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The Public Trust as an Antimonopoly Doctrine


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THE PUBLIC TRUST AS AN ANTIMONOPOLY DOCTRINE

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Abstract: The public trust doctrine originated—and has persisted in American law—as antimonopoly protection. From the time of its recognition by American courts in the early nineteenth century, the doctrine has protected the public against private monopolization of natural resources, beginning with tidal waters and wild animals. Ensuing public trust case law has extended the scope of trust

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protection to other important natural resources, including non-tidal and non-navigable waters, and land-based resources like parks. Courts are now considering the trust doctrine's application to the atmosphere. Although there is a considerable body of legal scholarship on the public trust, the doctrine's antimonopoly core has not been explored. In this Article, we remedy that oversight by examining the public trust's justification as an antimonopoly sentiment. Antimonopoly policy is at least as old in American law as the public trust and certainly more politically prominent. Viewing the public trust through the lens of antimonopoly helps to explain the history and evolution of this doctrine and its overriding goal of preventing irreversible commitments of natural resources to private monopolization.

INTRODUCTION

For nearly two hundred years, the public trust doctrine ("PTD") has ensured that Americans have access to select natural resources, protecting those resources from privatization.¹ At its core, the PTD prohibits sovereigns from alienating these natural resources² and requires sovereign protection of trust resources for future public use and enjoyment.³ As this Article explains, antimonopoly is the essence of the PTD, preventing privatization of certain resources used by the public, such as tidal waters and wildlife. Without this limit on alienation many valuable natural resources would, by now, be privately owned and thus inaccessible to the public.

The roots of the PTD lie in seventeenth-century English political thought, particularly the writings of John Locke. According to Locke, a person should only be able to acquire property that he could productively use, "whatever is beyond this, is more than his share, and belongs to others."⁴

¹ See *Arnold v. Mundy*, 6 N.J.L. 1, 76–77 (N.J. 1821) (rejecting an attempted landowner monopolization of tidal oyster beds).

² See *id.* (protecting public access to tidal oyster beds); Joseph L. Sax, *The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention*, 68 MICH. L. REV. 471, 477 (1970) (stating that public trust property "must not only be used for a public purpose, but it must be held available for use by the general public").

³ See Michael C. Blumm & Aurora Paulsen, *The Public Trust in Wildlife*, 2013 UTAH L. REV. 1437, 1466 (asserting that "preservation of access to wildlife lies at the heart of the American public trust doctrine"); Michael C. Blumm & Lynn S. Schaffer, *The Federal Public Trust Doctrine: Misinterpreting Justice Kennedy and Illinois Central Railroad*, 45 ENVTL. L. 399, 419 (2015) (asserting "a public trust claim inquires as to whether the sovereign is protecting trust assets sufficiently to safeguard the interest of present and future beneficiaries").

⁴ JOHN LOCKE, *SECOND TREATISE OF GOVERNMENT* 14 (1690). Locke posited:

Nature did well in setting limits to private property through limits to how much men can work and limits to how much they need. No man's labour could tame or appropriate all the land; no man's enjoyment could consume more than a small part; so that it was impossible for any man in this way to infringe on the right of another, or acquire property to the disadvantage of his neighbor . . .

This Lockean sentiment migrated to American political thought, most prominently through Thomas Jefferson's advocacy of a republic of small landholders and widespread distribution of resources.⁵ Preserving public rights to access natural resources, including navigable waters, served Jacksonian America's aversion to concentrated wealth and special privileges for elites.⁶ Later in the nineteenth century, monopolization became a widespread public concern as corporations amassed economic and political power and threatened to assert exclusive use of natural resources.⁷ The rise of concentrated industrial power in the years following the Civil War led to reform movements like state efforts to regulate railroads and the federal enactment of the Interstate Commerce Commission and Sherman Antitrust Acts, which sought to protect the public from the adverse effects of monopolization.⁸

Promoting widespread public access to navigable waters—the essential arteries of commerce—developed as part of a larger effort in nineteenth-century America to resist monopoly power.⁹ Antimonopoly sentiment produced limits on land acquisition in federal homestead and preemption laws¹⁰ and was at the center of the founding of western water law, which rejected common law riparian water rights because they gave monopoly rights to

⁵ See PAUL W. GATES, *HISTORY OF PUBLIC LAND LAW DEVELOPMENT* 62 (1968) (“The small landholders are the most precious part of a state.” (quoting Letter from Thomas Jefferson to Edmund Pendleton (Aug. 13, 1776)).

⁶ See Kenneth Lipartito, *The Antimonopoly Tradition*, 10 U. ST. THOMAS L.J. 991, 997 (2013) (explaining Jacksonian politics as antimonopoly).

⁷ See Michael C. Blumm & Kara Tebeau, *Antimonopoly in American Public Land Law*, 28 GEO. ENVTL. L. REV. 155, 157 (2016) (describing how antimonopoly policy permeates American public land law); Lipartito, *supra* note 6, at 991 (stating that “[a]ntimonopoly” was one of the most powerful words in the lexicon of nineteenth century America” and outlining the development of antimonopoly in the business world); Alan Brinkley, *The Antimonopoly Ideal and the Liberal State: The Case of Thurman Arnold*, 80 J. AM. HIST. 557, 557 (1993) (“For more than half a century—from the moment large industrial combinations began to emerge in the last decades of the nineteenth century to the late years of the Great Depression—the question of monopoly power was among the central issues of American public life.”).

⁸ Interstate Commerce Act, Ch. 104, 24 Stat. 379 (1887) (codified as amended in scattered sections of 49 U.S.C.); Sherman Antitrust Act, ch. 647, 26 Stat. 209 (1890) (codified as amended at 15 U.S.C. §§ 1–7 (2012)); see Brinkley, *supra* note 7, at 567 (asserting that the idea of antitrust was part of “the larger antimonopoly impulse”); Lipartito, *supra* note 6, at 991, 999 (explaining that antimonopoly policy “took aim at private actors who sought to advance their own interests against those of the broad public,” and that “[b]etween 1870 and 1900, the United States went through a corporation revolution”). See generally William E. Kovacic & Carl Shapiro, *Antitrust Policy: A Century of Economic and Legal Thinking*, 14 J. ECON. PERSP. 43 (2000) (outlining American antitrust law, beginning with the Sherman Act of 1890).

⁹ See Michael C. Blumm, Harrison C. Dunning & Scott W. Reed, *Renouncing the Public Trust Doctrine: An Assessment of the Validity of Idaho House Bill 794*, 24 ECOLOGY L.Q. 461, 489 (1997) (“In an era that did not clearly separate regulatory power from proprietary rights, public ownership of navigable waters was the key to promoting, controlling, and avoiding monopolies in the most important instrumentality of commerce in mid-nineteenth century America.”).

¹⁰ Blumm & Tebeau, *supra* note 7, at 169–73 (describing the antimonopoly tenets underlying early American homestead and preemption laws).

shoreland landowners.¹¹ Public rights to hunt on private, unenclosed lands were also commonplace, reflecting nineteenth-century America's preference for public subsistence hunting over land speculators' right to exclude, at least until they invested in fences.¹²

Nineteenth-century case law established the duty of states to prevent monopoly control of certain natural resources.¹³ In 1842, the United States Supreme Court's first PTD case disallowed a landowner's attempted monopoly control of oysters in the Raritan River.¹⁴ A half-century later, in 1892, the Court again invoked the PTD to prevent monopolization of Chicago Harbor, invalidating a state grant of lands beneath navigable waters to a railroad.¹⁵ The Court soon added another foundational decision in 1896, establishing public ownership of wildlife by upholding a state hunting law that prohibited the transportation of harvested wild birds out of the state.¹⁶ As with lands under navigable or tidal waters, the Court concluded that wild animals were owned by states in "trust for the benefit of all people, and not . . . for the benefit of private individuals as distinguished from the public good."¹⁷

By the dawn of the twentieth century, American law had evolved to recognize sovereign responsibilities to protect public rights in both navigable waters and their underlying beds, as well as in wildlife.¹⁸ During the twentieth century, courts increasingly acknowledged the relative scarcity of natural resources and the vulnerability of these resources to private monopolization, and in turn responded by extending public trust protection to other

¹¹ See Michael C. Blumm, *Antimonopoly and the Radical Lockean Origins of Western Water Law*, 20 HASTINGS W.-NW. ENVTL. L. & POL'Y L. REV. 377, 380–81 (2014) (reviewing DAVID SCHORR, *THE COLORADO DOCTRINE: WATER RIGHTS, CORPORATIONS, AND DISTRIBUTIVE JUSTICE ON THE AMERICAN FRONTIER* (2012)).

¹² See, e.g., *McConico v. Singleton*, 9 S.C.L. 244, 351 (Const. App. 1818).

¹³ See *infra* notes 29–118 (discussing nineteenth-century cases reflecting the public trust doctrine's ("PTD") antimonopoly tenets).

¹⁴ *Martin v. Waddell's Lessee*, 41 U.S. (16 Pet.) 367, 408, 411, 418 (1842) (holding that the PTD preempted a landowner from establishing control over oysters in tidal waters).

¹⁵ *Ill. Cent. R.R. v. Illinois*, 146 U.S. 387, 458 (1892) (deciding that the PTD prevented the state of Illinois from transferring substantial parts of the bed of Chicago Harbor to a private railroad company); see Sax, *supra* note 2, at 489 (referring to *Illinois Central* as "the lodestar in American public trust law"). See generally 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 (2004) (providing an extensive background on the case).

¹⁶ *Geer v. Connecticut*, 161 U.S. 519, 529, 535 (1896).

¹⁷ *Id.* at 529; see also Blumm & Paulsen, *supra* note 3, at 1459–61 (discussing the public trust in wildlife, beginning with *Geer*). The Supreme Court recently reaffirmed the sovereign ownership of wildlife in *Horne v. Department of Agriculture*, 135 S. Ct. 2419, 2431 (2015); see *infra* note 190.

¹⁸ See *infra* notes 38–92, 107–118 and accompanying text (discussing nineteenth-century public trust protections for tidelands and wildlife).

resources, including non-navigable-in-fact waters and upland parks.¹⁹ Courts also recognized that private monopolization would jeopardize fundamental public uses of natural resources beyond navigation, commerce, and fishing—the original triad of protected activities.²⁰ Consequently, many courts have recognized that the PTD protects recreation access, and others have decided that the doctrine provides environmental protection for trust resources to benefit future generations.²¹

Nevertheless, the PTD has to date only had marginal effects on modern natural resources allocation. Some potential reasons include the fact that the doctrine's recognition of public property rights is a counterpoise to an overwhelming commitment to private rights in American property law. Moreover, the PTD encourages courts to view skeptically governmental management of trust resources when that management threatens privatization, which runs against the dominant view of judicial deference to government legislatures and agencies.²² The PTD also is a fractured doctrine, with

¹⁹ See *infra* notes 200–243 and accompanying text (outlining public trust extensions to an increasing number of natural resources, including non-navigable waters, such as seasonal lakes, and other resources like upland parks).

²⁰ See *infra* notes 189–273 and accompanying text (describing important cases that have extended public trust protection beyond uses for navigation, commerce, and fishing).

²¹ See *infra* notes 189–273 and accompanying text; see, e.g., *District of Columbia v. Air Fla., Inc.*, 750 F.2d 1077, 1083 (D.C. Cir. 1984) (noting that “the doctrine has been expanded to protect additional water-related uses such as swimming and similar recreation, aesthetic enjoyment of rivers and lakes, and preservation of flora and fauna indigenous to public trust lands”); *Nat'l Audubon Soc'y v. Superior Court (Mono Lake)*, 658 P.2d 709, 719 (Cal. 1983) (acknowledging that the “principal values” the plaintiffs sought to protect were “recreational and ecological—the scenic views of the lake and its shore, the purity of the air, and the use of the lake for nesting and feeding by birds,” and concluding that “protection of these values is among the purposes of the public trust”). For instance, in *Robinson v. Ariyoshi*, the Hawaii Supreme Court explained:

[W]e believe that by [the sovereign reservation], a public trust was imposed upon all the waters of the kingdom. That is, we find the public interest in the waters of the kingdom was understood to necessitate a retention of authority and the imposition of a concomitant duty to maintain the purity and flow of our waters for future generations and to assure that the waters of our land are put to reasonable and beneficial uses. This is not ownership in the corporeal sense where the State may do with the property as it pleases; rather, we comprehend the nature of the State's ownership as a retention of such authority to assure the continued existence and beneficial application of the resource for the common good.

658 P.2d 287, 310 (Haw. 1982).

²² See, e.g., *Chevron, U.S.A., Inc. v. Nat. Res. Def. Council, Inc.*, 467 U.S. 837, 844 (1984) (“We have long recognized that considerable weight should be accorded to an executive department's construction of a statutory scheme it is entrusted to administer, and the principle of deference to administrative interpretations.”). See generally William N. Eskridge, Jr. & Lauren E. Baer, *The Continuum of Deference: Supreme Court Treatment of Agency Statutory Interpretations from Chevron to Hamdan*, 96 GEO. L.J. 1083 (2008) (discussing judicial deference for agency interpretations of statutes first established in *Chevron*).

decidedly different effects in different states.²³ For these reasons, the PTD has operated below the proverbial radar in many jurisdictions.

But the American population continues to grow, exerting increased pressure on limited natural resources. As private threats to the environment become clearer, PTD protection against privatization may become more prominent. Expansions in the scope of the doctrine in the past occurred in response to the “felt necessities of the time.”²⁴ Similar felt necessities will influence its future in the twenty-first century, perhaps strengthening anti-monopoly protection for natural resources.

In Part I, this Article links the origins, evolution, and contemporary significance of the PTD to antimonopoly policy.²⁵ Part I outlines early American public trust cases in which courts originally recognized the relevance of the PTD in Atlantic tidal waters, but soon extended the doctrine to inland navigable waters, illustrating the doctrine’s usefulness in protecting against landowner monopolization of public water resources and wildlife.²⁶ Part II turns to the modern era, discussing how the PTD has extended and strengthened antimonopoly protection over natural resources, expanding the scope of the resources subject to the doctrine and the public uses protected by it.²⁷ This Article concludes by suggesting that trust advocates would advance PTD case law by encouraging courts to recognize the antimonopoly impulses underlying the public trust.²⁸

I. THE FOUNDATION OF THE AMERICAN PUBLIC TRUST DOCTRINE: ANTIMONOPOLIZATION OF PUBLIC RESOURCES

The antimonopoly notion that the public holds rights to access select natural resources originated in Roman law. As the Roman Emperor Justini-

²³ See Charles F. Wilkinson, *The Headwaters of the Public Trust: Some Thoughts on the Source and Scope of the Traditional Doctrine*, 19 ENVTL. L. 425, 425 (1989) (“The public trust doctrine is complicated—there are fifty-one public trust doctrines in this country alone.”).

