but Mono's non-navigable feeder creeks.[221] Moreover, Los Angeles argued, the public trust was the wrong doctrine to focus on. The dispositive law was that of prior appropriations, with which the city had diligently complied. It had sought and perfected permits under California's statutory water code, and it was putting this water to municipal use, the highest echelon of beneficial use.[222] (It might argue that the *Illinois Central* analogy would fail on this point, as this was nothing like giving away Chicago Harbor: the city is a public body, and this water was for the good people of Los Angeles to drink!)

Even if none of that were enough, however, the city argued that the plaintiffs could not rely on the public trust doctrine to interfere with appropriative water rights, because of the customary relationship between statutory and common law.[223] It argued that the California Water Code, incorporating the prior appropriations doctrine by statute, should be construed to override the public trust doctrine.[224] After all, that is how the legal system ordinarily works: the common law fills gaps until the legislature passes a relevant statute, which effectively abrogates any contradictory common law.[225]

In essence, then, the Mono Lake advocates argued that the common-law public trust doctrine, in defining a core requirement of state sovereign ownership of waterways, should trump any contrary claims under the statutory law of prior applications—while Los Angeles argued that the prior appropriations doctrine, an abrogating act of statutory law, should trump the common-law public trust.[226] The two parties deadlocked on the seemingly irreconcilable issue of which rule of law reigns supreme.

B. The Court's Decision

The California Supreme Court issued a memorable opinion that both affirmed and disappointed the central arguments made by both sides. The prior appropriations statute does not foreclose the common-law public trust doctrine,[227] it concluded, but neither did the public trust doctrine determine the future of California's massive and entrenched water works.[228] Solomon-like, the court announced that neither of the two sets of law at issue trumps the other, and that the state must somehow find an accommodation between them.[229]

Its most significant holding, that the prior appropriations doctrine did not abrogate California's public trust, was cause for celebration among the Mono Lake Advocates.[230] But the court declined their invitation to exalt the public trust above all other considerations, holding that the entrenched legal and mechanical infrastructure constructed to move water resources around California could not be wishes away, nor should it.[231] The court observed that the state is dependent on such waterworks, and that it would be "disingenuous" to pretend otherwise.[232] For that reason, it concluded, the law cannot casually dismiss the

214. *Id.* at 712–14.
215. *Id.* at 714.
216. *Id.* at 712–14. By my analogy, this was like the state of Illinois giving away the bed of Chicago Harbor one hundred years earlier in the *Illinois Central* case, which the Supreme Court had pointedly affirmed the state could *not* do. Ryan, *The Historic Saga*, *supra* note 3, at 568.
217. *Id.* at 604.
218. Ryan, *The Historic Saga*, *supra* note 3, at 604, 606–07.
219. *Id.* at 602 (2015).
220. *Id. See, e.g.*, Salt River Valley Water User's Assn. v. Kovacovich, 411 P.2d 201 (Ariz. 1966) (concluding that an irrigator who implemented water conserving technology was not entitled to the conserved water under his appropriative right). Today, most prior appropriation states have amended their water laws to provide greater incentives for water users to conserve and protect them against forfeiture. For example, California now entitles those who conserve water to use, sell, or lease conserved water yielded by these efforts. Cal. Water Code § 1011.
221. *Mono Lake*, 658 P.2d at 716, 727.
222. Ryan, *The Historic Saga*, *supra* note 3, at 604.
223. *Id.* at 607–08.
224. *Mono Lake*, 658 P.2d at 716, 727; Ryan, *The Historic Saga*, *supra* note 3, at 607–08.
225. Ryan, *The Historic Saga*, *supra* note 3, at 603.
226. *Id.*
227. *Id.* at 712.
228. *Id.* at 712, 727.
229. *Mono Lake*, 658 P.2d at 716, 727. For fuller analysis of the court's decision, see Ryan, *The Historic Saga*, *supra* note 3, at 605–11.
230. *Mono Lake*, 658 P.2d at 712.
231. *Id.* at 712, 727.
232. *Id.* at 712.

appropriative rights upon which holders, especially major metropolitan areas, have come to rely.[233]

Nevertheless, the court concluded that the public trust doctrine is also the law of the land, and that the state may not ignore the obligations it imposes.[234] While the doctrine is designed to protect navigable waterways, the court recognized that under circumstances like these, the waterway cannot be meaningfully separated from its non-navigable tributaries.[235] The court found that the state had clearly failed to consider the public trust implications of the 1940 licensing decision, and since the state cannot neglect its public trust obligations,[236] it must reconsider these licenses anew, weighing Los Angeles' legitimate needs for water against the scenic, ecological, and recreational public trust values at stake in the Mono Basin.[237]

Of note, the court did not provide much guidance about how, exactly, the state should proceed in balancing legitimate but incommensurate interests beyond the admonition that it must. Analytically, it is useful to consider whether the decision creates a mere procedural requirement—a command to think carefully before deciding to compromise trust values, such as the "look before you leap" analysis required by the National Environmental Policy Act of 1969 (NEPA)[238]—or whether it creates a substantive command to protect public trust values. The procedural requirement is clear, as the decision was premised on the state's failure to consider public trust obligations at Mono Lake in the original licensing decision. But was there more?

The decision is so understated on this point that it takes a careful reader to find it, but the court did in fact articulate a substantive, if weak, command—to protect public trust values as much as possible.[239] The court directed that "before state courts and agencies approve water diversions they should consider the effect of such diversions upon interests protected by the public trust, *and attempt, so far as feasible, to avoid or minimize any harm to those interests*."[240] Requiring the state to avoid harming trust values as much as is "feasible" leaves an awful lot to state discretion, but it does imbue a substantive dimension to California's public trust doctrine that distinguishes it from the purely procedural requirements of NEPA. Such breadth of discretion begs questions about whether the command has real bite, but the court's language does provide both a moral impetus for state action and a legal hook for public and judicial oversight.

C. The Aftermath: The Water Board's Decision 1631

After the California Supreme Court's decision, the Water Resources Control Board spent the next ten years trying to calculate the proper balance between these competing interests. With the benefit of substantial research and exhaustive public input, the Water Board eventually worked out a more limited schedule of diversions that would allow Los Angeles to continue taking water, so long as critical public trust values at Mono Lake remained protected.[241] Famously known as "Decision 1631," the decision represented a compromise, not unlike the Supreme Court's decision.[242] It set a designated recovery level for the lake at 6,392 feet above sea level, a point roughly between the original, pre-diversion lake level (6,417 feet) and the level at the time of litigation (6,372 feet).[243]

This 6,392-foot recovery level was chosen for several reasons. It would stabilize the salinity of the lake at a level the brine shrimp could survive, thus protecting the fragile Mono Lake ecosystem.[244] It would cover the most hazardous salt flats, limiting toxic dust storms and thus protecting the public health.[245] It would also protect the scenic and recreational values of Mono Lake, and with it, the local communities and economies that depend on it.[246] Finally, it would still allow Los Angeles to export needed water supply, so long as designated benchmarks and recovery levels were met and maintained.[247] Eventually, when the lake reached the recovery level, exports would be unlimited, so long as the lake remains at the target level.[248] Twenty-four years later, the target has still not been achieved; the lake currently averages around 6,381 feet of elevation, not quite halfway toward the goal.[249] Unfortunately, California's ongoing water woes and unpredictable weather patterns cast doubt on when, if ever, that goal will be met.

Decision 1631 marked a true turning point for the Mono Lake story, but an equally significant moment followed shortly thereafter. While the court's decision set forth rules of law, it was the Water Board's decision that would determine the actual fate of both the city's water diversions and the lake. All parties had awaited its ruling with bated breath over each of the previous ten years. Everyone knew that from the perspective of Los Angeles, giving up any claim to the water the city had once relied on would be a painful loss.[250] Los Angeles had fought the *Mono Lake* lawsuit with all its might, because nothing made the city more vulnerable than the loss of access to water. Moreover, given the reasoning behind the court's decision, Los Angeles now had to worry not only about losing Mono Basin water, but potentially all of its water supply—much of which was imported from distant watersheds.[251]

233. *Id.*
234. *Id.*
235. *Id.*
236. *Id.*
237. *Id.* at 728–29.
238. 42 U.S.C. §§ 4321–4370(h) (2012).
239. *Mono Lake*, 658 P.2d at 728.
240. *Id.* (emphasis added).
241. Ryan, *The Historic Saga*, *supra* note 3, at 611.
242. Decision 1631, *supra* note 206, at 154–55.
243. *Id.* at 158.
244. *Id.* at 77–78, 82.
245. *Id.* at 3.
246. *Id.*
247. *Id.* at 156–57. Decision 1631 articulated a complicated series of interim benchmarks and recovery levels with corresponding permissible diversions. Exports were initially prohibited until the lake level reached the first benchmark, after which reduced exports would be permitted until the next benchmark was reached, and so on. Decision 1631, *supra* note 206.
248. *Id.* at 156.
249. Mono Lake Levels 1979-Present, Mono Lake Committee, http://www.monobasinresearch.org/data/levelmonthly.php [https://perma.cc/NC5K-SCS7].
250. Ryan, *The Historic Saga*, *supra* note 3, at 612–13.
251. *Id.* at 613.