²⁴ OLIVER WENDELL HOLMES, JR., *THE COMMON LAW* 1 (1881). According to the famous dictum of Justice Holmes, the law must evolve:

The life of the law has not been logic; it has been experience. The felt necessities of the time, the prevalent moral and political theories, intuitions of public policy, avowed or unconscious, and even the prejudices which judges share with their fellow-men, have had a good deal more to do than syllogism in determining the rules by which men should be governed. The law embodies the story of a nation’s development through many centuries, and it cannot be dealt with as if it contained only the axioms and corollaries of a book of mathematics.

Id.

²⁵ See *infra* notes 29–118 and accompanying text.

²⁶ See *infra* notes 29–118 and accompanying text.

²⁷ See *infra* notes 119–323 and accompanying text.

²⁸ See *infra* notes 324–330 and accompanying text.

an explained in a sixth century legal treatise, there are “things which are naturally everybody’s . . . air, flowing water, the sea, and the sea-shore.”²⁹ English law adopted this Roman law concept in the Magna Carta of 1215, which included a provision promising public uses of navigable and tidal waters for navigation, commerce, and fishing purposes while restricting private monopolies that would interfere with those uses.³⁰

In the nineteenth century, the PTD crossed the Atlantic and eventually became a fundamental tenet of American property law.³¹ In 1821 the New Jersey Supreme Court first announced the PTD as a means to guard against private monopolization of certain natural resources, and as a basis for dividing public and private ownership of waterways.³² By mid-century, the United States Supreme Court adopted the doctrine as federal law,³³ applying it to resolve ownership of submerged lands.³⁴ As the nineteenth century progressed, the PTD moved upstream to apply to inland waters that were important to commerce.³⁵ By the turn of the twentieth century, the doctrine not only protected public access to both navigable-in-fact and tidal waters,³⁶ it also forbade large-scale public conveyance of natural resources into private hands.³⁷

²⁹ JUSTINIAN’S INSTITUTES 55 (Paul Birks & Grant McLeod trans., 1987).

³⁰ See HARRISON C. DUNNING, 2 WATERS AND WATER RIGHTS § 30.01 (3d ed. 2016); see, e.g., *Shively v. Bowlby*, 152 U.S. 1, 11–15 (1894) (stating that water is a public resource “for highways of navigation and commerce, domestic and foreign, and for the purpose of fishing by all the king’s subjects,” and outlining English restrictions of privatization of tidal resources); see also Sax, *supra* note 2, at 475–77 (discussing the Roman and English origins of the American public trust doctrine); Wilkinson, *supra* note 23, at 465 (identifying navigation, commerce, and fishing as “traditional purposes” of the public trust doctrine). The California Supreme Court, in *City of Berkeley v. Superior Court*, credited that history when it stated:

The doctrine that the public owns the right to tidelands for purposes such as commerce, navigation and fishing originated in Roman law, which held the public’s right to such lands to be “illimitable and unrestrainable” and incapable of individual exclusive appropriation. The English common law developed similar limitations upon private authority over such property: the rights of the public prevailed over the rights of private persons claiming under tideland grants made by the crown.

606 P.2d 362, 364–65 (Cal. 1980) (internal citation omitted) (quoting Note, *The Public Trust in Tidal Areas: A Sometime Submerged Traditional Doctrine*, 79 YALE L.J. 762, 763 n.7 (1970)).

³¹ See generally Harrison C. Dunning, *The Public Trust: A Fundamental Doctrine of American Property Law*, 19 ENVTL. L. 515, 516 (1989) (“The public trust is a fundamental doctrine in American property law and should be recognized much more widely than it is today.”).

³² *Arnold v. Mundy*, 6 N.J.L. 1, 76–77 (N.J. 1821).

³³ *Martin v. Waddell’s Lessee*, 41 U.S. (16 Pet.) 367, 418 (1842).

³⁴ *Pollard’s Lessee v. Hagan*, 44 U.S. (3 How.) 212, 230 (1845).

³⁵ See *infra* notes 85–92 and accompanying text (discussing nineteenth-century inland PTD cases).

³⁶ See *Geer v. Connecticut*, 161 U.S. 519, 529 (1896); *Barney v. Keokuk*, 94 U.S. 324, 338 (1877); *The Genesee Chief v. Fitzhugh*, 53 U.S. 443, 457 (1851); *Waddell’s Lessee*, 41 U.S. at 418; *Arnold*, 6 N.J.L. at 76–77.

³⁷ *Ill. Cent. R.R. v. Illinois*, 146 U.S. 387, 464 (1892).

A. Prohibiting Landowner Monopolization of Public Water Resources

A central purpose of the early American PTD was to preserve public access to navigable-in-fact³⁸ and tidal³⁹ waters and the lands submerged beneath them.⁴⁰ Historically, navigation and commerce were overlapping concepts⁴¹ because the ability to navigate waterways was essential to commerce before efficient travel overland by railroad and highways emerged.⁴² Consequently, maintaining public access to navigable waters was a paramount public purpose.

³⁸ See *The Daniel Ball*, 77 U.S. (10 Wall.) 557, 563 (1870). In *The Daniel Ball*, Justice Stephen J. Field explained that rivers are navigable in fact:

when they are used, or are susceptible of being used, in their ordinary condition, as highways for commerce, over which trade and travel are or may be conducted in the customary modes of trade and travel on water. And they constitute navigable waters of the United States within the meaning of the acts of Congress, in contradistinction from the navigable waters of the States, when they form in their ordinary condition by themselves, or by uniting with other waters, a continued highway over which commerce is or may be carried on with other States or foreign countries in the customary modes in which such commerce is conducted by water.

Id.

³⁹ *Phillips Petroleum Co. v. Mississippi*, 484 U.S. 469, 476 (1988) (“[W]e reaffirm our longstanding precedents which hold that the States, upon entry into the Union, received ownership of all lands under waters subject to the ebb and flow of the tide.”). Tidal lands are lands subject to the ebb and flow of tides. *Id.*

⁴⁰ See Richard R. Lazarus, *Changing Conceptions of Property and Sovereignty in Natural Resources: Questioning the Public Trust Doctrine*, 71 IOWA L. REV. 631, 647 (1986) (“The public trust doctrine historically concerned public rights (traditionally, commerce, navigation, and fishing) in navigable waters and their submerged beds. Accordingly, the geographical application of the doctrine turned on the meaning of navigable water.”) (internal quotations omitted).

⁴¹ See DUNNING, *supra* note 30 (“‘Navigation’ and ‘commerce’ were clearly overlapping concepts in the historic formulation of the public right. . . . Typically the public right was asserted for ‘our great passageways of commerce and navigation,’ making clear the centrality of commercial navigation.”); see also Paul Stephen Dempsey, *Transportation: A Legal History*, 30 TRANSP. L.J. 235, 239 (2003) (“Transportation is . . . a fundamental component of economic growth. It is the infrastructure foundation upon which the rest of the economy is built.”).

⁴² See LOUIS C. HUNTER, *STEAMBOATS ON THE WESTERN RIVERS: AN ECONOMIC AND TECHNOLOGICAL HISTORY* 3–4 (1994) (Describing how sea travel was the preferred method of transportation during the eighteenth century, because “[i]n America, roads were especially poor, the cost of carriage high, and the time of trips very slow. Except to serve local needs highway transport played a minor role in commercial intercourse. Rivers made up the principal inland waterways”); Lazarus, *supra* note 40, at 636 (“Commerce was primarily waterborne; the rivers served as highways for pioneers and supplied power for industry. Accordingly, cities and towns invariably lined major waterways, and natural ports were a prerequisite to developing a major metropolitan area.”); Wilkinson, *supra* note 23, at 431–33 (Describing the significance of major rivers to early American transportation “[t]o the early settlers, the rivers furnished paths of exploration and avenues for the fur trade and log floats. Due to the density of the forests and the difficulty of road construction, the watercourses afforded logical areas for settlement. Fishing was significant, both for commercial and subsistence purposes.”).

In 1821, in *Arnold v. Mundy* the New Jersey Supreme Court rejected a landowner's attempt to monopolize oyster harvesting on tidal flats in the Raritan River, a decision that upheld that state's sovereign ownership of tidal waters and the lands beneath them.⁴³ Two decades later, in *Martin v. Waddell's Lessee*, the United States Supreme Court reiterated that New Jersey held the submerged lands in the Raritan River in trust for its citizens.⁴⁴ In so doing, the Court extended states' sovereign ownership of submerged tidal lands to all original states and, shortly thereafter, to all states.⁴⁵ By the turn of the twentieth century, the Court recognized state public trust obligations in inland, navigable-in-fact waters, protecting those waters from private monopolization as well.⁴⁶

1. Preventing Monopolization of Wildlife Resources in Tidal Waters

The earliest American public trust cases protected shellfish harvesting from private monopolization in tidal waters. The 1821 decision of the New Jersey Supreme Court's decision in *Arnold* established the state's sovereign ownership of tidal waters in the Raritan River and the lands underlying those waters.⁴⁷ Two decades later, in 1842, the United States Supreme Court affirmed the New Jersey court's ruling and ratified public access rights to the Raritan River and Bay.⁴⁸ The Raritan River is therefore the homeland of the American PTD.

Arnold, which laid the foundation for the American PTD, rejected a landowner's attempted monopolization of oysters in the Raritan River.⁴⁹ Robert Arnold, who owned land adjacent to the river, claimed an exclusive right to harvest adjacent oyster beds based on a chain of title dating to a grant from the Duke of York, who, in turn, had acquired title in the seventeenth century from his brother, Charles II, King of England.⁵⁰ After purchasing a farm adjacent to the river, Arnold planted oysters in the riverbed below the high water mark and then drove off would-be oyster harvesters.⁵¹

⁴³ 6 N.J.L. at 78.

⁴⁴ 41 U.S. at 417–18 (disagreeing with the plaintiff that *Arnold*, 6 N.J.L. at 93, was decided in error, and instead upholding the reasoning in *Arnold*).

⁴⁵ *Pollard's Lessee*, 44 U.S. at 224 (extending sovereign rights to the submerged lands of new states under the “equal footing” doctrine); see *infra* notes 80–83 (discussing this case).

⁴⁶ See *infra* notes 84–92 (discussing the march of the PTD inland).

⁴⁷ 6 N.J.L. at 78. Actually, a decade before the *Arnold* decision, the Pennsylvania Supreme Court recognized public rights in the inland Susquehanna River in *Carson v. Blazer*, 2 Binn. 475 (Pa. 1810); see *infra* note 85 and accompanying text.

⁴⁸ *Waddell's Lessee*, 41 U.S. at 417.

⁴⁹ 6 N.J.L. at 78.

⁵⁰ *Id.* at 45–46, 65–66.

⁵¹ *Id.* at 65–66. Arnold's predecessor, Coddington, had also attempted to assert an exclusive right to the oysters, “but the people had always disputed that right, had entered upon [the oyster

To test the legality of Arnold's assertion of an exclusive right to the oysters, Benajah Mundy led a small fleet upriver and harvested some of them.⁵²

As anticipated, Arnold filed suit against Mundy.⁵³ At trial, Mundy claimed that Arnold's exclusive title extended only to the high water mark,⁵⁴ and that his fleet had lawfully taken oysters under the public's right to harvest a publicly owned natural resource.⁵⁵ The New Jersey trial court found Mundy's assertions persuasive and held in his favor; Arnold appealed.⁵⁶

The New Jersey Supreme Court affirmed the trial court decision. Chief Justice Andrew Kirkpatrick agreed with the lower court that Arnold's title ended at the high water mark, and thus did not extend to the riverbed that provided a habitat for the oysters.⁵⁷ Kirkpatrick differentiated navigable waters, such as the tidal Raritan River, from streams and rivers "where the tide neither ebbs nor flows."⁵⁸ Although private title for non-tidal waters reached the middle of the water's channel, he announced that upland title adjacent to navigable waters ended at the high water mark.⁵⁹ Consequently, the public had a right to access the bed of the navigable Raritan River and to harvest the attached oysters; thus Arnold had no right to exclude the public.⁶⁰

flats], and taken oysters from it, when they pleased, and if opposed by Coddington . . . the strongest usually prevailed." *Id.* at 65.

⁵² *Id.* at 66. Kirkpatrick reported that Mundy had taken oysters "merely with a view of trying the plaintiff's pretended right, and not with a view of injuring the [oyster] bed, or taking the oysters further than was necessary for this purpose." *Id.* at 66.

⁵³ *Id.* at 65.

⁵⁴ The high water mark is "not . . . a physical mark made upon the ground by the waters; it means the line of high water as determined by the course of the tides." *Borax Consol., Ltd. v. City of Los Angeles*, 296 U.S. 10, 22 (1935). The ordinary high tide is "the mean high tide line," which is "a mean of all the high tides." *Id.* at 26.

⁵⁵ *Arnold*, 6 N.J.L. at 66.

⁵⁶ *Id.* at 14–15.

⁵⁷ *Id.* at 10.

⁵⁸ *Id.* The court found:

[A] grant of land to a subject or citizen, bounded upon a fresh water stream or river, where the tide neither ebbs nor flows, extends to the middle of the channel of such river; but that a grant bounded upon a navigable river, or other water, where the tide does ebb or flow, extends to the edge of the water only, that is to say, to high water mark, when the tide is high, and to low water mark, when the tide is low, but it extends no farther.

Id. Kirkpatrick proceeded to explain that "[t]he intermediate space . . . between the high water and low water mark, may be exclusively appropriated by the owner of the adjacent land, by building thereon docks, wharves, storehouses, salt-pans, or other structures which exclude the reflow of the water." *Id.*

⁵⁹ *Id.*

⁶⁰ *Id.* at 76–77. Kirkpatrick ruled:

[B]y the law of nature, which is the only true foundation of all the social rights [and] by the civil law, which formerly governed almost the whole civilized world [and] by

Consistent with his determination that the riverbed was publicly owned, Justice Kirkpatrick decided that the King's grant to the Duke of York was not merely a private proprietary estate but also a grant of sovereign powers.⁶¹ Because the King, as sovereign, could not claim exclusive title to navigable waterways, he could not grant more than he possessed, since that would interfere with public rights.⁶² Therefore, a successor to the title of the King had no power to grant to a landowner like Arnold the right to exclude the public from use of beds of the Raritan River and Bay.⁶³ Moreover, the state of New Jersey succeeded to the King's sovereign powers and duties upon statehood.⁶⁴

According to Chief Justice Kirkpatrick, there were three kinds of property: (1) private property, owned by individuals; (2) public property, which the sovereign may grant to private individuals, in the service of public good; and (3) common property, including "the air, the running water, the sea, the fish, and the wild beasts," held by the sovereign for public use.⁶⁵ Because it would be impractical for common property to "be vested in all the people," ownership is in the sovereign "to be held, protected, and regu-

the common law of England . . . the navigable rivers in which the tide land under the water, for the purposes of passing and repassing, navigation, fishing, fowling, sustenance, and all other uses of the water and its products (a few things excepted), are common to all the citizens, and . . . each [citizen] has a right to use them according to his necessities, subject only to the laws which regulate that use . . . [T]he property, indeed, strictly speaking is vested in the sovereign, but it is vested in him, not for his own use, but for the use of the citizen; that is, for [the citizen's] direct and immediate enjoyment.

Id.

⁶¹ *Id.* at 70–71.

⁶² *Id.* at 34. The court explained:

It is manifest [the king] could give to the duke of York, and his assigns, no greater right and power over the navigable waters here than he himself would have possessed; and, if the words of the grant are more extensive, all beyond his legitimate right is absolutely void. As he could only possess a right in these navigable waters, subject to the common right of fishery of the inhabitants, which was unalienable, the duke of York, and all claiming under him, would take the right of the king, subject to the same restriction.

Id.

⁶³ *Id.*

⁶⁴ *Id.* at 13. Kirkpatrick clarified by stating that the royal rights that had passed to the state of New Jersey, in its sovereign capacity, and therefore the state "cannot make a direct and absolute grant, divesting all the citizens of their common right; such a grant, or a law authorizing such a grant, would be contrary to the great principles of our constitution, and never could be borne by a free people." *Id.* at 78.

⁶⁵ *Id.* at 71.

lated for the common use and benefit.”⁶⁶ Subsequent decisions have agreed.⁶⁷

Two decades later, the United States Supreme Court adopted Justice Kirkpatrick’s reasoning in *Waddell’s Lessee*, another controversy over access to oysters in the Raritan River and Bay, thereby extending the public rights recognized in *Arnold* to all original thirteen states.⁶⁸ In *Waddell’s Lessee*, a lessee of William Waddell claimed title to a 100-acre tract of oyster beds below the high water mark in Raritan Bay, again based on grants from King Charles to his brother, the Duke of York, in 1664 and 1674 that conveyed “all the lands, islands, soils, rivers, harbors, mines, minerals, quarries, woods, marshes, waters, lakes, fishings, hawkings, and fowlings,” among other things.⁶⁹ Concurrently, Merrit Martin held a leasehold in those oyster beds under an 1824 New Jersey statute.⁷⁰ To establish exclusive access to the oysters, Waddell’s lessee sued to eject Martin, in what appeared to be an effort to get the New Jersey courts to reconsider the *Arnold* rule or have the Supreme Court overturn it.⁷¹ This effort bore fruit at trial when a jury ruled in favor of Waddell’s lessee, finding that the claim based on the King’s land grant was superior to the subsequent state lease.⁷²

Although the United States Supreme Court also recognized the royal charter, it reversed the lower court, stating that New Jersey had sovereign ownership of the submerged lands because the state was the successor to the English Crown.⁷³ Therefore, Martin’s harvesting lease from the state was

⁶⁶ *Id.* Chief Justice Kirkpatrick elaborated on the concept of common property by stating that the king could not

appropriate it to himself, or to the fiscal purposes of the nation, the enjoyment of it is a natural right which cannot be infringed or taken away, unless by arbitrary power; and that, in theory at least, could not exist in a free government, such as England has always claimed to be.

Id. at 72–73.

⁶⁷ See *infra* Part II (discussing the evolution of PTD case law).

⁶⁸ See *Waddell’s Lessee*, 41 U.S. at 382. The Court opined:

There is no language in this royal grant that will pass the sea and its arms, as private property We contend, first, that the sea and its arms were part of the regalia or prerogative rights of the crown. And secondly, that they could not, upon a sound construction of this charter, pass as private property, to the Duke, in his private capacity.

Id. at 382.

⁶⁹ *Id.* at 370.

⁷⁰ *Id.* at 408.

⁷¹ See *id.* at 407.

⁷² See *id.* at 405.

⁷³ *Id.* at 417.

superior to other land ownership claims.⁷⁴ Writing for the Court, Chief Justice Roger Taney considered the nature of the King's original rights,⁷⁵ and whether those rights changed when they passed to the Duke of York, and eventually to Waddell, as the landowner.⁷⁶ Scrutinizing the royal charters, Taney concluded that "the sea and its arms are peculiarly and pre-eminently in the king in respect to their uses; all of which, at common law, are public, and they are held by the king for the public benefit."⁷⁷ He decided that the Duke and his successors, Waddell and his lessee, merely stood in place of the King, meaning the private ownership was subject to the public's prior right of access; thus, Martin had no right to exclude the public from using the submerged lands.⁷⁸ Like *Arnold, Waddell's Lessee* prevented private monopolization of public resources in tidal waterways.⁷⁹

Three years after it decided *Waddell's Lessee*, the United States Supreme Court extended state sovereign ownership of submerged tidal lands to all states, not just those formed from British colonies, in a dispute over rights to submerged lands in Mobile Bay, Alabama.⁸⁰ Because all new states were admitted to the Union on an "equal footing" with the original states,⁸¹

⁷⁴ See *id.* The Court concluded that the Duke had later surrendered governmental power to the Crown, and that "when the people of New Jersey took possession of the reins of government, and took into their own hands the powers of sovereignty, the prerogatives and regalities which before belonged either to the crown or the parliament, became immediately and rightfully vested in the state." *Id.*

⁷⁵ *Id.* at 409. The Court stated:

We do not propose to meddle with the point which was very much discussed at the bar, as to the power of the king, since Magna Charta, to grant to a subject a portion of the soil covered by the navigable waters of the kingdom, so as to give him an immediate and exclusive right of fishery, either for shell-fish or floating fish, within the limits of his grant.

Id. at 410.

⁷⁶ *Id.* at 411. According to the Court, an essential question was whether, in the Duke's hands, the public resources were intended to be a trust for the common use of the new community about to be established; or private property to be parceled out and sold to individuals, for his own benefit? And in deciding a question like this, we must not look merely to the strict technical meaning of the words of the letters-patent. The laws and institutions of England, the history of the times, the object of the charter, the contemporaneous construction given to it, and the usages under it, for the century and more which has since elapsed, are all entitled to consideration and weight. *Id.*

⁷⁷ *Id.* at 383. But public waterways are not reserved exclusively for public use. As the Supreme Court observed in *Waddell's Lessee*, natural forces, such as alluvion (i.e., an increase in an area of land due to sediment deposited by a river), or practices such as wharfing out may produce private rights. *Id.*

⁷⁸ *Id.* at 412–13.

⁷⁹ See *id.* at 417; *Arnold*, 6 N.J.L. at 58.

⁸⁰ *Pollard's Lessee*, 44 U.S. at 230.

⁸¹ *Id.* at 224 ("Whenever the United States shall have fully executed these trusts, the municipal sovereignty of the new states will be complete, throughout their respective borders, and they, and the original states, will be upon an equal footing, in all respects whatever."). See generally James R. Rasband, *The Disregarded Common Parentage of the Equal Footing and Public Trust*

the Court in *Pollard's Lessee v. Hagan* ruled that the new states owned submerged tidal lands due to an implicit conveyance in their statehood acts.⁸² *Pollard's Lessee* therefore recognized public trust rights and accompanying antimonopoly protection in tidal submerged lands in all states.⁸³

2. Extending Antimonopoly Protection to Inland Waters

The Supreme Court's decisions in *Waddell's Lessee* and *Pollard's Lessee* might have been interpreted to confine public rights to coastal areas subject to tidal influence, leaving the vast interior of the American continent, with its large rivers and lakes, subject to private monopolization.⁸⁴ But in the early nineteenth century state courts began the process of enlarging the scope of public rights in waterways to include those waters that were navigable-in-fact. For example, in 1810, the Pennsylvania Supreme Court ruled in *Carson v. Blazer* that a riparian landowner had "no exclusive right to fish in the Susquehanna River immediately in front of his lands . . . [because] the right to fisheries in [a large freshwater river not subject to tidal influence] is vested in the state, and open to all."⁸⁵ In 1826, the Massachusetts Supreme Judicial Court declared that navigable waters "invariably and exclusively belong to the public."⁸⁶ Three decades later, in 1856, the Iowa Supreme Court concluded that actual navigability, not the presence of the tides, was the defining characteristic of public waters.⁸⁷

These decisions were emblematic of the PTD's inland march. The United States Supreme Court began to ratify this expansion of public rights in 1851 in *The Genesee Chief v. Fitzhugh*, in which the Court upheld a congressional extension of admiralty jurisdiction to non-tidal waters used for

Doctrines, 32 LAND & WATER L. REV. 1, 88 (1997) (asserting that the PTD originated in part from early equal footing cases).

⁸² 44 U.S. at 228–29; see Wilkinson, *supra* note 23, at 443–47 (discussing the origins of the equal footing doctrine). In *Pollard's Lessee v. Hagan*, the Court declared:

Alabama is therefore entitled to the sovereignty and jurisdiction over all the territory within her limits, subject to the common law, to the same extent that Georgia possessed it before she ceded it to the United States. To maintain any other doctrine, is to deny that Alabama has been admitted into the union on an equal footing with the original states

44 U.S. at 228–29.

⁸³ See *Pollard's Lessee*, 44 U.S. at 230; see also *Shively*, 152 U.S. at 1 ("The new States admitted into the Union since the adoption of the constitution have the same rights as the original states in the tide waters, and in the lands under them, within their respective jurisdictions.")

⁸⁴ See *Pollard's Lessee*, 44 U.S. at 230; *Waddell's Lessee*, 41 U.S. at 418.

⁸⁵ 2 Binn. at 477–78 (concluding that it would be "highly unreasonable" to limit the scope of navigability to tidal waters).

⁸⁶ *Ingraham v. Wilkinson*, 21 Mass. (4 Pick.) 268, 271 (1826).

⁸⁷ *McManus v. Carmichael*, 3 Iowa 1, 30 (1856).

commerce.⁸⁸ In that case, involving the advent of steamships that opened inland waters to commerce, the Court explained that in the United States there were “thousands of miles of public navigable water, including lakes and rivers in which there is no tide.”⁸⁹ Consequently, in a land with numerous inland waters capable of supporting commercial navigation, the tidal limit on the public rights in waterways inherited from England was a poor fit.⁹⁰ A quarter-century later, in 1877, in *Barney v. City of Keokuk*, a non-admiralty case, the Court extended public rights to navigable-in-fact waters, refusing to draw a distinction between tidal and non-tidal waters for the purposes of navigation and sovereign ownership.⁹¹ By the turn of the twentieth century, American courts thus had expanded the reach of public rights to include not just coastal waters subject to tidal influence but also all waters that served or could serve as commercial highways.⁹²

B. Restraining Privatization of Public Trust Resources

A second fundamental antimonopoly characteristic of the American PTD at the turn of the twentieth century was a restriction on privatizing trust resources. This restraint on alienation was the product of the United States Supreme Court’s 1892 opinion in *Illinois Central Railroad v. Illinois*, in which the Court invalidated a legislative attempt to privatize most of Chicago Harbor, hinging its decision on the PTD.⁹³ Four years later, in 1896, the Court upheld a state’s right to restrict privatization of wildlife in *Geer v. Connecticut*, concluding that wild animals were part of the public trust.⁹⁴

⁸⁸ *The Genesee Chief*, 53 U.S. at 457.

⁸⁹ *Id.*

⁹⁰ See Michael C. Blumm, *The Public Trust Doctrine—A Twenty-First Century Concept*, 16 HASTINGS W.-N.W. J. ENVTL. L. & POL’Y 105, 105–06 (2010) (“[T]he English standard of navigability did not fit the American continent, with its great rivers and lakes. Thus, over a century-and-a-half ago, navigability—central to the historic public trust doctrine, evolved from a coastal to an inland, upriver concept.”); Jan S. Stevens, *The Public Trust: A Sovereign’s Ancient Prerogative Becomes the People’s Environmental Right*, 14 U.C. DAVIS L. REV. 195, 196 (1980) (“The opening of the Northwest Territory and the purchase of Louisiana presented us with vastly different waters than the seas and rivers of England. Unrestricted use of the inland waterways was a necessity for the development of the country.”).

⁹¹ 94 U.S. at 338; see also *Ariz. Ctr. for Law in the Pub. Interest v. Hassell*, 837 P.2d 158, 161 (Ariz. Ct. App. 1991) (“Although watercourse sovereignty ran with the tidewaters in England, an island country, in America the doctrine was extended to navigable inland watercourses as well.” (citing *Barney*, 94 U.S. at 324)).

⁹² Public rights in navigable-in-fact waters became so well accepted during the twentieth century that later there was some question about whether the navigable-in-fact test had eclipsed the tidal waters test. In 1988, in *Phillips Petroleum Co. v. Mississippi*, the Supreme Court clarified that tidal waters that were not subject to navigation were in fact public trust waters. 484 U.S. at 478.

⁹³ 146 U.S. 387, 458, 464 (1892).

⁹⁴ 161 U.S. at 529, 535.

1. Restraining Privatization of Water Resources

The landmark case of *Illinois Central Railroad* involved a dispute arising from an attempt by the Illinois legislature to privatize most of Chicago Harbor.⁹⁵ In 1869, the Illinois legislature enacted the Lake Front Act, which granted Illinois Central Railroad roughly one thousand acres of Lake Michigan's submerged lands.⁹⁶ Four years later, amid widespread allegations of corruption, the legislature revoked the grant.⁹⁷ The railroad objected to the revocation, maintaining that the conveyance had transferred vested property rights that were not subject to legislative revocation without compensation.⁹⁸

The Court upheld the legislature's 1873 revocation of the grant in a majority opinion by Justice Stephen J. Field who decided that the PTD made the state's submerged lands largely inalienable.⁹⁹ In a decision that Professor Joe Sax characterized as the "lodestar" of the PTD, Justice Field stated, "A grant of all the lands under the navigable waters of a state has never been adjudged to be within the state's legislative power; and any attempted grant of the kind would be held, if not absolutely void on its face, as subject to revocation."¹⁰⁰ The state can no more abdicate its trust over property in which the whole people are interested—like navigable waters and the soils underneath them—than it can abdicate its police power in the administration of government and the preservation of the peace.¹⁰¹ Conse-

⁹⁵ *Ill. Cent. R.R.*, 146 U.S. at 458, 464. See generally Kearney & Merrill, *supra* note 15 (claiming that the 1869 grant was not simply a scandalous legislative grant but was the product of four decades of political wrangling between the city of Chicago, the state of Illinois, and businesses like the railroad and suggesting that downstate economic interests favored the grant because the 1869 legislation entitled them to share in fees paid by the railroad).