For that reason, when the Water Board ruled that the city would have to stop exporting all Mono Basin water until interim benchmarks were met, many perceived the decision not as a compromise between the interests of both sides, but as a serious loss for Los Angeles. The big question on everyone's mind was whether the city would appeal the Water Board's decision.[252] That would have brought many more years of litigation, and even more serious environmental impacts for the Mono Basin during the interim. Many observers anticipated that Los Angeles, who had so bitterly fought the underlying litigation, would certainly appeal.

Yet, in a remarkable turnaround, the city changed course. Much like the citizens of Illinois in the *Illinois Central* story,[253] the good people of Los Angeles voted in new city leadership, and those new leaders took office with a new platform and a new approach: Conservation.[254]

Rather than carrying on the same old battle, the city decided to cooperate with the Mono Basin advocates they'd been fighting in court, resolving to work together toward increased water conservation in the Los Angeles basin and restoration of the deteriorated resources of the Mono Basin.[255] Instead of appealing Decision 1631, they took advantage of the state and federal grants that have been previously offered to implement large-scale water conservation projects.[256] Through a series of programmatic conservation efforts, from facilitating industrial water recycling to subsidizing low flush toilet installation and other household-based limits on consumption, the city made remarkable progress—recovering through conservation alone the entire loss of water supply that had been coming from the Mono Basin.[257] Los Angeles deserves enormous credit for its leadership in water conservation and recycling ever since.

IV. Unpacking the *Mono Lake* Decision

The *Mono Lake* case not only saved Mono Lake, it established several important legal principles, interpreting the scope of public trust protections for different values, in application to different resources, and even the operation of the doctrine over time. But before assessing them, I'd like to consider the issue the court resolved that carries the most theoretical heft: the implications of the decision for the legal nature of the public trust doctrine itself.

A. The Nature of the Public Trust Doctrine

As noted, the court concluded that California's statutorily adopted prior appropriations doctrine did not abrogate its common-law public trust doctrine, and that neither trumps the other.[258] Both sets of legal requirements must be considered together, and perhaps balanced against one another, when the state makes management decisions about water resources subject to the public trust like Mono Lake.[259] Yet, this grand gesture of legal compromise highlights a singular feature of the public trust doctrine, and how it departs from the usual legal norms. Because at first blush, Los Angeles's argument on this point seems correct—normally, statutory law *does* trump the common law.[260]

This seemingly paradoxical result makes sense, however, if the doctrine originated as a constitutive grant of authority and obligation regarding the management of public commons water resources. If the public trust doctrine serves to both grant and limit sovereign authority—granting the sovereign ownership of these resources but obligating it to manage them in trust for the public—then, of course, it would be self-defeating to allow the state to abolish the limit legislatively.[261] Some have argued that this gives the doctrine a quasi-constitutional foundation, an underlying legal constraint that statutory law can build upon but not undermine, which makes it inherently different from more conventional, garden-variety common-law doctrines.[262] Some have argued that this interpretation of the public trust doctrine is a necessary implication of the equal footing doctrine,[263] which is also recognized as a principle of U.S. constitutional law[264]—even though, like the words "public trust," the words "equal footing" appear nowhere in the U.S. Constitution.

While many jurisdictions have followed California's model,[265] it is important to note that at least one American jurisdiction, Idaho, has taken a markedly different approach, prompting both political and scholarly controversy.[266] After

252. *Id.*
253. *See supra* notes 60–82 and accompanying text, discussing *Illinois Central*.
254. Ryan, *The Historic Saga*, *supra* note 3, at 612–13.
255. *Id.*
256. Hart, *supra* note 56, at 149.
257. Mono Lake Comm., *Mono Lake FAQ: Frequently Asked Questions About Mono Lake*, http://www.monolake.org/about/faq [https://perma.cc/UVC4-QQPV] (noting that Los Angeles conservation efforts have more than replaced water no longer diverted from Mono Lake).
258. *Id.* at 727.
259. *Id.*
260. Ryan, *The Historic Saga*, *supra* note 3, at 604.
261. *Id.* at 573–74.
262. *See, e.g.*, Michael Blumm & Mary Christina Wood, *"No Ordinary Lawsuit": Climate Change, Due Process, and the Public Trust Doctrine*, 67 Am. U. L. Rev. 1, 43–44 (2017) (arguing that the public trust doctrine is "an inherent constitutional limit on sovereignty"); Michael C. Blumm et al., *Renouncing the Public Trust Doctrine: An Assessment of the Validity of Idaho House Bill 794*, 24 Ecology L.Q. 461 (1997).
263. *See, e.g.*, Michael Blumm & Lynn Schaffer, *The Federal Public Trust Doctrine: Misinterpreting Justice Kennedy and* Illinois Central Railroad, 45 Envtl. L. 257, 400–01 (2015); James R. Rasband, *The Disregarded Common Parentage of the Equal Footing and Public Trust Doctrines*, 32 Land & Water L. Rev. 1 (1997); Harrison C. Dunning, *The Public Trust: A Fundamental Doctrine of American Property Law*, 19 Envtl. L. 515, 524 (1989).
264. U.S. Const. art. IV, § 3, cl. 1. *See also* Coyle v. Smith, 221 U.S. 559, 566 (1911) (interpreting the equal footing clause in reference to sovereign ownership of submerged lands).
265. *See, e.g.*, Lawrence v. Clark Cnty., 254 P.3d 606, 613 (Nev. 2011) ("The final underpinning of our formal adoption of the public trust doctrine arises from the inherent limitations on the state's sovereign power."); In re Water Use Permit Applications for the Waiahole Ditch, 9 P.3d 409, 432 (Haw. 2000) ("[H]istory and precedent have established the public trust as an inherent attribute of sovereign authority."); East Cape May v. State Dept. of Envtl. Prot., 777 A.2d 1015, 1034 (N.J. Super. A.D. 2001) (noting that "tidally-flowed land has always been subject to the public trust doctrine . . . [which] provides that the sovereign never waives its right to regulate the use of public trust property"); Caminiti v. Boyle, 732 P.2d 989, 994 (1987) ("The state can no more convey or give away this jus publicum interest than it can 'abdicate its police powers in the administration of government and the preservation of the peace.'").
266. James M. Kearney, *Recent Statute: Closing the Floodgates? Idaho's Statutory Limitation on the Public Trust Doctrine*, 34 Idaho L. Rev. 91 at 94 (1997); Blumm, Dunning, & Reed, *supra* note 262, at 472 (noting that the new statute "was the

the Idaho Supreme Court issued a series of public trust decisions converging on the California Supreme Court's interpretation in *Mono Lake*,[267] the state legislature enacted a statute that expressly foreclosed this interpretive path.[268] The legislation declared that the public trust doctrine did limit the state's ability to alienate title to the beds of navigable waters, but that it had little impact beyond that,[269] preventing the doctrine from impacting the allocation of prior appropriative water rights or state decisions about the commercial, agricultural, or recreational uses of public trust waterways.[270]

Environmental advocates and scholars condemned the Idaho statute as an illegitimate legislative move,[271] but in fairness, that depends on the nature of the doctrine at its core. If the public trust doctrine does include a constitutive limit on sovereign authority over natural resource public commons, then yes, the Idaho Legislature's move to abrogate this limit was *ultra vires*. That view is reflected in the California approach, mirrored in other states with strong common-law doctrines, such as Hawaii, New Jersey, and Washington, and those with express constitutional trusts, such as Pennsylvania.[272] But the Idaho legislature treated the doctrine as just another conventional expression of ordinary state authority, which is normally subject to legislative change. The Idaho example poses a strong challenge to the constitutive public trust model, indicating both the variability of the doctrine among U.S. jurisdictions and also this critical underlying theoretical dilemma.

The contest between the California and Idaho models is significant, because it reveals precisely this unresolved theoretical question at the heart of the public trust doctrine. Is it a constitutive element of sovereign authority that cannot be casually dissolved by the one wielding that sovereign authority at any given moment in time? Or is it an expression of the state's conventional police power to protect the public welfare, which can always be revisited by future legislative decisionmakers? If we assume that the public trust doctrine in every state evolved from a single, unified principle, then the contrary approaches taken by these states pose a thorny legal problem, because it would seem that they cannot both be right. Either the doctrine originated as a modifiable expression of conventional state authority, or it has always been a less negotiable constraint on sovereign power.[273]

If California is right, then unlike the conventional common law, the public trust doctrine represents a quasi-constitutional limit on sovereign authority that cannot be so easily legislated away. But if Idaho is right, then the doctrine is just another common-law rule that is forever subject to new sovereign consensus. Neither of these principles can reduce to the other without constitutional change. The Idaho approach could not legitimately evolve from the California model, nor could the California approach evolve from the Idaho model, because either path threatens conventional rule of law principles. At least in the United States, sovereign authority cannot free itself of constitutional constraints, nor does ordinary common law assume constitutive status through conventional common-law processes.