⁹⁶ Lake Front Act, 1869.11, Laws 245 (repealed by Act of April 15, 1873, 1873.11, Laws 115); *Ill. Cent. R.R.*, 146 U.S. at 454.

⁹⁷ *Ill. Cent. R.R.*, 146 U.S. at 463.

⁹⁸ *Id.* at 433–34.

⁹⁹ See *id.* at 458, 464. The decision was unclear as to whether the grant to the railroad was voidable by the legislature or void at the outset, but the ambiguity did not affect the outcome, since the Illinois legislature had revoked its grant. See *id.* Subsequent decisions, however, indicate that such a grant is void, at least in Illinois. See, e.g., *Lake Mich. Fed'n v. U.S. Army Corps of Eng'rs*, 742 F. Supp. 441, 450 (N.D. Ill. 1990) (enjoining a conveyance to Loyola University of eighteen acres of submerged Lake Michigan lands); *People ex rel. Scott v. Chi. Park Dist.*, 360 N.E.2d 773 (Ill. 1976) (striking down a conveyance of 194 submerged acres of Lake Michigan to U.S. Steel).

¹⁰⁰ *Ill. Cent. R.R.*, 146 U.S. at 453; Sax, *supra* note 2, at 489. Similarly, Professor Charles Wilkinson called *Illinois Central Railroad v. Illinois*, "the leading case on the traditional public trust doctrine." Wilkinson, *supra* note 23, at 450; see *Ill. Cent. R.R.*, 146 U.S. at 453.

¹⁰¹ *Ill. Cent. R.R.*, 146 U.S. at 453. The size of the grant concerned the Court, with Justice Field remarking that it was "as large as that embraced by the merchandise docks along the Thames at London; is much larger than that included in the famous docks and basins at Liverpool; is twice the size of the port at Marseilles, and nearly, if not quite, equal to the pier area along the water front at New York." *Id.* at 454.

quently, the Court held that “[t]here can be no irrevocable contract of property by a grantor in disregard of a public trust, under which he was bound to hold and manage it.”¹⁰²

Although the Court concluded that the grant of most of Chicago Harbor violated the PTD, the *Illinois Central* opinion did not prohibit all alienation of public trust resources. The Court suggested two circumstances under which the public’s right to use navigable water could be extinguished: a sovereign may alienate a public trust resource: where doing so (1) furthered the purposes of the public trust,¹⁰³ or (2) did not substantially impair public use of the remaining public trust resources.¹⁰⁴ As a result, states retain some

¹⁰² *Id.* at 460. Justice Field did not discuss the origins of Illinois’ fiduciary obligations concerning certain public resources. *See id.* Arguably, the Court’s conclusion and assertions about the public trust were based on federal common law recognition of a doctrine the United States inherited from England. *See id.*; Crystal S. Chase, *The Illinois Central Public Trust Doctrine and Federal Common Law: An Unconventional View*, 16 HASTINGS W.-N.W. J. ENVTL. L. & POL’Y 113, 130 (2010) (so arguing). *But see* William D. Araiza, *The Public Trust Doctrine as an Interpretive Canon*, 45 U.C. DAVIS L. REV. 693, 700 (2012) (Criticizing as “notoriously murky . . . the foundations of the rule that prevented Illinois from conveying a large part of the Chicago lakefront to a railroad corporation. That decision has been described as resting on state common law, federal common law, the federal navigational servitude, and an inchoate concept of inalienable sovereignty.”). In the more than one hundred years since *Illinois Central*, the Court has not clarified whether the public trust doctrine originates in state or federal law, although it has proclaimed in dicta that the decision in that case was “necessarily a statement of Illinois law.” *Appleby v. City of N.Y.*, 271 U.S. 364, 395 (1926); *see Ill. Cent. R.R.*, 146 U.S. at 459; *see also Phillips Petroleum Co.*, 484 U.S. at 475 (states may “define the limits of lands they hold in public trust and recognize private rights in such lands as they see fit.”). In 2012, in *PPL Montana, LLC v. Montana*, the Supreme Court explained:

Pursuant to [the equal footing] doctrine, upon its date of statehood, a State gains title within its borders to the beds of waters then navigable. It may allocate and govern those lands according to state law subject only to the United States’ power “to control such waters for purposes of navigation in interstate and foreign commerce.”

132 S. Ct. 1215, 1219 (2012) (quoting *United States v. Oregon*, 295 U.S. 1, 1 (1935)).

¹⁰³ *Ill. Cent. R.R.*, 146 U.S. at 452. The Court explained:

The interest of the people in the navigation of the waters and in commerce over them may be improved in many instances by the erection of wharves, docks, and piers therein, for which purpose the state may grant parcels of the submerged lands; and, so long as their disposition is made for such purpose, no valid objections can be made to the grants.

Id.

¹⁰⁴ *Id.* The Court also announced:

It is grants of parcels of lands under navigable waters that may afford foundation for wharves, piers, docks, and other structures in aid of commerce, and grants of parcels which, being occupied, do not substantially impair the public interest in the lands and waters remaining, that are chiefly considered and sustained in the adjudged cases as a valid exercise of legislative power consistently with the trust to the public upon which such lands are held by the state.

Id.

discretion in managing their trust resources, although many impose a presumption against alienation of public resources, requiring clear legislative intent to accomplish such alienation.¹⁰⁵ As the United States Supreme Court stated, “[t]he control of the State for the purposes of the trust can never be lost.”¹⁰⁶ Thus, before the turn of the twentieth century, American public trust case law established a preference for public ownership and control of key natural resources and an aversion to private monopolies.

2. Restraining Privatization of Wildlife

By the end of the nineteenth century, the PTD had evolved to restrict privatization of resources beyond navigable waters. For example, in addition to protecting public access to waterways, both *Arnold* and *Waddell’s Lessee* preserved public rights to harvest oysters on commonly owned submerged lands.¹⁰⁷ Then, four years after its decision in *Illinois Central Railroad*, the United States Supreme Court ratified state claims of sovereign ownership of all wildlife as part of the public trust.¹⁰⁸

In 1896, in *Geer v. Connecticut*, the Court ratified state claims of sovereign ownership of all wildlife, which the Court recognized as part of the public trust.¹⁰⁹ Accordingly, the Court upheld Connecticut’s right to restrict privatization of wild animals.¹¹⁰ The state charged Edward Geer with violating a state law that criminalized the transport of certain bird species across state lines.¹¹¹ Although Geer’s possession of the birds was legal, because he

¹⁰⁵ See, e.g., *Coastal Petroleum Co. v. Am. Cyanamid Co.*, 492 So. 2d 339, 343 (Fla. 1986) (explaining that state sovereignty lands “cannot be conveyed without clear intent and authority”); *Gwathmey v. State*, 464 S.E.2d 674, 686 (N.C. 1995) (stating that “the presumption arising under the public trust doctrine that the General Assembly did not convey title free of public trust rights has not been rebutted and prevails in this case”); *Cnty. Nat’l Bank v. State*, 782 A.2d 1195, 1198 (Vt. 2001) (rejecting alienation where “the record contains no clear expression of a legislative intent to abandon the public trust interest in the land in question”).

¹⁰⁶ *Ill. Cent. R.R.*, 146 U.S. at 453.

¹⁰⁷ See *Waddell’s Lessee*, 41 U.S. at 418; *Arnold*, 6 N.J.L. at 76–77; see *supra* notes 43–78 and accompanying text (discussing these cases).

¹⁰⁸ See *Geer*, 161 U.S. at 529 (stating that states’ sovereign ownership of wildlife “is to be exercised, like all other powers of government, as a trust for the benefit of the people, and not as a prerogative for the advantage of the government as distinct from the people, or for the benefit of private individuals as distinguished from the public good”); *Ill. Cent. R.R.*, 146 U.S. at 459 (stating that “soil under navigable waters being held by the people of the state in trust for the common use”). See generally Blumm & Paulsen, *supra* note 3, at 1466 (discussing the public trust in wildlife and providing a compendium of state wildlife trusts).

¹⁰⁹ See *Geer*, 161 U.S. at 529 (stating that states’ sovereign ownership of wildlife “is to be exercised, like all other powers of government, as a trust for the benefit of the people, and not as a prerogative for the advantage of the government as distinct from the people, or for the benefit of private individuals as distinguished from the public good”).

¹¹⁰ See *id.* at 519, 529.

¹¹¹ *Id.* at 521.

had shot them during hunting season, the statute prohibited their out-of-state transport.¹¹² The state successfully prosecuted Geer in the lower courts, and he appealed to the United States Supreme Court, arguing that Connecticut's law violated the U.S. Constitution's Commerce Clause.¹¹³

The Court rejected Geer's argument and affirmed the state conviction in an opinion by Justice Edward White, who recounted "numerous" examples of judicial recognition of the states' right to regulate wild animals,¹¹⁴ explaining that "the right to reduce animals *ferae naturae* to possession has [long] been subject to the control of the law-giving power."¹¹⁵ As with lands under navigable and tidal waters, *Geer* traced the state's ownership of wild animals to rights transferred from the King of England, and consequently clarified that wild animals are a public trust resource.¹¹⁶

Like navigable waters, states own wildlife in their sovereign capacity, in trust for the people. At the turn of the twentieth century, *Geer* expanded the PTD beyond the limits of navigable waters, recognizing wildlife as a trust resource.¹¹⁷ Thus states may restrict privatization of wild animals, including preventing wildlife harvests or transportation. Like *Illinois Central Railroad*, *Geer* was fundamentally an antimonopoly decision.¹¹⁸

II. THE EVOLUTION OF THE PUBLIC TRUST: EXPANDING ANTIMONOPOLY PROTECTION

Like the common law from which it emerged, the public trust doctrine ("PTD") continued to evolve in the twentieth century, changing in response

¹¹² *Id.* at 521–22.

¹¹³ *Id.*

¹¹⁴ *See id.* at 528.

¹¹⁵ *Id.* 522.

¹¹⁶ *Id.* at 527, 529. Justice White stated:

[T]he power or control lodged in the state, resulting from . . . common ownership, is to be exercised, like all other powers of government, as a trust for the benefit of the people, and not as a prerogative for the advantage of the government as distinct from the people, or for the benefit of private individuals as distinguished from the public good.

Id. Justice White also decided that transactions occurring within Connecticut's borders were not interstate commerce under the U.S. Constitution because he concluded that items entering the food supply could be the object of commerce only with the state's consent. *Id.* at 534–35. The Supreme Court reversed part of the opinion in 1979 in *Hughes v. Oklahoma*. 441 U.S. 322, 335, 338 (1979) (ruling that Oklahoma could not ban exports of native minnows because wildlife was commerce, subject to the limits imposed by the Commerce Clause).

¹¹⁷ *See* 161 U.S. at 529 ("the power or control lodged in the state, resulting from . . . common ownership, is to be exercised, like all other powers of government, as a trust for the benefit of the people").

¹¹⁸ *See supra* notes 95–106 and accompanying text (discussing antimonopoly in *Illinois Central*).

to public values, needs, and uses of natural resources.¹¹⁹ As the New Jersey Supreme Court explained in 1972, “[t]he public trust doctrine, like all common law principles, should not be considered fixed or static, but should be molded and extended to meet changing conditions and needs of the public it was created to benefit.”¹²⁰

Over the last two centuries, the PTD has grown in several somewhat surprising ways, extending antimonopoly protection beyond tidelands and beyond traditional public uses while reinforcing the principle of non-alienation of natural resources. First, the PTD has expanded to protect uses beyond the traditional triad of commerce, navigation, and fishing. Some states now recognize recreation and ecological use as trust purposes, transforming the doctrine into a vehicle to, for example, protect wetlands and preserve lake and river waters in place.¹²¹ Second, courts have recognized additional trust resources, including non-navigable waters and upland resources like parks.¹²² Third, state courts have continued to recognize restraints on privatization of public trust resources.¹²³ Fourth, by the turn of

¹¹⁹ See, e.g., *Marks v. Whitney*, 491 P.2d 374, 380 (Cal. 1971) (“The public uses to which tidelands are subject are sufficiently flexible to encompass changing public needs. In administering the [PTD] the state is not burdened with an outmoded classification favoring one mode of utilization over another.”) (internal citation omitted). See generally Michael C. Blumm, *Public Property and the Democratization of Western Water Law: A Modern View of the Public Trust Doctrine*, 19 ENVTL. L. 573, 579 (1989) (asserting that the public trust doctrine is “chameleon-like” because courts apply it to create a variety of different types of remedies); Bertram C. Frey & Andrew Mutz, *The Public Trust in Surfaceways and Submerged Lands of the Great Lakes States*, 40 U. MICH. J. L. REFORM 907, 911–12 (2007) (arguing that the public trust doctrine is an “inherently dynamic” and evolving aspect of the common law).

¹²⁰ *Borough of Neptune City v. Borough of Avon-By-The-Sea*, 294 A.2d 47, 54 (N.J. 1972) (ensuring public access to dry sandy portions of a municipal beach).

¹²¹ See, e.g., *Nat’l Audubon Soc’y v. Superior Court (Mono Lake)*, 658 P.2d 709, 719, 728 (Cal. 1983) (acknowledging that the “principal values” the plaintiffs sought to protect were “recreational and ecological—the scenic views of the lake and its shore, the purity of the air, and the use of the lake for nesting and feeding by birds,” and concluding that “protection of these values is among the purposes of the public trust”); *City of Berkeley v. Superior Court*, 606 P.2d 362, 365 (Cal. 1980) (noting early disputes concerning public interest in tidelands “encompass[ed] navigation, commerce and fishing, the permissible range of public uses is far broader, including the right to hunt, bathe or swim, and the right to preserve the tidelands in their natural state as ecological units for scientific study”); *Marks*, 491 P.2d at 380 (“Public trust easements . . . have been held to include the right to fish, hunt, bathe, swim, to use for boating and general recreation purposes the navigable waters of the state, and to use the bottom of the navigable waters for anchoring, standing, or other purposes.”).