The disjuncture begs the question: which is it? And indeed, debate over the answer continues to unfold in centers of judicial, legislative, and executive decisionmaking across the nation, especially prompted by the unfolding atmospheric trust litigation.[274] It demonstrates that the project of interpreting the public trust doctrine remains a work in progress, and we are all bearing witness to this ongoing debate.

B. Doctrinal Extensions on Values, Tributaries, and Time

That statutory water allocation law did not displace the California public trust doctrine may be the most significant part of the holding as a matter of legal theory, but the decision also included several other important extensions of the doctrine, expanding the scope of doctrinal protections to environmental values, non-navigable tributaries, and over time.[275]

1. Environmental Public Trust Values

The one for which *Mono Lake* is most often celebrated is the recognition that the public trust doctrine protects not only the navigation and fishing values traditionally associated with the common-law doctrine but also the ecological, scenic, and recreational values at stake at Mono Lake.[276] The Mono Basin makes a great poster child for this proposition,

legislature's response to judicial public trust declarations" in a series of Idaho Supreme Court cases).

267. *See, e.g.*, Selkirk-Priest Basin Ass'n v. State ex rel. Andrus, 127 Idaho 239, 240 (1995) (suggesting that the public trust doctrine might be used to constrain harm from logging activities to an impacted water body); Idaho Conservation League v. State, 911 P.2d 748 (Idaho 1995) (declining intervention by environmental groups to raise public trust issues where state ownership was not at issue, but suggesting in dicta that the public trust doctrine could take precedence over vested water rights). *See also* Kearney, *supra* note 266 at 95–96 (discussing the reaction of the legislature to these cases).
268. Idaho Code tit. 58, ch. 12 §§ 58-1201–1203 (1996) (Chapter 12. Public Trust Doctrine).
269. *Id.* at § 58-1201(4) and (6) (defines public trust doctrine as guiding alienation of the title of the beds of navigable waters and clarifies that the purpose of the act is to define limits on the public trust doctrine); *id.* at § 58-1203(1) (limits the public trust doctrine to "solely a limitation on the power of the state to alienate or encumber the title to the beds of navigable waters").
270. *Id.* at § 58-1203(3) (does not limit the state to authorize public and private use or alienation of title to the beds of navigable waters if the state board of land commissioners determines that it is in accordance with Idaho statutes and constitution and for the purposes of navigation, commerce, recreation, agriculture, mining, forestry, or other uses).
271. *See, e.g.*, Kearney, *supra* note 266; Blumm et al., *supra* note 262.
272. *See* sources cited *supra*, notes 87 & 265.
273. If there is one, an alternative explanation would probably require the operation of something like the controversial "Constitutional Moments" higher lawmaking hypothesis offered by Prof. Bruce Ackerman to explain the adoption of constitutional principles outside the formal amendment process (justifying, for example, the canonization of Fourteenth Amendment principles within the U.S. constitutional framework notwithstanding problems with the post-civil war amendment process). Bruce Ackerman, We the People: Foundations 6–7, 110–11 (1991). Ackerman's theory, of course, has itself been the object of intense criticism. *See, e.g.*, Michael J. Klarman, *Review: Constitutional Fact/Constitutional Fiction: A Critique of Bruce Ackerman's Theory of Constitutional Moments*, 44 Stanford L. Rev. 759 (1992).
274. *See infra* Part IV.
275. For a fuller analysis, see Ryan, *The Historic Saga*, *supra* note 3, at 609–12; Ryan, *supra* note 4, at Chapter VI.
276. Ryan, *The Historic Saga*, *supra* note 3, at 606; Blumm, *supra* note 8, at 591; Frank, *supra* note 78, at 670; Timothy J. Conway, National Audubon Society

because it is such a visually stunning place, with a unique and life-productive ecosystem, attracting hundreds of thousands of recreational visitors each year.

In this regard, however, *Mono Lake* is really just riding the coat-tails of a slightly earlier California case, *Marks v. Whitney*, in which the California Supreme Court first allowed for consideration of these extended environmental values.[277] *Mono Lake* was the later comer, relying itself on the precedent set forth in *Marks*, but *Marks* was a relatively dry and technical case that adjudicated rights of access to privately-owned tidelands, about which ordinary people could not get terribly excited.[278] *Mono Lake* has perhaps stolen *Marks*'s rightful thunder, but the Mono Lake story was so much more engaging that it has come to stand for this legal innovation in the public consciousness more compellingly than *Marks* was able to do.

2. Non-Navigable Tributaries

Notably, *Mono Lake* also extended the public trust doctrine to the non-navigable tributaries on which a navigable waterway relies.[279] Spanning 45,000 acres and reaching depths of hundreds of feet, Mono Lake is unquestionably a navigable waterway.[280] It has been commercially navigated since the time of the California Gold Rush, when it was used to transport logs from the Jeffrey Pine forest south of the lake to Bodie, one of the principal Gold Rush boom towns north of the Basin.[281] Yet, Los Angeles was not diverting water directly from Mono Lake, whose salty waters are manifestly non-potable. Water was diverted from the freshwater Mono Basin creeks that flow down from the Sierra Nevada into the lake, and these steep, rocky creeks were not navigable at the point of diversion.[282] Los Angeles attempted to leverage this distinction, but the Court held that the tributaries of a protected waterway must also be protected if the alternative would result in the destruction of the protected waterway.[283]

The extension of public trust protection to non-navigable tributaries at Mono Lake continues to play a pivotal role in the unfolding power of the doctrine to protect California waterways. Most recently, the *Mono Lake* case proved foundational in a public trust decision extending the non-navigable tributary rule to groundwater.[284] The Scott River in central California is a navigable river substantially fed by groundwater sources, and the river has declined seriously as these sources are increasingly exploited.[285] The plaintiffs in the *Scott River* case sought to extend the *Mono Lake* rule to groundwater on exactly the same theory—that even though groundwater tributaries are non-navigable, withdrawals must be limited to protect the navigable waterway that depends on them.

In 2018, the California Court of Appeals affirmed that the state has the authority and obligation under the public trust doctrine to regulate extractions of groundwater that affect public trust uses in the Scott River.[286] The decision was heralded by environmentalists, who have long urged that water law better account for the interdependence of ground and surface water resources.[287] However, it was equally decried by advocates for property rights holders, including the farmers and ranchers who had been withdrawing groundwater that was the subject of this litigation for commercial purposes.[288] Later that year, when the defendant county appealed this decision to the California Supreme Court, the high court denied review, making the Court of Appeal's decision the final word in the case.[289]

3. Duty of Ongoing Supervision

Finally, and perhaps most concerning to water managers throughout the western United States, the California Supreme Court articulated in *Mono Lake* a duty of ongoing oversight for public trust resources.[290] Conceptually, this was necessary to overcome the time lag between Los Angeles' original grant of the diversion licenses in 1940 and the filing of litigation forty years later.[291] *Mono Lake* was not the first case to apply the doctrine in the context of water rights—it followed a recent North Dakota case requiring consideration of the impacts of a new consumptive permit on existing and future supply[292]—but it was the first to do so retroactively. In the *Mono Lake* case, the court held that there is no statute of limitations on public trust claims; the state has an ongoing duty to supervise public trust resources and consider its responsibilities under the doctrine.[293] This ongoing obligation of oversight both allowed and required the Water Board to revisit its past decision, when that decision had failed to take account of public trust obligations.

v. Superior Court: *The Expanding Public Trust Doctrine*, 14 Envtl. L. 617, 631 (1984).

277. 491 P.2d 374, 380, 2 ELR 20049 (Cal. 1971) (expanding public trust protections to ecological, habitat, open space, climatic, and scenic values).
278. *See id.*
279. *Mono Lake*, 658 P.2d at 720–21.
280. Hart, *supra* note 56, at 24–25.
281. *Id.*
282. Ryan, *The Historic Saga*, *supra* note 3, at 607–10.
283. *Mono Lake*, 658 P.2d at 721.
284. *Scott River*, Case No.: 34-2010-80000583 (Cal. 3d App. Dist., Aug. 29, 2018).
285. *Id.* at 2.
286. *Id.*
287. Richard Frank, *California Court Finds Public Trust Doctrine Applies to State Groundwater Resources*, Legal Planet (Aug. 29, 2018), legal-planet.org/2018/08/29/california-court-finds-public-trust-doctrine-applies-to-state-groundwater-resources/ (reporting that the court declared that "California's powerful public trust doctrine applies to at least some of the state's overtaxed groundwater resources . . . [and] rejects the argument that California's Sustainable Groundwater Management Act displaces the public trust doctrine's applicability to groundwater resources").
288. Pacific Legal Foundation, *The State Has No "Public Trust" Power Over Groundwater*, https://pacificlegal.org/case/environmental-law-foundation-v-state-water-resources-control-board/ [https://perma.cc/S9BG-GBZ2] ("As amicus on behalf of property owners and farmers, PLF asks the Court of Appeal to reverse this unwarranted, vast expansion of the public trust doctrine.").
289. Order Denying Petition for Review, Envtl. Law Found. v. State Water Res. Control Bd., No. S251849 (Cal. Nov. 28, 2018). Since then, much ink has been spilled over the implications of the decision for California water law and how it may affect the development and review of groundwater sustainability plans under California's 2014 Sustainable Groundwater Management Act. Sustainable Groundwater Management Act, Cal. Water Code §§ 10720–10737.8, added by Stats.204, c. 346 (S.B. 1168, eff. Jan 1, 2015).
290. *Mono Lake*, 658 P.2d at 727.
291. Ryan, *The Historic Saga*, *supra* note 3, at 606.
292. United Plainsmen Ass'n v. N.D. State Water Conservation Comm'n, 247 N.W.2d 457, 463, 7 ELR 20117 (N.D. 1976).
293. *Mono Lake*, 658 P.2d at 727–28, 732.

In terms of practical impact, this might have been the biggest legal innovation of all. By implication, it meant that the state might have to revisit its Mono Lake diversion decision again in another forty years' time—or sooner than that, or later—as circumstances evolve.[294] Indeed, it could require the state to revisit any past decision involving a navigable waterway for the same reason, or if circumstances significantly alter the calculus underlying a past decision. At least in theory, all water allocation or management decisions impacting public trust waterways could be up for renegotiation, as would be all future decisions.[295] The potential ramifications of this duty of ongoing supervision sent shock waves through the arid west, where diverters feared what this could mean for the certainty of their rights and infrastructure.[296] The prospect of revisiting management decisions made without consideration of public trust values threatened to upend many seemingly settled allocation plans, because before the *Mono Lake* case called attention to them, public trust issues were unlikely to have been raised during the decisionmaking process.[297]

This point generated considerable controversy, and indeed, no state has adopted the full *Mono Lake* doctrine of ongoing oversight[298] except Hawaii, a riparian rights state that operates under a wholly different set of legal and hydrological constraints.[299] As noted, some states have gone out of their way to ensure that they do not follow in California's footsteps, as the Idaho Legislature did in statutorily limiting the judicial evolution of the doctrine.[300] Outside of the Mono Basin, even California has not made much use of the doctrine retrospectively, although the doctrine does now play an important role in prospective administrative decisionmaking.[301]

C. *Post-Decision Pushback*

In the context of the Mono Lake story, it is easy to paint a heroic portrait of the public trust doctrine. After the *Mono Lake* litigation, the doctrine emerged as a darling of the wider environmentalist community—the unlikely savior of a treasured place against the forces of those with far greater power. Many celebrated the David-and-Goliath result, in which a rag-tag collection of local scientists and bird watchers organized around a kitchen table somehow defeated one of the largest and most powerful cities in the world.[302] However, not everyone was so enamored with the doctrine. Important critiques soon emerged from advocates for private property rights, advocates for greater separation of powers, and even some environmentalists.[303]

The most vociferous critique comes from the property rights community. Property rights advocates worry about how quickly the modern public trust doctrine has developed, and the new interests it has been interpreted to protect.[304] They decry the way they see the doctrine putting a fist on the scale on the side of public interests at the expense of established private interests in water resources protected by the trust.[305] They are concerned about the trajectory of public trust disputes when the doctrine seems so malleable, encompassing new values as they become recognized—and especially if public trust decisions can be revisited over time through a duty of ongoing oversight.[306]

Another critique has arisen from those concerned with the legal process ramifications of the public trust doctrine.[307] These critics worry about the separation of powers implication of a doctrine that allows the judiciary to second-guess legislative and executive decisionmaking.[308] They view judicial encroachment on policy decisions with skepticism, given that the judiciary is "the least democratic branch," in comparison with the others that are more directly beholden to electing constituents.[309] Legal Process critics are troubled by the idea that unelected judges could countermand the popular will, and that even in states where judges are elected, their decisions could maintain precedential value long after a judge leaves office.[310] To these champions of the political branches, the public trust doctrine seems not only antidemocratic but potentially destabilizing to the rule of law.[311]

Finally, while most environmentalist love the public trust doctrine, the *Mono Lake* decision also produced an environmentalist critique, one that I have previously referred to as "The Green Dissent."[312] Leading that charge thirty years ago was Richard Lazarus, now a leading professor of environ-

294. Ryan, *The Historic Saga*, *supra* note 3, at 608.
295. *Id.* at 611–12.
296. *Id.* at 608–11.
297. *Id.* at 609, 611–12.
298. *Id.*
299. In re Water Use Permit Applications for the Waiahole Ditch, 9 P.3d 409, 445 (Haw. 2000).
300. *See supra* notes 266–71 and accompanying text (discussing Idaho's legislative abrogation of the common-law doctrine).
301. *See generally* David Owen, *The* Mono Lake *Case, the Public Trust Doctrine, and the Administrative State*, 45 U.C. Davis L. Rev. 1099 (2012).
302. Ryan, *The Historic Saga*, *supra* note 3, at 603–09.
303. For a fuller analysis, see *id.* at 617–22; Ryan, *supra* note 4, at Chapter VII.
304. *Id.* at 615, 618–19; James L. Huffman, *A Fish out of Water: The Public Trust Doctrine in a Constitutional Democracy*, 19 Envtl. L. 527, 533 (1989) (identifying the doctrine as a creature of property law that has been distorted by the courts beyond its proper boundaries); Barton H. Thompson Jr., *The Public Trust Doctrine: A Conservative Reconstruction and Defense*, 15 Se. Envtl. L.J. 47, 49 (2006) (suggesting reconstruction of the public trust doctrine in response to libertarian and property rights critiques); Lloyd R. Cohen, *The Public Trust Doctrine: An Economic Perspective*, 29 Cal. W. L. Rev. 239, 274–76 (1992) (criticizing the public trust doctrine's effects on private property rights); *see also* Rose, *supra* note 31, at 711–13, 717; (recognizing the inevitable conflict between the public trust and private property rights and considering what type of property can, under competing notions of public trust, be considered inherently public). *But see* Richard A. Epstein, *The Public Trust Doctrine*, 7 Cato J. 411, 428–30 (1987) (analyzing the public trust doctrine from a similarly libertarian, property rights perspective, but supporting it as a natural limitation on government power, comparable to restrictions on eminent domain).
305. Ryan, *The Historic Saga*, *supra* note 3, at 615, 618–19.
306. *Id.* at 615–19; Thompson, *supra* note 304, at 47, 48–49.
307. *See, e.g.*, Ryan, *The Historic Saga*, *supra* note 3, at 617–18; Thompson, *supra* note 304, at 48–49; William D. Araiza, *Democracy, Distrust, and the Public Trust: Process-Based Constitutional Theory, the Public Trust Doctrine, and the Search for a Substantive Environmental Value*, 45 UCLA L. Rev. 385, 432 (1997).
308. Ryan, *The Historic Saga*, *supra* note 3, at 618.
309. *Id.*
310. *See* Huffman, *supra* note 304, at 533.
311. *Id.*
312. *See, e.g.*, Erin Ryan, *Public Trust & Distrust: Theoretical Implications of the Public Trust Doctrine for Natural Resource Management*, 31 Envtl. L. 477, 492–93 (2001); Ryan, *The Historic Saga*, *supra* note 3, at 616, 620–21; Thompson, *supra* note 304, at 48–49; Richard J. Lazarus, *Changing Conceptions of Property and Sovereignty in Natural Resources: Questioning the Public Trust Doctrine*, 71 Iowa L. Rev. 631, 715–16 (1986); Araiza, *supra* note 307, at 387–89.

mental law at Harvard Law School.[313] He famously criticized the environmentalist embrace of the doctrine, arguing that it would take the burgeoning environmental law movement—which had come of age barely ten years earlier in the 1970s—in the entirely wrong direction.[314]

Central to the Green Dissent was the position that it was a mistake to embrace the tools and vocabulary of property law to accomplish the stewardship-oriented goals of environmental law.[315] As Lazarus explained, the public trust doctrine emphasizes such property law concepts as public and private ownership of resources, trustees and beneficiaries, and so forth.[316] Instead of infusing environmental law with property concepts, he maintained that environmental law should embrace stewardship concepts more consistent with new environmental statutes such as NEPA and the Clean Air and Water Acts, and the emerging principles of administrative law.[317] The stewardship approach obliges the state to protect valued resource independently from ownership, public or otherwise.[318] After all, if we base environmental protection obligations on public ownership, then what happens if a fickle public suddenly decides it would be more valuable to put up a parking lot?

Accordingly, not everybody loves the public trust doctrine as it stands, nor does everyone cheer where it may be headed. These critiques warrant mention, especially as new developments push the doctrine into territory not previously recognized in U.S. law.