¹²² See *Pullen v. Ullmer*, 923 P.2d 54, 60–61 (Alaska 1996) (concluding that the PTD applies to salmon and other fish); *In re Water Use Permit Applications for the Waiiahole Ditch*, 9 P.3d 409, 453, 488 (Haw. 2000) (deciding that groundwater is a public trust resource); *Gould v. Greylock Reservation Comm’n*, 215 N.E.2d 114, 126 (Mass. 1966) (holding that privatization of a substantial part of a public park violated the state’s public trust doctrine).

¹²³ See, e.g., *Lake Mich. Fed’n v. U.S. Army Corps of Eng’rs*, 742 F. Supp. 441, 443–45 (N.D. Ill. 1990) (relying on the PTD to prevent a state’s grant of 18.5 acres of lakebed for development of an athletic facility); *Ariz. Ctr. for Law in the Pub. Interest v. Hassell*, 837 P.2d 158,

the twenty-first century, a number of PTD decisions reflected efforts to protect trust resources from environmental degradation.¹²⁴ As with early public trust case law, these developments seek to prevent private monopolization of important natural resources.

*A. Protecting Public Resource Uses Beyond Commerce,
Navigation, and Fishing*

The PTD traditionally supplied antimonopoly protection for activities in commerce, navigation, and fishing.¹²⁵ As the New Jersey Supreme Court explained, “[t]he original purpose of the doctrine was to preserve for the use of all the public natural water resources for navigation and commerce, waterways being the principal transportation arteries of early days, and for fishing, an important source of food.”¹²⁶ In recent decades, state courts have expanded the scope of activities covered by the PTD beyond that triad to protect public recreation and ecological preservation under the doctrine, expanding its antimonopoly effect.¹²⁷

166–73 (Ariz. Ct. App. 1991) (rejecting the Arizona legislature’s grant of riverbed lands to a private owner on PTD grounds); *People ex rel. Scott v. Chi. Park Dist.*, 360 N.E.2d 773, 780–81 (Ill. 1976) (relying on *Illinois Central Railroad v. Illinois*, 146 U.S. 387 (1892), to prevent conveyance of submerged lands).

¹²⁴ See Alexandra B. Klass, *Modern Public Trust Principles: Recognizing Rights and Integrating Standards*, 82 NOTRE DAME L. REV. 699, 708 (2006). According to Professor Klass:

These more recent public trust decisions show how the environmental movement of the 1970s began to influence state courts’ conceptions of the role of the common law public trust doctrine in our modern world. Indeed, the supreme courts of California, Wisconsin and Illinois and lower courts in other jurisdictions issued strong public trust opinions in the 1970s that expressly recognized society’s growing concern regarding environmental issues and the need

Id.; see also Robin Kundis Craig, *A Comparative Guide to the Western States’ Public Trust Doctrines: Public Values, Private Rights, and the Evolution Toward and Ecological Public Trust*, 37 ECOLOGY L.Q. 53, 80–91 (2010) (discussing the emergence of ecologically related PTDs in western states).

¹²⁵ See *Marks*, 491 P.2d at 380 (“Public trust easements are traditionally defined in terms of navigation, commerce and fisheries.”).

¹²⁶ *Borough of Neptune City*, 294 A.2d at 52.

¹²⁷ *Id.* at 54 (“We have no difficulty in finding that, in this latter half of the twentieth century, the public rights in tidal lands are not limited to the ancient prerogatives of navigation and fishing, but extend as well to recreational uses, including bathing, swimming and other shore activities.”); see *infra* notes 128–188 and accompanying text (discussing this expansion to recreation and ecological function).

1. Recreation

A number of states have extended PTD antimonopoly protection to recreational uses of natural resources.¹²⁸ In 1893, Minnesota became the first state to embrace recreation as a public trust purpose.¹²⁹ In *Lamprey v. Metcalf*, private parties claimed that they owned the bed of a dry lake, having acquired it under federal patents, and that because the lakes were not used for navigable commerce, they were not subject to public rights.¹³⁰ The state of Minnesota objected, maintaining that it owned the former lakebed in its sovereign capacity, and that private ownership extended only to the uplands above the lake's original borders.¹³¹ The trial court found for the private parties, and the state appealed.¹³²

The Minnesota Supreme Court affirmed, concluding that the landowners owned the dry lakebeds, but it also decided that lakebeds were subject to the public trust if they were suitable for recreation, not just navigable commerce.¹³³ According to the court, thousands of other lakes in the state also had receding lake levels and might also become dry.¹³⁴ Many of the lakes had not been used for commercial navigation, but they supported various public recreational uses, including boating and bathing.¹³⁵ Although acknowledging that private parties acquired ownership of the lakebed,¹³⁶ the

¹²⁸ See, e.g., ALASKA STAT. § 38.05.965(14) (2016) (defining “navigable waters” to include waters that may be used for “floating of logs, landing and takeoff of aircraft, and public boating, trapping, hunting waterfowl and aquatic animals, fishing, or other public recreational purposes”); *State v. McIlroy*, 595 S.W.2d 659, 665 (Ark. 1980) (deciding that a watercourse can be considered navigable due solely to recreational use); *In re Water Use Permit Applications*, 9 P.3d at 448 (stating that “the trust traditionally preserved public rights of navigation, commerce, and fishing” but also recognizing “a wide range of recreational uses, including bathing, swimming, boating, and scenic viewing, as protected trust purposes”); *Kootenai Env'tl Alliance, Inc. v. Panhandle Yacht Club, Inc.*, 671 P.2d 1085, 1092–93 (Idaho 1983) (acknowledging recreation as a public trust purpose); *J.P. Furlong Enter., Inc. v. Sun Expl. & Prod. Co.*, 423 N.W.2d 130, 140 (N.D. 1988) (extending public trust protection to bathing, swimming, fishing, and irrigation); *Morse v. Or. Div. of State Lands*, 581 P.2d 520, 523 (Or. App. 1978) (stating that public trust protection extends to recreation); *Orion Corp. v. State*, 747 P.2d 1062, 1073 (Wash. 1987) (citing *Wilbour v. Gallagher*, 462 P.2d 232 (Wash. 1969)) (public trust rights include navigation, fishing, swimming, water skiing, and other related recreational purposes); *Just v. Marinette Cty.*, 201 N.W.2d 761, 768 (Wis. 1972) (“The active public trust duty of the state of Wisconsin in respect to navigable waters requires the state not only to promote navigation but also to protect and preserve those waters for fishing, recreation, and scenic beauty.”); *Menzer v. Village of Elkhart Lake*, 186 N.W.2d 290, 296 (Wis. 1971) (purposes of trust “include all public uses of water”); see also *Wilkinson*, *supra* note 23, at 465 (discussing extension of the public trust beyond the traditional triad of uses).

¹²⁹ *Lamprey v. Metcalf*, 53 N.W. 1139, 1143–44 (Minn. 1893).

¹³⁰ *Id.* at 1140.

¹³¹ *Id.*

¹³² *Id.*

¹³³ *Id.* at 1144.

¹³⁴ *Id.*

¹³⁵ *Id.* 1143.

¹³⁶ *Id.* at 1144. The *Lamprey* court explained:

court agreed with the state that waters were subject to the public trust, even if they were used only for recreation.¹³⁷ As the court explained:

Many, if not the most, of the meandered lakes of this state, are not adapted to, and probably will never be used to any great extent for, commercial navigation; but they are used—and as population increases, and towns and cities are built up in their vicinity, will be still more used-by the people for sailing, rowing, fishing, fowling, bathing, skating, taking water for domestic, agricultural, and even city purposes, cutting ice, and other public purposes which cannot now be enumerated or even anticipated. *To hand over all these lakes to private ownership, under any old or narrow test of navigability, would be a great wrong upon the public for all time, the extent of which cannot, perhaps, be now even anticipated.*¹³⁸

Lamprey thus extended public rights to all waters suited for public recreation.¹³⁹

Many other state courts have since extended the PTD's antimonopoly protection to waters used for recreation.¹⁴⁰ Montana offers a good example. In 1984, in *Montana Coalition for Stream Access, Inc. v. Curran*, the Montana Supreme Court affirmed a lower court decision prohibiting a private landowner and his oil company from excluding the public from recreating on some seven miles of the Dearborn River.¹⁴¹ The trial court held that the public had a right to use the waters and streambed of the river up to the high water mark, because the river was navigable-in-fact at the time of statehood

[S]o long as these lakes are capable of use for boating, even for pleasure, they are navigable, within the reason and spirit of the common-law rule. When the waters of any of them have so far receded or dried upon to be no longer capable of any beneficial use by the public, they are no longer public waters, and their former beds, under the principles already announced, would become the private property of the riparian owners.

Id.

¹³⁷ *Id.* at 1143.

¹³⁸ *Id.* (emphasis added).

¹³⁹ *Id.*

¹⁴⁰ See, e.g., *Marks*, 491 P.2d at 380 (“Public trust easements . . . have been held to include the right to fish, hunt, bathe, swim, to use for boating and general recreation purposes the navigable waters of the state, and to use the bottom of the navigable waters for anchoring, standing, or other purposes.”); *Borough of Neptune City*, 294 A.2d at 54 (recognizing public recreational rights to beaches and the water they abut); *Luscher v. Reynolds*, 56 P.2d 1158, 1161 (Or. 1936) (acknowledging the public right to recreational use of waters); *Guilliams v. Beaver Lake Club*, 175 P. 437, 442 (Or. 1918) (recognizing public rights in “sailing, rowing, fishing, fowling, bathing, skating . . . and other public uses which cannot now be enumerated or even anticipated” (quoting *Lamprey*, 53 N.W. at 1143)).

¹⁴¹ *Mont. Coal. for Stream Access, Inc. v. Curran*, 682 P.2d 163, 169–70 (Mont. 1984).

the state owned the streambeds.¹⁴² The Montana Supreme Court affirmed, agreeing that the Dearborn River was navigable under federal law.¹⁴³ But the court also indicated that the PTD extended beyond waters in which the state owned the bed, adopting a recreational-use test like that first announced by the Minnesota court in *Lamprey*:

The capability of use of the waters for recreational purposes determines their availability for recreational use by the public. Streambed ownership by a private party is irrelevant. If the waters are owned by the State and held in trust for the people by the State, no private party may bar the use of those waters by the people.¹⁴⁴

Interpreting the state constitution to codify the PTD, the court concluded that the private landowner could not exclude the public from recreational use of the river.¹⁴⁵

One month later, in *Montana Coalition for Stream Access, Inc. v. Hildreth*, the Montana Supreme Court confirmed its extension of the PTD to recreational uses.¹⁴⁶ A citizen group filed suit against a private owner, Lowell Hildreth, who had attempted to exclude members of the public from floating on a stream that ran through his property.¹⁴⁷ The trial court enjoined Hildreth from interfering with floaters, deciding that the stream was suitable for recreation, and therefore subject to Montana's public trust.¹⁴⁸ Hildreth appealed, but the Montana Supreme Court affirmed, holding that "the capability of use of the waters for recreational purposes determines whether the waters can be so used,"¹⁴⁹ and concluding that because the stream was suit-

¹⁴² *Id.* at 172. The district court also dismissed Curran's counterclaim for inverse condemnation. *Id.* at 171.

¹⁴³ *Id.* at 172

¹⁴⁴ *Id.* at 170; see also *Parks v. Cooper*, 676 N.W.2d 823, 838 (S.D. 2004) (discussing cases from several other states and joining those concluding that public recreational rights were independent of private ownership of the bed of the body of water). On the pleasure-boat test for navigability, see DUNNING, *supra* note 30, § 32.03.

¹⁴⁵ *Curran*, 682 P.2d at 170–71 (quoting the Montana Constitution as providing that "[a] surface, underground, flood, and atmospheric waters within the boundaries of the state are the property of the state for the use of its people and are subject to appropriation for beneficial uses as provided by law").

¹⁴⁶ *Mont. Coal. for Stream Access, Inc. v. Hildreth*, 684 P.2d 1088, 1091 (Mont. 1984).

¹⁴⁷ *Id.* at 1090.

¹⁴⁸ *Id.*

¹⁴⁹ *Id.* at 1091. Curiously, the court was reluctant to adopt the so-called "pleasure-boat test," used in other jurisdictions. *Id.*; see DUNNING, *supra* note 30, § 32.03. Instead, the court held that a body of water is subject to the state's PTD if it is suitable for recreation. *Hildreth*, 684 P.2d at 1091. In its holding, the Montana Supreme Court explained:

The [trial court] found the Beaverhead River to be navigable for recreational use under the pleasure-boat test and the commercial use test. While we affirm the result, we find it unnecessary and improper to determine a specific test under which to find

able for recreation, the public not only could float on the stream but also had portage rights to cross Hildreth's land to navigate around barriers in the water.¹⁵⁰

Like early public trust cases, the *Curran* and *Hildreth* decisions rejected landowner monopolization of PTD water resources, preserving them for public recreational use.¹⁵¹

2. Ecological Preservation

In the twentieth and twenty-first centuries, the PTD has evolved to preserve ecosystems and other uses of trust resources, including non-consumptive purposes such as wildlife viewing, scientific study, and conservation for future generations.¹⁵² In the 1970s and 1980s, California courts embraced an expanded interpretation of PTD purposes that included ecological preservation,¹⁵³ and other state courts have reached the same

navigability for recreational use. The pleasure-boat test is a test which has not been adopted in Montana and the commercial use test is a federal test designed to determine navigability for title purposes and not navigability for use. Neither are suitable nor appropriate here. . . . We have not limited the recreational use of the State's waters by devising a specific test. As we held in *Curran*, the capability of use of the waters for recreational purposes determines whether the waters can be so used.

Id. (internal citation omitted).

¹⁵⁰ *Hildreth*, 684 P.2d at 1091, 1094. The portage rights recognized by the Montana Supreme Court are limited to those with the least intrusive effects on private property. *Id.* The court subsequently clarified that the state could not require private landowners to assume the cost of maintaining portage routes. *Galt v. State ex rel. Dep't of Fish, Wildlife & Parks*, 731 P.2d 912, 916 (Mont. 1987). The Montana Supreme Court stated:

[A]lthough the recreational user has a right to portage around obstructions minimally impacting the adjoining landowner's fee interest, there can be no responsibility on behalf of the landowner to pay for such portage route. The landowner receives no benefit from the portage. The benefit flows to the public and the expense should be borne by the State.