V. The Contested Future: An Atmospheric Trust

After *Mono Lake*, environmentalist appeals to the doctrine surged, although successes were mostly limited to contexts involving waterways.[319] There have been important new applications in the context of water resources, including California's extension of the *Mono Lake* doctrine to groundwater tributaries in the *Scott River* case,[320] the protection of public beach access in New Jersey,[321] public walking rights along Great Lakes shores,[322] and the protection of public drinking water from hydraulic fracturing under Pennsylvania's constitutionalized version of the doctrine.[323]

Yet, all along, litigants and scholars have tried to understand the proper extent of the doctrine. Is it a background principle of state law that can function as a defense to takings litigation?[324] If it applies to waterways, then which waterways? All of them, or only some subset?[325] And if it protects waterways as public commons against private monopoly or appropriation, then why not apply the same rule to other critical natural resources that are also susceptible to appropriation or monopoly?[326] Why not to fisheries? Why not to biodiversity? And perhaps most to the point, as we face down the increasingly violent effects of climate change, why not to the atmospheric commons?

Indeed, recall the original Justinian statement of the doctrine that I introduced at the beginning of this Article, which explicitly named "the air" among the select public commons protected by the doctrine, together with the running water, the sea, and the shores.[327]

To that end, University of Oregon Prof. Mary Wood has advocated that the public trust doctrine should apply to the atmosphere.[328] She argues that we should seek public trust protection for the air commons and the climate system bound up with that enables life on earth as we know it.[329] Inspired by her scholarship, environmental advocates have launched the atmospheric trust litigation project,[330] now spearheaded by the nonprofit organization, Our Children's Trust,[331] which has assisted youth plaintiffs around the country in bringing suits and administrative action seeking public trust protection for the atmosphere.[332] The named plaintiff in the most important of these cases, *Juliana v. United States*, was a teenager when she and eighteen other youth plaintiffs first filed the case in 2015.[333]

313. *See, e.g.*, Lazarus, *supra* note 312, at 715–16.
314. *Id.*
315. Ryan, *The Historic Saga*, *supra* note 3, at 617–620.
316. Lazarus, *supra* note 312, at 648, 642–43.
317. *Id.* at 680–81 n.308, 684; Ryan, *The Historic Saga*, *supra* note 3, at 617–20.
318. *Id.*
319. Ryan, *The Historic Saga*, *supra* note 3, at 490.
320. *See supra* notes 284–88.
321. Matthews v. Bay Head Improvement Ass'n, 471 A.2d 355, 363 (N.J. 1984).
322. Glass v. Goeckel, 703 N.W.2d 58 (Mich. 2005); Scott River Litigation: Envtl. Law Found. v. Cty. of Siskiyou, No. C083239 (Cal. Ct. App. 3d Dist. 2018); *see also* Ryan, *The Historic Saga*, *supra* note 3, at 625.
323. *See* Dernbach, *supra* note 88, at 464; *see also* Ryan, *The Historic Saga*, *supra* note 3, at 624.
324. *See supra* notes 75–79 and accompanying text, discussing the use of the doctrine as a defense to takings claims.
325. *See, e.g.*, Kramer v. City of Lake Oswego, 285 Or. App. 181, 196-291 (2017) (declining plaintiff's request to clarify that the public trust doctrine applies to all submerged lands and overlying waters, not just those owned by the state).
326. Ryan, *The Historic Saga*, *supra* note 3, at 622.
327. *See* J. Inst. Proemium, 2.1.1., *supra* note 16; *see also supra* Section I.A.1.
328. *See generally* Mary Christina Wood, Nature's Trust: Environmental Law for a New Ecological Age (2014).
329. *Id.*
330. *See, e.g.*, Erin Ryan et al., Juliana v. United States: *Debating the Fundamentals of a Fundamental Right to a Sustainable Climate*, 46 Fla. St. U. L. Rev. Online *1 (2018) (analyzing the unfolding atmospheric trust litigation in the context of *Juliana v. United States*) [hereinafter Ryan et al., *Debating* Juliana]; Blumm & Wood, *supra* note 262 (discussing *Juliana v. United States* and all other atmospheric trust litigation and administrative actions); Randall S. Abate, *Atmospheric Trust Litigation in the United States: Pipe Dream or Pipeline to Justice for Future Generations?*, *in* Climate Justice: Case Studies in Global and Regional Governance Challenges 542 (Randall S. Abate ed., 2016); Ryan, *The Historic Saga*, *supra* note 3, at 629.
331. *Our Mission*, Our Children's Trust, https://www.ourchildrenstrust.org/mission-statement [https://perma.cc/BWP7-KK8H]:
> Our Children's Trust elevates the voice of youth to secure the legal right to a stable climate and healthy atmosphere for the benefit of all present and future generations. . . . We lead a game-changing legal campaign seeking systemic, science-based emissions reductions and climate recovery policy at all levels of government. We give young people, those with most at stake in the climate crisis, a voice to favorably impact their futures.
332. *See State Judicial Actions Now Pending*, Our Children's Trust, https://www.ourchildrenstrust.org/pending-state-actions [https://perma.cc/GX2C-W5F9] (describing pending actions in Alaska, Colorado, Florida, Maine, Massachusetts, New Mexico, North Carolina, Oregon, and Washington); *Other Proceedings in All 50 States*, Our Children's Trust, https://www.ourchildrenstrust.org/other-proceedings-in-all-50-states [https://perma.cc/LVC7-8R62].
333. 217 F. Supp. 3d 1224, 46 ELR 20072 (D. Or. 2016). Together with other public trust scholars, I have participated in the professor amicus briefs on the side of the plaintiffs in this case.

The plaintiffs in these cases maintain that the government holds the air commons in trust for the people, just as it does navigable waterways—and that both federal and state governments are failing their trust obligations to protect it from polluters, who are wrongfully using the atmosphere as a carbon sink.[334] More importantly, they say, the atmospheric commons is a congestible resource that is being used up. The specific public trust argument is that by not regulating greenhouse gas pollution, the federal and state governments are allowing private appropriators to appropriate the air commons as a private dumping ground, and at the expense of the public interest for future generations in a livable world.[335] The fact that the youth plaintiffs are, themselves, members of the future generation makes their claim all the more arresting.[336]

Juliana had been slated for trial before Judge Ann Aiken of the Federal District of Oregon in October of 2018, having defeated several motions to dismiss.[337] However, the case was stalled after the Donald Trump Administration filed multiple petitions for the writ of mandamus, a rare judicial remedy by which the Administration sought to convince a higher court to force Judge Aiken to reverse herself and dismiss the case.[338] Two of these petitions were appealed unsuccessfully to the Supreme Court, but the latter received noteworthy attention in the order denying it.[339] The Court once again declined the petition,[340] but the order included language suggesting this was because relief might still be available from a preferable judicial forum, the Ninth Circuit.[341] Despite her previous decision to allow the case to go forward, Judge Aiken acknowledged the Supreme Court's implied suggestion by certifying the question of whether the trial should proceed to the Ninth Circuit on interlocutory appeal.[342] As this piece goes to press, the trial is once again on hold. After hearing arguments on the motion to dismiss in early June 2019, the Ninth Circuit is now deliberating whether to allow the case to go to trial.[343]

Juliana has generated enormous interest, but the case faces high legal hurdles.[344] First, the plaintiffs must convince the federal judiciary that the obligations of the public trust apply to the federal government, which is best positioned to regulate greenhouse gas pollution in the United States.[345] In fact, the Supreme Court recently issued dicta emphasizing that the doctrine is strictly a matter of state law, which will be a challenge for the plaintiffs.[346] Nevertheless, the plaintiffs seek to distinguish this dicta based on its context,[347] and emphasize that if the public trust doctrine is an attribute of sovereign authority, then it must be an attribute of all sovereign authority, and not just that at the state level.[348] In addition, states beyond the original thirteen colonies that inherited the public trust doctrine as an attribute of sovereignty upon statehood must have received it through the sovereignty conferred by the federal government, suggesting a further basis for a federal trust obligation.[349]

Perhaps more importantly, the plaintiffs must convince the court that the public trust doctrine should apply to atmospheric resources, which would represent a substantial extension of the doctrine as it has been thus far understood in the United States. Judge Aiken initially sustained the claim against a motion to dismiss on this ground, sidestepping the atmospheric trust issue by holding that the plaintiffs had also alleged cognizable claims of harm to coastal resources that are clearly protected by the public trust doctrine.[350] However, the *Juliana* plaintiffs have bolstered this element of their lawsuit by adding an ambitious substantive due process claim for violation of their fundamental right to a livable climate, implicating both the Due Process Clause of the Fourteenth

334. *Id.* at 1233, 1253.

335. *Id.* at 1233, 1245; *see also* Ryan et al., *Debating* Juliana, *supra* note 330 (Wood on government responsibility for climate change); *see also* Ryan, *The Historic Saga*, *supra* note 3, at 625–31 (discussing the atmospheric trust project before the filing of *Juliana v. United States*, which corrected some of the strategic issues in the first batch of cases).

336. Ryan, *The Historic Saga*, *supra* note 3, at 627.

337. *See* Juliana v. United States—*Major Court Orders and Filings*, Our Children's Trust, https://www.ourchildrenstrust.org/court-orders-and-pleadings [https://perma.cc/U66Z-JGY5] (listing all motions).