Id.

¹⁵¹ *Hildreth*, 684 P.2d at 1091; *Curran*, 682 P.2d at 171.

¹⁵² See, e.g., *Mono Lake*, 658 P.2d at 719 (acknowledging that the "principal values" the plaintiffs sought to protect were "recreational and ecological—the scenic views of the lake and its shore, the purity of the air, and the use of the lake for nesting and feeding by birds," and concluding that "protection of these values is among the purposes of the public trust"); *City of Berkeley*, 606 P.2d at 365 (noting "the right to preserve the tidelands in their natural state as ecological units for scientific study"); *Marks*, 491 P.2d at 380 ("Public trust easements . . . have been held to include the right to fish, hunt, bathe, swim, to use for boating and general recreation purposes the navigable waters of the state, and to use the bottom of the navigable waters for anchoring, standing, or other purposes.").

¹⁵³ See *Mono Lake*, 658 P.2d at 719; *City of Berkeley*, 606 P.2d at 365; *Marks*, 491 P.2d at 380.

conclusion.¹⁵⁴ In thus expanding PTD purposes, courts have recognized the interconnectedness of natural resources, as well as the fact that private monopolization of one resource, like water, can have cascading effects on other public resources, such as wildlife and recreation.

In 1971, in *Marks v. Whitney*, the California Supreme Court rejected a private landowner's attempt to develop—and therefore monopolize—tidelands on the Pacific Ocean.¹⁵⁵ Larry Marks had acquired title to tidelands abutting the shoreline of Peter Whitney's upland property under an 1874 state patent.¹⁵⁶ Marks had record title to the tidelands, and thus claimed he could fill them for development.¹⁵⁷ Whitney, his neighbor, objected, maintaining that Marks' tideland development plans would unlawfully eviscerate his rights both as a littoral owner and as a member of the public to access the tidelands and the navigable waters covering them.¹⁵⁸ The trial court settled the common boundary line but enjoined Whitney from using the tidelands as a member of the public.¹⁵⁹ Whitney appealed.¹⁶⁰

¹⁵⁴ See, e.g., *Robinson v. Ariyoshi*, 658 P.2d 287, 311 (Haw. 1982) (upholding a public interest in "preservation" of state waters); *Reppun v. Bd. of Water Supply*, 656 P.2d 57, 76 n.20 (Haw. 1982) (extending PTD protection to "a free-flowing stream for its own sake"); *In re Dravo Basic Materials Co.*, 604 So. 2d 630, 635 (La. Ct. App. 1992) ("A public trust for the protection, conservation, and replenishment of the environment, including the healthful, scenic, historic, and esthetics quality of the environment is mandated by the Louisiana Constitution."); *Bayview Land, Ltd. v. State ex rel. Clark*, 950 So. 2d 966, 979 (Miss. 2006) ("This Court has held the many public purposes of the trust to include 'navigation and transportation, commerce, fishing, bathing, swimming, and other recreational activities, development of mineral resources, environmental protection and preservation, the enhancement of aquatic, avian and marine life, sea agriculture and no doubt others.'" (quoting *Cinque Bambini P'ship v. State*, 491 So. 2d 508, 512 (Miss. 1986))); *Mineral Cty. v. Dep't of Conservation & Nat. Res.*, 20 P.3d 800, 807 (Nev. 2001) ("Although the original objectives of the public trust were to protect the public's rights in navigation, commerce, and fishing, the trust has evolved to encompass additional public values—including recreational and ecological uses."); *Parks*, 676 N.W.2d at 838 ("[W]e find the public trust doctrine manifested in . . . South Dakota's Environmental Protection Act, authorizing legal action to protect 'the air, water and other natural resources and the public trust therein from pollution, impairment or destruction.'"); *Nat'l Parks & Conservation Ass'n v. Bd. of State Lands*, 869 P.2d 909, 919 (Utah 1993) ("The 'public trust' doctrine . . . protects the ecological integrity of public lands and their public recreational uses for the benefit of the public at large."); *Orion Corp.*, 747 P.2d at 1083 ("The record persuasively establishes that Padilla Bay is subject to the public trust rights and that the public has an intense interest in prohibiting tideland uses that would endanger the ecological environment . . ."); see also Craig, *supra* note 124, at 80–91.

¹⁵⁵ *Marks*, 491 P.2d at 378, 381.

¹⁵⁶ *Id.* at 377.

¹⁵⁷ *Id.*

¹⁵⁸ *Id.* The court explained that "[t]idelands are properly those lands lying between the lines of mean high and low tide covered and uncovered by the ebb and flow thereof. The trial court found that the portion of Marks' lands here under consideration constitutes a part of the tidelands of Tomales Bay. . . ." *Id.* at 378–79 (internal citations omitted).

¹⁵⁹ *Id.* at 377–78, 381.

¹⁶⁰ *Id.* at 378.

The Supreme Court of California acknowledged Marks' title to the tidelands but made clear that California's conveyance creating private ownership did not extinguish the public trust.¹⁶¹ Consequently, Marks' private ownership could not divest the public—including Whitney—of access rights to tidelands held in trust.¹⁶²

The *Marks* court explained that preventing landowner monopolization of tidelands was a “matter of great public importance, particularly in view of population pressures, demands for recreational property, and the increasing development of seashore and waterfront property.”¹⁶³ In support of public access, the court clarified that California's PTD-protected uses of trust resources extended beyond the traditional triad of commerce, navigation, and fishing.¹⁶⁴ Accordingly, public trust uses are not static, but rather are flexible and can accommodate evolving public needs.¹⁶⁵ Presciently, the court stated that the PTD extended to recreation and conservation:

There is a growing public recognition that one of the most important public uses of the tidelands—a use encompassed within

¹⁶¹ *Id.* at 379. The court explained:

California acquired title to the navigable waterways and tidelands by virtue of her sovereignty when admitted to the Union in 1850. This title is different in character from that which the state holds in lands intended for sale. The state holds tidelands in trust for public purposes, traditionally delineated in terms of navigation, commerce and fisheries.

Id. at 379 n.5 (internal citations omitted). Further noting:

the public right was not intended to be divested or affected by a sale of tide lands under these general laws relating alike both to swamp land and tidelands. Our opinion is that . . . the buyer of land under these statutes receives the title to the soil, the *jus privatum*, subject to the public right of navigation, and in subordination to the right of the state to take possession and use and improve it for that purpose, as it may deem necessary.

Id. at 379.

¹⁶² *Id.* at 381 (“There is absolutely no merit in Marks' contention that as the owner of the *Jus privatum* under this patent he may fill and develop his property, whether for navigational purposes or not . . .”).

¹⁶³ *Id.* at 378.

¹⁶⁴ *See id.* at 380.

¹⁶⁵ *Id.* (“The public uses to which tidelands are subject are sufficiently flexible to encompass changing public needs. In administering the trust the state is not burdened with an outmoded classification favoring one mode of utilization over another.” (internal citation omitted)); *see also* Ill. Cent. R.R. v. Illinois, 146 U.S. 387, 460 (1892) (“[The governing of the public trust] must vary with varying circumstances. The legislation which may be needed one day for the [waterway in question] may be different from the legislation that may be required at another day.”); *In re Water Use Permit Applications*, 9 P.3d at 447 (“The public trust, by its very nature, does not remain fixed for all time, but must conform to changing needs and circumstances.”); *Borough of Neptune City*, 294 A.2d at 54 (“The public trust doctrine, like all common law principles, should not be considered fixed or static, but should be molded and extended to meet changing conditions and needs of the public it was created to benefit.”).

the tidelands trust—is the preservation of those lands in their natural state, so that they may serve as ecological units for scientific study, as open space, and as environments which provide food and habitat for birds and marine life, and which favorably affect the scenery and climate of the area. It is not necessary to here define precisely all the public uses which encumber tidelands.¹⁶⁶

Marks thus began the trend toward public trust protection for resources of ecological value.¹⁶⁷

Another California public trust case, *National Audubon Society v. Superior Court (Mono Lake)*, reinforced the idea that the PTD protects ecological conservation and other public uses beyond commerce, navigation, and fishing.¹⁶⁸ Environmentalists challenged a 1940 state grant of a water right to divert water from streams feeding Mono Lake to the Los Angeles Department of Water and Power (“DWP”) for municipal water, alleging violations of several state statutes and the PTD.¹⁶⁹ The state and the DWP defended on the ground that municipal use of was the highest use of water under state water law.¹⁷⁰ Although the state knew of the likely damage to Mono Lake when it granted the water right in 1940, the water agency assumed that it had no authority to prevent damage caused by the diversions.¹⁷¹ By 1979, the diversions had a drastic effect on Mono Lake, shrinking the lake by 85 square

¹⁶⁶ *Marks*, 491 P.2d at 380.

¹⁶⁷ *See id.*

¹⁶⁸ *See Mono Lake*, 658 P.2d at 719. *See generally* Michael C. Blumm & Thea Schwartz, *Mono Lake and the Evolving Public Trust in Western Water*, 37 ARIZ. L. REV. 701 (1995) (discussing the legacy of this case); Sherry A. Enzler, *How Law Mattered to the Mono Lake Ecosystem*, 35 WM. & MARY ENVTL. L. & POL’Y REV. 413 (2011) (explaining how this case helped preserve the larger Mono Lake ecosystem); 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) (providing a detailed background on this case from someone who lived nearby).

¹⁶⁹ *Mono Lake*, 658 P.2d at 712.

¹⁷⁰ *Id.* at 714 n.6.

¹⁷¹ *Id.* The court cited the Water Board’s reasoning in the following terms:

The Board’s decision states that “[i]t is indeed unfortunate that the City’s proposed development will result in decreasing the aesthetic advantages of Mono Basin *but there is apparently nothing that this office can do to prevent it.* The use to which the City proposes to put the water under its Applications . . . is defined by the Water Commission Act as the highest to which water may be applied and to make available unappropriated water for this use the City has, by the condemnation proceedings described above, acquired the littoral and riparian rights on Mono Lake and its tributaries south of Mill Creek. This office therefore has *no alternative but to dismiss all protests based upon the possible lowering of the water level in Mono Lake and the effect that the diversion of water from these streams may have upon the aesthetic and recreational value of the Basin.*”

miles to just 60 square miles, with further declines imminent.¹⁷² Shrimp populations in the lake, upon which millions of local and migratory birds relied, declined significantly.¹⁷³ Human uses of Mono Lake like boating, fishing, and wildlife viewing were also adversely affected.¹⁷⁴

When they did not obtain relief in the lower courts, the environmentalists appealed.¹⁷⁵ In 1983, the California Supreme Court ruled that a state agency's failure to consider the detrimental environmental effects on a lake's ecosystem of the diversions violated the PTD.¹⁷⁶ The court recognized that the "principal values" the environmentalists sought to protect were "recreational and ecological—the scenic views of the lake and its

¹⁷² *Id.* The Water Board anticipated diminishment to thirty-eight square miles or fewer—which would have been less than half the size of the pre-diversion lake. *Id.* at 715.

¹⁷³ *Id.* The California Supreme Court explained:

Plaintiffs predict that the lake's steadily increasing salinity, if unchecked, will wreak havoc throughout the local food chain. They contend that the lake's algae, and the brine shrimp and brine flies that feed on it, cannot survive the projected salinity increase DWP's diversions also present several threats to the millions of local and migratory birds using the lake. First, since many species of birds feed on the lake's brine shrimp, any reduction in shrimp population allegedly caused by rising salinity endangers a major avian food source. The Task Force Report considered it "unlikely that any of Mono Lake's major bird species . . . will persist at the lake if populations of invertebrates disappear." Second, the increasing salinity makes it more difficult for the birds to maintain osmotic equilibrium with their environment.

Id. (internal citation omitted).

¹⁷⁴ *See id.* at 716. The court stated:

[T]he lake's recession obviously diminishes its value as an economic, recreational, and scenic resource. Of course, there will be less lake to use and enjoy. The declining shrimp hatch depresses a local shrimping industry. The rings of dry lake bed are difficult to traverse on foot, and thus impair human access to the lake, and reduce the lake's substantial scenic value. Mono Lake has long been treasured as a unique scenic, recreational and scientific resource, but continued diversions threaten to turn it into a desert wasteland like the dry bed of Owens Lake.

Id. (internal citation omitted).

¹⁷⁵ *Id.* at 717.

¹⁷⁶ *Id.* at 712 (explaining "we believe 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"). The court began its opinion by describing the ecological importance of Mono Lake:

Mono Lake, the second largest lake in California, sits at the base of the Sierra Nevada escarpment near the eastern entrance to Yosemite National Park. The lake is saline; it contains no fish but supports a large population of brine shrimp which feed vast numbers of nesting and migratory birds. Islands in the lake protect a large breeding colony of California gulls, and the lake itself serves as a haven on the migration route for thousands of Northern Phalarope, Wilson's Phalarope, and Eared Grebe. Towers and spires of tufa on the north and south shores are matters of geological interest and a tourist attraction.

Id. at 711.

shore, the purity of the air, and the use of the lake for nesting and feeding by birds.”¹⁷⁷ Concluding that “protection of these values is among the purposes of the public trust,”¹⁷⁸ the court agreed that the PTD required the state to evaluate the ecological effects of water diversion adversely affecting trust uses.¹⁷⁹ As the court explained, the state had an ongoing duty to supervise navigable waters and the lands beneath them, and thus could not grant water rights that unnecessarily harm trust resources.¹⁸⁰ Further, the court ruled that PTD prevents anyone from obtaining a vested water right to a diversion harming public trust uses.¹⁸¹ The decision effectively renounced monopolization of water that impaired public use and enjoyment of a PTD resource.¹⁸²

Other state courts have also acknowledged ecological conservation as a public trust purpose. For example, in 1982, the Supreme Court of the State of Hawaii recognized public trust protection for the preservation of its state waters,¹⁸³ answering questions about the state’s PTD that were certified to it by the United States Court of Appeals for the Ninth Circuit, which was considering the state’s decision about water rights allocation in the Hanapepe River system.¹⁸⁴ The court instructed that state law required private land-

¹⁷⁷ *Id.* at 719.

¹⁷⁸ *Id.*

¹⁷⁹ *Id.* at 732. In doing so, however, the court clarified that it did not “dictate any particular allocation of water.” *Id.* Rather, the court stated:

As a matter of practical necessity the state may have to approve appropriations despite foreseeable harm to the public trust uses. In so doing, however, the state must bear in mind its duty as trustee to consider the effect of the taking on the public trust, and to preserve, so far as consistent with the public interest, the uses protected by the trust.

Id. at 728 (internal citation omitted).

¹⁸⁰ *Id.* at 727. The *Mono Lake* court explained:

The state as sovereign retains continuing supervisory control over its navigable waters and the lands beneath those waters. This principle, fundamental to the concept of the public trust, applies to rights in flowing waters as well as to rights in tidelands and lakeshores; it prevents any party from acquiring a vested right to appropriate water in a manner harmful to the interests protected by the public trust.

Id.

¹⁸¹ *Id.* at 712.

¹⁸² *See id.* at 712, 727. It remains somewhat of a puzzle as to why the *Mono Lake* decision has not played a more prominent role in California water law, having little apparent effect on ensuing case law. *See id.* at 712; Dave Owen, *The Mono Lake Case, the Public Trust Doctrine, and the Administrative State*, 45 U.C. DAVIS L. REV. 1099, 1114, 1139 (2012) (finding that the primary effect of the case has been on the State Water Resources Control Board decisions). If the water board has institutionalized PTD consideration into its decision-making, though, the *Mono Lake* case has in fact significantly altered California water law. Owen, *supra* at 1139; *see Mono Lake*, 658 P.2d at 712.

¹⁸³ *Robinson*, 658 P.2d at 310–11.

¹⁸⁴ *Id.* at 292; *see McBryde Sugar Co. v. Robinson*, 504 P.2d 1330, 1343 (Haw. 1973).

owners to leave additional water in the river, because their diversions caused the river to nearly run dry during part of the year, violating the PTD.¹⁸⁵ Describing the state's public trust, the court explained that the PTD extended to the preservation of water resources, imposing on the state "a concomitant duty to maintain the purity and flow of our waters for future generations."¹⁸⁶

Like the California courts, the Hawaii Supreme Court thus extended PTD antimonopoly protection to public uses beyond commerce, navigation, and fishing to ecological conservation.¹⁸⁷ Other state courts have agreed.¹⁸⁸

B. Expanding Public Trust Resources

In recent decades, states have expanded the PTD's antimonopoly impulse to include an increasing number of natural resources,¹⁸⁹ extending public rights beyond waterways and protecting both public access and the resources themselves. Thus far, beyond navigable and tidal waters, courts have embraced all of the following under the public trust: (1) wildlife,¹⁹⁰ (2)

¹⁸⁵ *Robinson*, 658 P.2d at 310; see *McBryde Sugar Co.*, 504 P.2d at 1334, 1346.

¹⁸⁶ *Robinson*, 658 P.2d at 310.

¹⁸⁷ See generally Harry R. Bader, *Antaeus and the Public Trust Doctrine: A New Approach to Substantive Environmental Protection in the Common Law*, 19 B.C. ENVTL. AFF. L. REV. 749, 761 (1992) ("The marriage of absolute ecological protection with absolute access for the purpose of utilizing natural resources comes the closest to the true essence of the public trust doctrine.").

¹⁸⁸ See, e.g., *Robinson*, 658 P.2d at 311 (upholding a public interest in "preservation" of state waters); *Reppun*, 656 P.2d at 76 n.20 (extending PTD protection to "a free-flowing stream for its own sake"); *In re Dravo Basic Materials Co.*, 604 So. 2d at 635 ("A public trust for the protection, conservation, and replenishment of the environment, including the healthful, scenic, historic, and esthetics quality of the environment is mandated by the Louisiana Constitution."); *Bayview Land, Ltd.*, 950 So. 2d at 979 ("This Court has held the many public purposes of the trust to include navigation and transportation, commerce, fishing, bathing, swimming, and other recreational activities, development of mineral resources, environmental protection and preservation, the enhancement of aquatic, avian and marine life, sea agriculture and no doubt others."); *Mineral Cnty.*, 20 P.3d at 807 ("Although the original objectives of the public trust were to protect the public's rights in navigation, commerce, and fishing, the trust has evolved to encompass additional public values—including recreational and ecological uses."); *Parks*, 676 N.W.2d at 838 ("[W]e find the public trust doctrine manifested in . . . South Dakota's Environmental Protection Act, authorizing legal action to protect 'the air, water and other natural resources and the public trust therein from pollution, impairment or destruction.'" (quoting S.D. CODIFIED LAWS § 34A-10-1 (2004))); *Nat'l Parks & Conservation Ass'n*, 869 P.2d at 919 ("The 'public trust' doctrine . . . protects the ecological integrity of public lands and their public recreational uses for the benefit of the public at large."); *Orion Corp.*, 747 P.2d at 1083 ("The record persuasively establishes that Padilla Bay is subject to the public trust rights and that the public has an intense interest in prohibiting tideland uses that would endanger the ecological environment . . ."); see also Craig, *supra* note 124, at 80–91 (discussing the emergence of ecologically related PTDs in western states).

¹⁸⁹ See Scott Reed, *The Public Trust Doctrine: Is It Amphibious?* 1 J. ENVTL. L. & LIT. 107, 116–21 (1986) (describing states' extension of public trust protection to an increasing number of natural resources).

¹⁹⁰ *Geer v. Connecticut*, 161 U.S. 519, 529 (1896). The United States Supreme Court, in 1896, embraced wildlife as part of the PTD in *Geer v. Connecticut*, and nearly all states have fol-

wildlife habitat connected to navigable waters,¹⁹¹ (3) marine life,¹⁹² (4) drinking water,¹⁹³ (5) groundwater,¹⁹⁴ (6) artificial waters,¹⁹⁵ (7) inland wetlands,¹⁹⁶ (8) state parks,¹⁹⁷ (9) the dry sand area of beaches,¹⁹⁸ and (10) archaeological remains.¹⁹⁹ Discussing a few of those public trust extensions—to non-navigable-in-fact waters, upland resources, and potentially the atmosphere—illustrates the doctrine’s evolution to protect additional natural resources from private monopolization.

1. Non-Navigable-in-Fact Waters

Some states have extended PTD antimonopoly protection to non-navigable-in-fact waters, including drinking water,²⁰⁰ groundwater,²⁰¹ sea-

lowed suit. *Id.*; see Blumm & Paulsen, *supra* note 3, at 1466 (asserting that at least forty-eight states have used public trust or trust-like language to describe their wildlife resources); see, e.g., Pullen, 923 P.2d at 61 (concluding that the PTD applies to salmon and other fish). In *Horne v. U.S. Department of Agriculture*, the United States Supreme Court ratified the sovereign ownership of wildlife doctrine. 135 S. Ct. 2419, 2431 (2015); see John D. Echeverria & Michael C. Blumm, *Horne v. Department of Agriculture: Expanding Per Se Takings While Endorsing State Sovereign Ownership of Wildlife*, 75 MD. L. REV. 657, 688–97 (2016).

¹⁹¹ See Marks, 491 P.2d at 380 (deciding that the public trust encompasses purposes broader than the traditional uses of navigation, commerce, and fishing, including use as open space, for wildlife study, for scientific study, and for swimming).

¹⁹² See, e.g., N.J. Dep’t of Env’tl Prot. v. Jersey Cent. Power & Light Co., 308 A.2d 671, 673 (N.J. Super. Ct. Law Div. 1975) (applying the public trust doctrine to living marine resources).

¹⁹³ See, e.g., Clifton v. Passaic Valley Water Comm’n, 539 A.2d 760, 765 (N.J. Super. Ct. Law Div. 1987) (stating that the public trust doctrine includes drinking water resources).

¹⁹⁴ See, e.g., *In re Water Use Permit Applications*, 9 P.3d at 447 (ruling that groundwater is a public trust resource).

¹⁹⁵ See, e.g., *Parks*, 676 N.W.2d at 824–25 (relying on public ownership of all state water to establish public access to three lakes created on private land by several unseasonably wet years).

¹⁹⁶ See, e.g., *Just*, 201 N.W.2d at 769 (applying the public trust doctrine to inland wetlands).

¹⁹⁷ See, e.g., *Gould*, 215 N.E.2d at 126 (determining that privatization of a substantial part of a public park violated the state’s PTD); *Friends of Van Cortland Park v. City of N.Y.*, 750 N.E.2d 1050, 1054–55 (N.Y. 2001) (finding a park to be within the state’s PTD); see also *Sierra Club v. Dep’t of Interior*, 398 F. Supp. 284, 294 (N.D. Cal. 1975) (extending public trust protection to a national park).

¹⁹⁸ See, e.g., *Matthews v. Bay Head Improvement Ass’n*, 471 A.2d 355, 363 (N.J. 1984) (explaining that the public trust doctrine requires public access to the dry sand area of beaches between the high water mark and the vegetation line); *Nies v. Town of Emerald Isle*, 780 S.E.2d 187, 197 (N.C. App. 2015) (discussed *infra* notes 227–231 and accompanying text). See generally Mackenzie S. Keith, *Judicial Protection for Beaches and Parks: The Public Trust Doctrine Above the High Water Mark*, 16 HASTINGS W.-NW.J. ENVTL. L. & POL’Y 165 (2010) (discussing how the PTD can, and should, be used to protect upland areas, such as dry sand beaches and parks).

¹⁹⁹ See, e.g., *Wade v. Kramer*, 459 N.E.2d 1025, 1027–28 (Ill. 1984) (finding archaeological remains to be within the state’s public trust). *But see* *San Diego Cnty. Archaeological Soc’y, Inc. v. Compadres*, 81 Cal.App.3d 923, 927 (Ct. App. 1978) (stating that the PTD does not apply to archaeological remains).

²⁰⁰ See *Clifton*, 539 A.2d at 765 (stating that the public trust doctrine includes drinking water resources).

sonal waters,²⁰² and inland wetlands.²⁰³ For example, extending the PTD to drinking water supplies, a New Jersey court invalidated a water commission's distribution of funds to municipalities, holding that drinking water, along with any financial benefits it accrued, was a public trust resource.²⁰⁴ According to the court:

While the original purpose of the public trust doctrine was to preserve the use of the public natural water for navigation, commerce and fishing, it is clear that since water is essential for human life, the doctrine applies with equal impact upon the control of our drinking water reserves Ultimate ownership rests in the people and this precious natural resource is held by the state in trust for the public benefit.²⁰⁵

Consequently, the water commission could not charge rates in excess of its cost of water production and transfer the money it made to the municipalities that owned the water.²⁰⁶ The court thus prevented financial monopolization of the economic benefits through sale of a renewable public trust resource.²⁰⁷

²⁰¹ See *In re Water Use Permit Applications*, 9 P.3d at 447 (extending the public trust doctrine to groundwater).

²⁰² See *Parks*, 676 N.W.2d at 824–25 (relying on public ownership of all state water to suggest that the public had access to three lakes created on private land by several unseasonably wet years).

²⁰³ See *Just*, 201 N.W.2d at 769 (finding that inland wetlands were part of the state's public trust).

²⁰⁴ *Clifton*, 539 A.2d at 765, 767.

²⁰⁵ *Id.* at 765 (internal citations omitted). The court explained:

Water is an essential commodity which all of nature requires for survival. Our food supply is derived through water which combines with nutrients and minerals to form the fruits and vegetables which become part of our daily diet. The plants of the soil, nurtured by water and consumed by animals, provide our main staple of meat. Like the plants and animals, we too must be nurtured by water Potable water, then, is an essential commodity which every individual requires in order to sustain human existence.

Id. at 765.

²⁰⁶ *Id.* at 767.

²⁰⁷ See *id.* In another case involving non-coastal waters, in 2004, the South Dakota Supreme Court decided that water in seasonal lakes was a public trust resource. *Parks*, 676 N.W.2d at 824–25. After a series of unseasonably wet years caused water to accumulate in three large lakes, in *Parks v. Cooper*, the court ruled that the public could use those lakes for recreation, concluding that the water was a public trust resource and therefore not susceptible to private ownership, rejecting landowners' arguments that the land hosting the seasonal lakes was private property. *Id.* Specifically, the court determined that the public lacked access rights on water over private lands:

We conclude that all the water in South Dakota belongs to the people in accord with the public trust doctrine and as declared by statute and precedent, and thus, although the lake beds are mostly privately owned, the water in the lakes is public and may be

In 2000, in another case challenging agency allocation of water rights, the Supreme Court of the State of Hawaii decided that groundwater was a public trust resource.²⁰⁸ *In re Water Use Permit Applications for the Waiahole Ditch* concerned Native Hawaiian residents challenged water exports in Waiahole Ditch from the windward side of Oahu to the leeward side of the island for agricultural irrigation.²⁰⁹ The natives argued that the ditch reduced the flow in several windward streams, harming wildlife and members of the public.²¹⁰ Reviewing the state's expansive constitutional public trust—which extends to “all public resources”—the court concluded that “the public trust doctrine applies to all water resources without exception or distinction,” including groundwater.²¹¹ The state's public trust in groundwater required the state water agency to revise its decision to allocate water rights to private parties and preserve water for public use, thereby invoking the PTD to prevent monopolization of groundwater.²¹²

In 2014, a California trial court also decided that groundwater pumping adversely affected a navigable river and, in doing so, violated the

converted to public use, developed for public benefit, and appropriated, in accord with legislative direction and state regulation.

Id. at 825. This result expanded the state's public trust well beyond traditional navigable-in-fact waterways, preventing monopolization of seasonal lakes that were suitable for public recreation. *Id.* at 838–39 (“Today we acknowledge, in accord with the State's sovereign powers and the legislative mandate, that all the waters in South Dakota, not just those waters considered to be navigable under the federal test, are held in trust for the public.”).

²⁰⁸ *In re Water Use Permit Applications*, 9 P.3d at 447.

²⁰⁹ *Id.* at 422.

²¹⁰ *Id.* at 422–23. The court reasoned:

Diversions by the ditch system reduced the flows in several windward streams, specifically, Waiāhole, Waianu, Waikāne, and Kahana streams, affecting the natural environment and human communities dependent upon them. Diminished flows impaired native stream life and may have contributed to the decline in the greater Kāne'ohē Bay ecosystem, including the offshore fisheries. The impacts of stream diversion, however, went largely unacknowledged until, in the early 1990s, the sugar industry on O'ahu came to a close.

Id.