338. *Id.*; Adam Wernick, *Circuit Court Declines to Halt Climate Case Brought by Youth Plaintiffs*, Pub. Radio Int'l (Apr. 14, 2018), https://www.pri.org/stories/2018-04-14/circuit-court-declines-halt-climate-case-brought-youth-plaintiffs [https://perma.cc/46LF-T6RE]; *see also* In re United States, 884 F.3d 830, 838 (9th Cir. 2018).

339. In re United States, 139 S. Ct. 452, 586 U.S. (No. 18A410, Nov. 2, 2018), https://www.scotusblog.com/wp-content/uploads/2018/11/18A410-In-Re-United-States-Order.pdf.

340. *Id.*

341. The Court's order implied that the Ninth Circuit had previously dismissed the government's efforts to dismiss the case for reasons that may no longer be valid:

> At this time . . . the Government's petition for a writ of mandamus does not have a "fair prospect" of success in this Court because adequate relief may be available in the United States Court of Appeals for the Ninth Circuit. . . . Although the Ninth Circuit has twice denied the Government's request for mandamus relief, it did so without prejudice. And the court's basis for denying relief rested, in large part, on the early stage of the litigation, the likelihood that plaintiffs' claims would narrow as the case progressed, and the possibility of attaining relief through ordinary dispositive motions. Those reasons are, to a large extent, no longer pertinent. The 50-day trial was scheduled to begin on October 29, 2018, and is being held in abeyance only because of the current administrative stay.

Id.

342. Order at 6, Juliana v. United States, No. 6:15-CV-01517-AA, 2018 WL 6303774 (D. Or. filed Nov. 21, 2018).

343. *See* Brandi Buchman, *Inaugural Hearing of House Climate Group Gathers Young Voices*, Courthouse News Serv. (Apr. 4, 2019), https://www.courthousenews.com/inaugural-hearing-of-house-climate-group-gathers-young-voices/ [https://perma.cc/MU8D-SXMY] (reporting the anticipated trial date); Juliana v. United States—*Youth Climate Lawsuit*, Our Children's Trust, https://www.ourchildrenstrust.org/juliana-v-us [https://perma.cc/LV8J-EQBM].

344. *See, e.g.*, Alec L. ex rel. Loorz v. McCarthy, 561 F. App'x 7, 44 ELR 20130 (D.C. Cir. 2014), *cert. denied*, No. 14-405, 2014 WL 6860603 (U.S. Dec. 8, 2014) (dismissing a similar claim brought in the U.S. Court of Appeals for the District of Columbia (D.C.) Circuit in 2014); *see also* Ryan, *The Historic Saga*, *supra* note 3, at 628–30 (discussing legal hurdles for the atmospheric trust litigation, but before the filing of *Juliana v. United States*, which corrected some of the strategic issues in the early cases).

345. Ryan, *The Historical Saga*, *supra* note 3, at 628–29.

346. *See* PPL Montana, LLC v. Montana, 556 U.S. 576 (2012).

347. *See* Ryan et al., *Debating* Juliana, *supra* note 330 (presenting Rick Frank's argument that Court's passing statement in the *PPL Montana* dicta cannot resolve the larger issue in a fully different factual context).

348. *See* Juliana v. United States, 217 F. Supp. 3d 1224, 46 ELR 20072 (D. Or. 2016); *see also supra* Part IV.A. (discussing the public trust doctrine as a constraint on sovereignty); Ryan, *The Historic Saga*, *supra* note 3, at 574–75 (discussing scholarly interpretations of the public trust doctrine as an attribute of sovereignty).

349. Ryan, *The Historic Saga*, *supra* note 3, at 575, 45; Michael Blumm & Lynn Schaffer, *The Federal Public Trust Doctrine: Misinterpreting Justice Kennedy and* Illinois Central Railroad, 45 Envtl. L. 257, 399–405 (2015).

350. *Juliana*, 217 F. Supp. 3d 1224.

Amendment and the doctrine of unenumerated fundamental rights under the Ninth Amendment.[351]

In her dramatic ruling on the defendant's motion to dismiss, Judge Aiken originally held that the plaintiffs could move forward with their suit, concluding that there was a substantive due process right to a climate system capable of sustaining human life.[352] Analogizing to the fundamental right to marry that the Supreme Court had recognized earlier the same year,[353] Judge Aiken opined:

> "[As to t]he idea is that certain rights may be necessary to enable the exercise of other rights, whether enumerated or unenumerated. . . . Exercising my 'reasoned judgment,' I have no doubt that the right to a climate system capable of sustaining human life is fundamental to a free and ordered society. Just as marriage is the 'foundation of the family,' a stable climate system is quite literally the foundation 'of society, without which there would be neither civilization nor progress."[354]

Importantly, Judge Aiken did not conclude that the plaintiffs' rights had actually been violated in this case, only that they would have the opportunity to try and prove that violation in court. Even if the plaintiffs prevail at the district court level, the odds are stacked against them on appeal, especially if the case reaches the Supreme Court.[355] Nevertheless, the recognition of a fundamental right to climate security would be a landmark ruling for the federal bench, if it is not extinguished by a contrary decision by the Ninth Circuit in the summer of 2019.

On top of everything else, the case raises difficult questions of remedy: if the plaintiffs actually prevail, what can they realistically expect a court to do to vindicate their claim?[356] Courts ordinarily do not order legislative or executive action. But these plaintiffs argue that climate change, and what they allege as the government's complicity in creating it, is no ordinary circumstance.[357] In addressing the issue of redressability to achieve standing to bring their suit, the plaintiffs persuaded at least Judge Aiken that they had framed a violation of their rights that was the proper subject of judicial review,[358] and that the defendant agencies possessed the power to redress their claim, using existing regulatory resources, by developing a remedial plan to reduce greenhouse gas emissions.[359]

Juliana is not the first legal action premised on the atmospheric trust, nor will it be the last.[360] Parallel atmospheric trust cases have been unfolding throughout the nation at the state and federal levels, with incremental judicial success[361] and some noteworthy success through administrative process.[362] One atmospheric trust petition successfully forced the creation of an executive climate action plan in Massachusetts.[363] Atmospheric trust cases are also being brought in other countries, including Uganda and India,[364] inspired not only by *Juliana* but by the 2015 *Urgenda Foundation v. Netherlands* climate lawsuit that, citing a sovereign obligation to protect the environment, required the Dutch government to reduce greenhouse gas emissions by 25%.[365]

---

351. *Id.*
352. *Id.* at 1231–32; *see also* Ryan et al., *Debating* Juliana, *supra* note 330 (Wood and Irma Russel discussing the fundamental right to a livable climate).
353. Obergefell v. Hodges, 135 S. Ct. 2584 (2015) (holding that the fundamental right to marry under the Due Process Clause of the Fourteenth Amendment applies equally, across all fifty states, to same-sex couples as it does to opposite-sex couples).
354. *Juliana*, 217 F. Supp. 3d at 1231–32.
355. Ryan et al., *Debating* Juliana, *supra* note 330 (Huffman on the assertion of a positive right, Frank on the odds of overturning a decision favorable to the plaintiffs on appeal).
356. Juliana v. United States, 217 F. Supp. 3d 1224, 46 ELR 20072 (D. Or. 2016) (briefing on requested remedy).
357. Ryan et al., *Debating* Juliana, *supra* note 330 (Huffman and Wood debating the requested remedy); Brief for Petitioner at 23–28, Juliana v. United States, No. 18-36082 (9th Cir. filed Feb. 26, 2019).
358. *Juliana*, 217 F. Supp. 3d at 41–44.
359. *Id.*; *see also* Blumm & Wood, *supra* note 262, at 71–72.
360. Blumm & Wood, *supra* note 262, 67–77 (discussing state-based atmospheric trust litigation).
361. The early judicial cases show a mix of failures and incremental successes. Many were dismissed on displacement, preemption, or political question grounds. *E.g.*, Alec L. v. Jackson, 863 F. Supp. 2d 11, 15, 42 ELR 20115 (D.D.C. 2012) (inter alia, dismissing ATL federal suit on the basis of displacement by Clean Air Act); Chernaik v. Kitzhaber, 328 P.3d 799, 808 (Or. Ct. App. 2014) (reversing lower court's dismissal based on the political question doctrine, separation-of-powers doctrine, sovereign immunity, and the court's perceived lack of authority to grant requested relief).

    Later cases began to erode initially negative precedent, though few produced the sought-after relief. *See, e.g.*, Kanuk ex rel. Kanuk v. State of Alaska, Dep't of Natural Res., 335 P.3d 1088 (Alaska 2014) (holding that the political question doctrine did not foreclose plaintiff's suit, but rejecting the relief sought); Sanders-Reed v. Martinez, 350 P.3d 1221, 1225 (N.M. Ct. App. 2015) (holding that the New Mexico constitution recognizes public trust protection of the atmosphere but concluding that claims must be based on existing constitutional or statutory processes); Bonser-Lain v. Tex. Comm'n on Envtl. Quality, No. D-1-GN-11-002194, 2012 WL 2946041 (Tex. Dist. Ct. July 9, 2012), *vacated*, 438 S.W.3d 887 (Tex. App. 2014) (in a case later vacated on unrelated grounds, rejecting the agency's determination that the public trust doctrine applies only to water, and affirming that the federal Clean Air Act provides "a floor, not a ceiling, for the protection of air quality").

    Several provide useful foundation for future success in atmospheric trust cases by recognizing the application of the public trust doctrine to the atmospheric commons. *See, e.g.*, Foster v. Wash. Dep't of Ecology, No. 14-2-25295-1 SEA, 2015 WL 7721362, at *4, 45 ELR 20223 (Wash. Super. Ct. Nov. 19, 2015) (expressly holding that the public trust includes air and atmosphere); Butler ex rel. Peshlakai v. Brewer, No. 1 CA-CV 12-0347, 2013 WL 1091209 (Ariz. Ct. App. Mar. 14, 2013) (assuming without deciding that the atmosphere is a part of the public trust subject to the public trust doctrine).
362. Blumm & Wood, *supra* note 262, 73–77 (discussing administrative relief in Massachusetts and Washington).
363. On Sept. 16, 2016, the governor of Massachusetts responded to a win in court by atmospheric trust youth plaintiffs by issuing Executive Order No. 569, establishing an Integrated Climate Change Strategy for the Commonwealth. *See Legal Updates: Sept. 16, 2016*, Our Children's Trust, https://www.ourchildrenstrust.org/massachusetts/ [https://perma.cc/H27W-DG89]; *see also* Blumm & Wood, *supra* note 262, 272–74 (discussing Kain v. Mass. Dep't of Envtl. Protection, 49 N.E.3d 1124, 1128 (Mass. 2016), the litigation leading to this executive order).
364. Mbabazi & Others v. Attorney Gen. & Nat'l Envtl. Mgmt. Auth., Civil Suit No. 283, High Court of Uganda Holden at Kampala (Sept. 20, 2012) (decision pending), http://blogs2.law.columbia.edu/climate-change-litigation/wp-content/uploads/sites/16/non-us-case-documents/2012/20120920_Civil-Suit-No.-283-of-2012_complaint-1.pdf; Pandey v. India, National Green Tribunal at Principal Bench, New Delhi (2017) (undecided), http://blogs2.law.columbia.edu/climate-change-litigation/wp-content/uploads/sites/16/non-us-case-documents/2017/20170325_Original-Application-No.-___-of-2017_petition-1.pdf; *see also Climate Litigation Databases*, Sabin Center for Climate Change Law (2019), http://climatecasechart.com/?cn-reloaded=1.
365. C/09/456689/HA ZA 13-1396 (Neth. June 24, 2015), https://uitspraken.rechtspraak.nl/inziendocument?id=ECLI:NL:RBDHA:2015:7196.

It will be fascinating to see how *Juliana* and the other atmospheric trust claims unfold. Many have speculated that these cases simply reach too far from established legal norms, and that they will inevitably fail as they progress through legal channels toward the Supreme Court, even if they succeed at trial or on appeal to the Ninth Circuit.[366] The claims implicate each of the critiques raised after the *Mono Lake* case: property rights advocates worry about the ever-expanding doctrine that eats all in its path, environmental critics worry about the bad precedent that losses along the way might create for more promising avenues of regulating greenhouse gases, and legal process critics worry about the separation of powers implications of the requested remedy.[367]

Nevertheless, the *Juliana* case recalls of one of the most powerful features of the public trust doctrine, one that implicates the separation of powers controversy, but with a twist. It is the way that the doctrine enables citizens to use the levers made available by the horizontal separation of powers to increase their efficacy in democratic participation, by invoking judicial review of legislative or executive action that violates legal rules. This is a feature of our democratic design, hallowed in the United States since *Marbury v. Madison*.[368] The *Juliana* plaintiffs may not succeed in their lawsuit, but the very act of bringing it, and generating so much public support for their claim, puts pressure on the political branches in ways that amplify their voices as individual voters and constituents.[369]

For example, the *Juliana* case has generated grassroots support from over 36,000 individual young people, each of whom signed on to an open amicus brief supporting the plaintiffs' claims, and the list of supporters continues to grow.[370] The children's brief, as it has become known, begins:

> Children are people and citizens. The Constitution protects the fundamental rights of children as fully as it does the rights of adults. The Constitution states clearly it intends to "secure the Blessings of Liberty to ourselves and our Posterity." We are the Posterity the Constitution protects. Scientific studies show that government actions today, including its actions of authorizing greenhouse gas discharges and subsidizing fossil fuel extraction, development, consumption, and exportation, imperil plaintiffs' constitutional rights to life, liberty, and property. The government's fossil fuel policies and actions threaten to push our climate system over tipping points into catastrophe. We ask the Court to grant plaintiffs the opportunity to try their case and prove the harms caused and intensified by governmental action.[371]

On the matter of the atmospheric trust, the brief continues:

> As the Constitution protects our fundamental rights, the Public Trust Principle protects our inheritance of resources. It articulates the legal duty of the government, as the trustee of property held in common, to conserve our vital natural resources. The government holds and manages the public trust for us, the trust beneficiaries. The government is obligated to protect our inheritance of, and refrain from substantially impairing and alienating, the natural resources upon which all life and liberty depend. "The beneficiaries of the public trust are not just present generations but those to come."[372]

Widespread attention generated by cases like *Juliana* and *Urgenda*, together with other focal points of youth activism, including the leadership of Swedish teenager Greta Thunberg, have inspired a growing chorus of youth climate protests worldwide, including the International Climate Strike on March 15, 2019, in which young people from every inhabited continent marched out of school to protest their governments' failures to respond to the increasing urgency of scientific climate predictions.[373] Even if *Juliana* is dismissed by the Ninth Circuit, the case has helped coalesce a youth movement that no motion to dismiss can undo.

Indeed, the atmospheric trust cases reveal that "the separation of powers" is not the same thing as those powers working in complete isolation.[374] Citizens' appeal to the judicial process is rightly part of the wider political process. The ability to seek judicial review is especially important when citizens have felt silenced within the wider political process for unjust reasons, such as invidious discrimination[375] or government corruption.[376] The public trust doctrine thus facilitates a conversation between the three branches of government about the disposition of critical public natural resource commons in which all citizens have a stake, but which are often managed far beyond the reach of the average voter's influence.[377]

Viewed this way, it is not that the judiciary is antidemocratically second-guessing the political branches—the sec-

366. *E.g.*, Ryan et al., *Debating* Juliana, *supra* note 330 (Huffman critiquing the claims on these grounds).
367. Ryan, *The Historic Saga*, *supra* note 3, at 621–22 (and sources cited therein).
368. 5 U.S. (1 Cranch) 137 (1803) (establishing the principle that courts may strike down government actions that violate constitutional rules).
369. Ryan, *The Historic Saga*, *supra* note 3, at 630–31.
370. *Brief of Amicus Curiae Zero Hour on Behalf of Approximately 32,340 Children and Young People in Support of Plaintiffs-Appellees*, Juliana v. United States, 217 F. Supp. 3d 1224, 46 ELR 20072 (D. Or. 2016), https://www.joinjuliana.org/joinjuliana_files/201931FinalYoungPeoplesBrief.pdf (last visited Apr. 10, 2019); *see also* Zero Hour Movement, *Join the Youth Legal Action for a Safe Climate*, https://www.joinjuliana.org [https://perma.cc/EV8Y-3ENT] (noting that the brief was filed with over 36,000 names in support, and inviting continued signatories while the case works its anticipated way toward the Supreme Court).
371. Brief of Amicus Curiae, *supra* note 370, at 5–6.
372. *Id.* (quoting Ariz. Ctr. for Law in the Pub. Interest v. Hassell, 837 P.2d 158, 169, 23 ELR 20348 (Ariz. Ct. App. 1991)).
373. Harmeet Kaur & Madison Park, *Young Environmental Activists Across the World Skip School in a Call to Action*, CNN (Mar. 15, 2019, 3:14 pm), https://www.cnn.com/2019/03/15/world/climate-strike-students/index.html ("The movement, inspired by the actions of 16-year-old Swedish environmental activist Greta Thunberg, spanned more than 100 countries and 1,500 cities, where students gathered in the streets and at their state capitols to call for action."); *see also Pictures From Youth Climate Strikes Around the World*, N.Y. Times (Mar. 15, 2019), *at* https://www.nytimes.com/2019/03/15/climate/climate-school-strikes.html:
> From Sydney to Seoul, Cape Town to New York, children skipped school en masse Friday to demand action on climate change. It was a stark display of the alarm of a generation. It was also a glimpse of the anger directed at older people who have not, in the protesters' view, taken global warming seriously enough.
374. Ryan et al., *Debating* Juliana, *supra* note 330 (Ryan opening statement).
375. *E.g.*, Brown v. Bd. of Educ., 347 U.S. 483 (1954).
376. *See supra* notes 60–82 and accompanying text, discussing the *Illinois Central*.
377. Ryan, *The Historic Saga*, *supra* note 3, at 630–31.

ond-guessing at issue is by citizens legitimately invoking their rights to the judicial process. And especially for the *Juliana* plaintiffs and supporters, many of whom are too young to vote, it is one of their only means of democratic participation.

Viewed this way, the role of judicial review within the political process is a gambit of good governance. We would not want every disgruntled voter to make a federal case out of every grievance, and to that end, the rules of standing generally operate to screen out those with least merit. But the gambit succeeds if the claim is legitimate enough to withstand procedural barriers, and compelling enough to motivate public support within the wider political process. In the ongoing and recursive dialectic between law and culture, a compelling case can sometimes change the conversation, even if it does not immediately change the law. For another example, consider the evolution of the Supreme Court's gay rights jurisprudence over the last thirty years—a stunning progression that tracked the evolution of cultural norms, themselves influenced by compelling examples of civil rights litigation.[378]

Juliana and the other atmospheric trust cases may yet prove a successful gambit for the plaintiffs, even if they fail to prevail in the judicial process. The children bringing these suits have generated unusual public support and international interest.[379] Something about their argument has struck a chord with many ordinary people, motivating greater interest in the efficacy of good climate governance to protect the atmospheric commons on which we all depend. The *Juliana* public trust claim reaches them in the same way the *Mono Lake* case reached ordinary people who never mustered excitement about the important public trust legal developments in *Marks*.[380] And indeed, this is how our political process, incorporating all three branches of government, is supposed to work. As in all complex policy dilemmas, the procedural mechanics of governance are reinforced by political safeguards.[381]

Conclusion: Navigating Public and Private Interests in Natural Resource Commons

The public trust doctrine has long played a critical role in helping us navigate the protection of public and private interests that collide in natural resource commons. All public resource commons are complicated by the demands that individuals place on their share of a common pool. Sometimes, the common pool is more easily disaggregated, as when one individual takes a quantity of water from a waterway, or a single member from a species of biodiversity. Other times, it may be harder to disaggregate commons values, as when one individual erects a weir preventing all else from navigating the waterway, or in the climate context, where one polluter's use of the atmosphere as a carbon sink equally compromises everyone else's share. But in all cases, over-exploitation of the commons by some individuals can compromise the resource for all—or in the worst case, destroy it.

The public trust doctrine represents one of the earliest known mechanisms for regulating natural resource commons problems. It first did so by recognizing these resources as public commons, belonging to everyone equally, as set forth in ancient Roman law.[382] Later, it added recognition of the sovereign authority to maintain these resources for the public, as affirmed by early British[383] and American law.[384] More recently, it has been understood to confer sovereign responsibility to affirmatively protect these resources for the public, as recognized by the *Mono Lake* case and its progeny.[385]

As the California Supreme Court recognized in *Mono Lake*, the doctrine does not foreclose private use of public commons. The *Mono Lake* case affirmed a variety of legitimate private uses of the water commons at issue there—recreational use, scientific inquiry, commercial exploitation, and sheer aesthetic beauty, among others—so long as these private uses did not compromise the sustainability of the underlying *res*, the thing held in trust. For example, the public trust doctrine did not prevent the state's decision to allocate Mono Basin water for municipal use in Los Angeles—so long as doing so did not destroy the public trust values at Mono Lake. The *Scott River* case does not forbid all groundwater extraction in the basis, so long as public trust values in the river are maintained. The *Juliana* plaintiffs are seeking a climate action plan that balances legitimate needs for economic development against fundamental rights to climate security. But the *Mono Lake* case and its progeny leave much to resolve in interpreting the role of the public trust doctrine in protecting resource commons going forward.

Each of these cases raise the question: to what resources should the doctrine apply? *Mono Lake* applied the doctrine squarely within the traditional public trust purview of navigable waterways—but the case extended the protections of the doctrine to new environmental values, farther up the watershed, and farther out in time. The *Scott River* followed directly from *Mono Lake*, applying the new doctrine protecting non-navigable tributaries of a dependent navigable waterway—but it extended that rationale to the new context of groundwater management. The *Scott River* decision is satisfying to water scholars who critique groundwater law as long hampered by scientifically uninformed legal doctrines that artificially separate hydrologically intertwined ground and surface waters—yet it threatens settled expectations created by the old legal regime. Meanwhile, the *Juliana* case takes the same public trust rationale—sovereign obligation to protect a critical public commons from private misappropriation—and applies it in a wholly new context. The idea

378. *Compare* Bowers v. Hardwick, 478 U.S. 186 (1986) (upholding state laws criminalizing gay sex), *with* Lawrence v. Texas, 539 U.S. 553 (2003) (overturning *Bowers*), *and* Obergefell v. Hodges, 135 S. Ct. 2584 (2015) (establishing a constitutional right to gay marriage).

379. *See, e.g.*, Wernick, *supra* note 338.

380. 491 P.2d 374, 380, 2 ELR 20049 (Cal. 1971) (expanding public trust protections to ecological, habitat, open space, climatic, and scenic values).

381. *Cf.* Jesse H. Choper, Judicial Review and the National Political Process (1980) (discussing the importance of political safeguards in good governance).

382. *See supra* Part I.A.1.

383. *See supra* Part I.A.2.–3.

384. *See supra* Part I.A.4.–6.

385. *See supra* Part III–IV.

of treating the atmosphere as a public commons is as old as Justinian, but applying the public trust doctrine to protect it is a relatively new idea.

Next, who should administer the public trust? A defining feature of the common-law doctrine is that it empowers ordinary citizens to seek redress for public trust violations in court. Separation-of-powers critics worry that the doctrine thereby overpowers the judiciary, enabling it to override legislative policymaking. Yet, this critique may be overblown, not only because it discounts the way that judicial review further empowers democratic participation, but also because traditionally the law of trusts has always been interpreted and enforced by courts. If the trust analogy holds, then who better than judges to oversee the public beneficiary's interest in trust resources against self-serving or neglectful management by the legislative trustee? The government is always under a duty to protect the public; it is the veritable purpose of government, and the charge underlying the police power from which it generally operates. But while government decisions under the police power get a lot of judicial discretion, some public trust obligations are less open to interpretation. Courts may be the best venue for evaluating government decisions that may transgress the acceptable margins of interpretation.

Finally, what is the nature of the constraint, and to what authority does it apply? These are, perhaps, the most interesting and difficult questions raised by the *Mono Lake* case and its progeny. The *Mono Lake* case established the nature of the trust as something beyond the ken of ordinary common law, without fully resolving the question of its constitutive status. As discussed in Part IV, the extent to which the common-law doctrine exceeds conventional common-law limitations remains debated, although most states that have addressed the matter follow the California approach of placing it beyond the reach of ordinary statutory abrogation. This approach seems most consistent with a doctrine that meaningfully constrains sovereign authority over public trust resources—limiting what the sovereign can and cannot do—because a constraint that the sovereign can easily extinguish has no real force.

As for whose sovereign authority it constrains—state or federal or both—the most theoretically and historically consistent answer is that it constrains *all* sovereign authority. There is no doubt that the doctrine constrains the states, based on centuries of U.S. case law. But if it is appropriately understood as a limit on sovereign authority over public commons, then as an intellectual matter, it should not matter whose sovereign authority is at issue—it constrains whatever authority governs the relevant commons. This answer also best accounts for the history of state and federal turn-taking on managing public trust resources, given that most states inherited their trust-impressed resources through the intervening medium of federal sovereign authority, by which the U.S. government held these resources until they could be disbursed to new states.[386] The Supreme Court's dicta in *PPL Montana* characterizing the doctrine as a feature of state law is definitely problematic for claims that depend on a federal trust—but that passing, out-of-context reference should not be authoritative when the Court properly considers this issue for the first time.[387] As it may well do in the next few years, if the *Juliana* case or a related claim makes it to the High Court.

In the meantime, the state and lower courts—and increasingly, legislative and executive actors—will continue to shepherd the protection of public trust values in the separate but interlocking roles within the political processes of good governance. The doctrine will continue to help us navigate the inevitable clash between public and private interests in natural resource commons, a clash that is destined to intensify with the increasing pressure we are putting on public commons resources like air, water, biodiversity, and climate—and perhaps other commons the law has yet to address. So long as the doctrine is functioning, under whatever operative legal theory, we can all take comfort in the knowledge that critical public commons will have a legal sentry and safeguard.

386. *See* Ryan, *The Historic Saga*, *supra* note 3, at 573–74:

> [T] he public trust doctrine must constrain federal authority, because the implicit trust obligations of most states arose by delegation of federal authority over lands previously held in federal ownership. . . . [Other than the original thirteen colonies, all states inherited their trust obligations through the medium of federal sovereignty that applied before their lands were carved out of federal holdings. The states must have inherited a pre-existing trust obligation . . . because there is no clear legal moment when new trust obligations were expressly conferred. Therefore, the doctrine must have implicitly inhered at the federal level before it was delegated to the states, and by this theory, it remains there in application to all trust resources that were not delegated to the states.

387. *See* Ryan et al., *Debating* Juliana, *supra* note 330 (Frank discussing the *PPL Montana* dicta).