²¹¹ *Id.* at 445 (“The Hawai'i Constitution declares that ‘all public resources are held in trust by the state for the benefit of its people,’ . . . and establishes a public trust obligation ‘to protect, control, and regulate the use of Hawaii's water resources for the benefit of its people,’”). The court explained that “the common law distinctions between ground and surface water developed without regard to the manner in which ‘both categories represent no more than a single integrated source of water with each element dependent upon the other for its existence.’ . . . Modern science and technology have discredited the surface-ground dichotomy.” *Id.* at 447 (internal citation omitted) (quoting *Reppun*, 656 P.2d at 73).

²¹² *See id.* at 453, 501–02.

PTD.²¹³ Environmentalists claimed that groundwater hydrologically connected to the navigable Scott River was a public trust resource.²¹⁴ They asked the court to enjoin a county from issuing well-drilling permits until it complied with the constraints imposed by the PTD.²¹⁵ The Scott River, used for boating and fishing, among other purposes, is often dewatered in the summer and early fall, allegedly due to groundwater pumping. The environmentalists claimed that the low water levels hindered recreational activities on Scott River and also harmed fish.²¹⁶ The county regulating groundwater pumping had not considered public trust implications before issuing the permits,²¹⁷ and the court concluded that groundwater pumping would be subject to the PTD, if in fact it harmed the navigable Scott River.²¹⁸ The result made clear that the state could not privatize groundwater to the detriment of public use of the river.

2. Beaches

Courts have increasingly moved the PTD's antimonopoly protection inland, including beaches.²¹⁹ In 2005, for example, the Supreme Court of

²¹³ *Envtl. Law Found. v. State Water Res. Control Bd.*, No. 34-2010-80000583, at *7, *10 (Sup. Ct. Cal. July 15, 2014), <http://www.envirolaw.org/documents/ScottOrderonCrossMotions.pdf> [<https://perma.cc/RNY2-FL6W>].

²¹⁴ *Id.* at *8.

²¹⁵ *Id.* at *2. The environmentalists sued both the State Water Resources Control Board (“the Board”) and the county. *Id.* They did not seek affirmative relief from the Board, but instead a judicial declaration that the PTD applies to groundwater hydrologically connected to a navigable river. *Id.*

²¹⁶ *Id.* at *3–4 (“According to the Petitioners, at times almost every gallon of groundwater pumped decreases the flow of the Scott River by the same amount.”).

²¹⁷ *Id.* at *4. The court in *Golden Feather Community Ass'n v. Thermalito Irrigation District*, however, declined to declare that groundwater was a public trust resource because the California Court of Appeals earlier limited the California PTD's scope to navigable surface waters. 209 Cal. App. 3d 1276, 1286 (Ct. App. 1989); *see also Env'tl. Law Found.*, No. 34-2010-80000583 at *8 (“Petitioners request a declaration groundwater hydrologically connected to navigable surface flows is protected by the public trust doctrine. However, the court does not find groundwater itself is a resource protected by the public trust doctrine.”).

²¹⁸ *Env'tl. Law Found.*, No. 34-2010-80000583 at *9–10 (citing *Mono Lake*, 658 P.2d at 721). As the court explained, California's public trust applies to effects of groundwater pumping that damaged a navigable water by impairing recreation or ecological function. *Id.* at *9. The court decided:

[The PTD] protects the Scott River and the public's right to use the Scott River for trust purposes, including fishing, rafting and boating. It also protects the public's right to use, enjoy and preserve the Scott River in its natural state and as a habitat for fish. If the extraction of groundwater near the Scott River adversely affects those rights, the public trust doctrine applies.

Id. (internal citations omitted).

²¹⁹ *See, e.g., Borough of Neptune City*, 294 A.2d at 54 (relying on the public trust to reject restrictions on public uses of beaches); *see also State ex rel. Thornton v. Hay*, 462 P.2d 671, 673

New Jersey upheld the public's right to access a privately owned beach under the PTD.²²⁰ In *Raleigh Avenue Beach Ass'n v. Atlantis Beach Club, Inc.*, a beach access group sued a private beach club that had excluded the public from using a dry-sand beach, asserting that this exclusion violated the public trust.²²¹ The trial court found for the beach access group, deciding that the public was entitled to a right of access, and a court of appeals affirmed that ruling.²²²

The Supreme Court of New Jersey also affirmed, ruling that the club must allow public use of the beach, subject to a fee for the club's maintenance of the beach, as approved by the state's Department of Environmental Protection, under the PTD.²²³ Quoting an earlier New Jersey PTD beach case, the court explained:

Exercise of the public's right to swim and bathe below the mean high water mark may depend upon a right to pass across the upland beach. Without some means of access the public right to use the foreshore would be meaningless. To say that the public trust doctrine entitles the public to swim in the ocean and to use the foreshore in connection therewith without assuring the public of a feasible access route would seriously impinge on, if not effectively eliminate, the rights of the public trust doctrine.²²⁴

Raleigh Avenue Beach Ass'n thus relied on the PTD to prevent private monopolization of an upland dry-sand beach that would have limited public access to and enjoyment of the ocean.

In 2015, the North Carolina Court of Appeals gave public trust protection to a publicly built, renourished dry-sand beach.²²⁵ A North Carolina statute claimed state ownership of dry-sand beaches replenished through dredging or other means, if the creation was publicly funded.²²⁶ The Town of Em-

(Or. 1969) (holding that the state of Oregon could prevent landowners from enclosing a dry sand area contained within the legal description of their ocean-front property); *id.* at 678–79 (Denecke, J., concurring) (reaching the same conclusion, but on PTD grounds). For an additional discussion of this case and the pertinent concurring PTD opinion see Michael C. Blumm & Erika Doot, *Oregon's Public Trust Doctrine: Public Rights in Waters, Wildlife, and Beaches*, 42 ENVTL. L. 375, 408–10.

²²⁰ *Raleigh Ave. Beach Ass'n v. Atlantis Beach Club, Inc.*, 879 A.2d 112, 113 (N.J. 2005).

²²¹ *Id.* at 113, 116.

²²² *Id.* at 117–18.

²²³ *Id.* at 113.

²²⁴ *Id.* at 120 (quoting *Matthews*, 471 A.2d at 364).

²²⁵ *Nies*, 780 S.E.2d at 202. The court explained, “The ‘dry sand beach’ is the portion of the beach landward of the mean high water mark and continuing to the high water mark of the storm tide.” *Id.* at 190.

²²⁶ *Id.* at 191. North Carolina law specifically states:

erald Isle funded the development of a dry-sand beach in front of private property and prohibited driving on the renourished beach, asserting that the new beach was subject to the PTD.²²⁷ The property owners sued, arguing that the beach was not a public trust resource. But the trial court found in favor of the town.²²⁸ The North Carolina Court of Appeals affirmed, concluding that ocean beaches shoreward of the vegetation line are subject to the state's PTD.²²⁹ Like other cases expanding the public trust inland, the decision prevented landowner monopolization of an upland resource.

3. Parks

In some states, the PTD has fully emerged from the water, extending to parklands.²³⁰ For example, a half-century ago in the 1966 decision of *Gould v. Greylock*, the Massachusetts Supreme Judicial Court treated a state park, the Greylock State Reservation, as a public trust resource.²³¹ Five citizens, including Mildred Gould, sued the Greylock Reservation Commission (“the Commission”) because the Commission planned to allow construction of a

Notwithstanding the other provisions of this section, the title to land in or immediately along the Atlantic Ocean raised above the mean high water mark by publicly financed projects which involve hydraulic dredging or other deposition of spoil materials or sand vests in the State. Title to such lands raised through projects that received no public funding vests in the adjacent littoral proprietor. All such raised lands shall remain open to the free use and enjoyment of the people of the State, consistent with the public trust rights in ocean beaches, which rights are part of the common heritage of the people of this State.

N.C. GEN. STAT. § 146-6(f) (2016).

²²⁷ *Nies*, 780 S.E.2d at 191–92.

²²⁸ *Id.* at 193.

²²⁹ *Id.* at 196–97. The North Carolina Court of Appeals explained:

We adopt the test suggested in N.C. GEN. STAT. § 77-20(e): “Natural indicators of the landward extent of the ocean beaches include, but are not limited to, the first line of stable, natural vegetation; the toe of the frontal dune; and the storm trash line.” . . . For the purposes of N.C. GEN. STAT. § 77-20, the landward boundary of North Carolina ocean beaches is the discernable reach of the “storm” tide. This boundary represents the extent of semi-regular submersion of land by ocean waters sufficient to prevent the seaward expansion of frontal dunes, or stable, natural vegetation, where such dunes or vegetation exist. Where both frontal dunes and natural vegetation exist, the high water mark shall be the seaward of the two lines. Where no frontal dunes nor stable, natural vegetation exists, the high water mark shall be determined by some other reasonable method, which may involve determination of the “storm trash line” or any other reliable indicator of the mean regular extent of the storm tide. The ocean beaches of North Carolina, as defined in N.C. GEN. STAT. § 77-20(e) and this opinion, are subject to public trust rights unless those rights have been expressly abandoned by the State.

Id. (internal citations omitted).

²³⁰ See Reed, *supra* note 189, at 107, 116–17 (discussing upland PTD cases). See generally Keith, *supra* note 198 (discussing upland PTD cases).

²³¹ See 215 N.E.2d at 126.

large ski resort extending into the reservation, arguing that the proposed expansion violated the PTD.²³² The court agreed with Gould, concluding that the statutes governing the Commission did not authorize the conveyance.²³³ Using the PTD to interpret the statute,²³⁴ the court explained that the Greylock reservation “is not to be diverted to another inconsistent public use without plain and explicit legislation to that end. . . .The policy of the Commonwealth has been to add to the common law inviolability of parks’ express prohibition against encroachment.”²³⁵ The court decided that because the statutes did not expressly allow the Commission to permit development of a ski resort, issuing the lease violated the state’s PTD.²³⁶ *Gould* was the first decision to apply the PTD to an inland park, thus preventing private monopolization of public park resources and preserving them for public use.²³⁷

In ensuing years, other courts have extended PTD antimonopoly protection to parks.²³⁸ In 1984, the New York Court of Appeals prohibited state agencies from using parklands for parking vehicles, affirming a lower court decision that deemed this storage use inconsistent with park purposes, and thus violative of the public trust.²³⁹ As the court explained, “[d]edicated park areas in New York are impressed with a public trust and their use for other than park purposes, either for a period of years or permanently, re-

²³² *See id.* at 116. The proposed resort on Mount Greylock was to become highly developed, “with a large activity center at the base of the mountain including an access road, a swimming pool, restaurant, fireplace, barbecue pit, bar, sun deck, summer dance terrace, ski shop, gift shop, ski rental and repair room, and parking space for [two thousand] automobiles.” *Id.* at 120.

²³³ *Id.*

²³⁴ *See generally* 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, 439–41 (1997) (discussing courts’ interpretations of statutory PTDs).

²³⁵ *Gould*, 215 N.E.2d at 121 (internal quotation omitted).

²³⁶ *Id.* at 126; *see Sax, supra* note 2, at 491–95 (1970) (discussing *Gould* in detail).

²³⁷ *See* 215 N.E.2d at 126.

²³⁸ *See, e.g.,* *Cty. of Solano v. Handlery*, 155 Cal. App. 4th 566, 576 (Ct. App. 2007) (relying on the PTD grounds to prevent a county from disposing of land used for a county fair); *Big Sur Properties v. Mott*, 62 Cal. App. 3d 99, 107 (Ct. App. 1976) (relying on the PTD to prevent conveyance of a private right-of-way across park land); *Raritan Baykeeper, Inc. v. City of N.Y.*, No. 0031145-06, WL 6916531, at *8 (N.Y. Sup. Ct. Dec. 20, 2013) (relying, in an unreported case, on the PTD to prevent New York City from allowing construction of a solid waste management facility on park lands).

²³⁹ *Ackerman v. Steisel*, 480 N.Y.S.2d 556, 558 (App. Div. 1984), *aff’d* 489 N.E.2d 251 (N.Y. 1985) (mem.). The agencies stored approximately 100 vehicles, including snow removal equipment, as well as other materials and physical improvements, on part of Cunningham Park. *Id.* Citizens sued to have the agencies remove the vehicles, materials, and improvements, and the trial court dismissed their suit. *Id.* The appellate court reversed, concluding that the agencies had violated the PTD by using the park for a non-park purpose and ordered removal of the equipment. *Id.* at 557–58.

quires the direct and specific approval of the State Legislature, plainly conferred,” which had not occurred.²⁴⁰

Other courts have reached the same conclusion. For example, the California Court of Appeals relied on the PTD to enjoin a city from allowing a developer to use property dedicated for a public library for commercial purposes.²⁴¹ Similarly, the Pennsylvania Supreme Court upheld a trial court decision that set aside a city’s conveyance of parklands to the University of Pennsylvania, concluding that the city held the parklands as part of the public trust, and thus could not convey them.²⁴² And the Illinois Supreme Court ruled that citizens may challenge conveyances of parklands.²⁴³ These decisions interpreting the PTD to include parklands all reflect the doctrine’s antimonopoly tenets, preventing privatization of public inland resources.

4. Wildlife

The United States Supreme Court recognized wildlife as a trust resource in *Geer v. Connecticut* in 1896.²⁴⁴ In the years since *Geer*, the vast majority of states have used public trust language to refer to their sovereign ownership of wild animals, and many states have expressly recognized a public trust in wildlife.²⁴⁵

For example, in *Owsichek v. Guide Licensing & Control Board*, the Supreme Court of Alaska held in 1988 that wild animals are part of that state’s PTD.²⁴⁶ The state Guide Licensing and Control Board (“the Board”) created exclusive guide areas that hunting guide Kenneth Owsichek chal-

²⁴⁰ *Id.* at 558.

²⁴¹ *Save the Welwood Murray Mem’l Library Comm. v. City Council*, 215 Cal. App. 3d 1003, 1017 (Ct. App. 1989).

²⁴² *Bd. of Tr. of Phila. Museum v. Tr. of Univ. of Pa.*, 96 A. 123, 126 (Pa. 1915).

²⁴³ *Paepcke v. Pub. Building Comm’n of Chi.*, 263 N.E.2d 11, 19 (Ill. 1970). In another recent Illinois PTD park case, a federal court allowed a case to go forward that challenged construction of a museum on parklands on PTD grounds. *Friends of the Parks v. Chi. Park Dist.*, No. 14-cv-09096, 2015 WL 1188615, at *7 (N.D. Ill. Mar. 12, 2015). The Chicago Park District agreed to allow construction of a George Lucas “Star Wars” museum on a parking lot in Burnham Park, but a public interest group challenged that agreement as a violation of the PTD, arguing that conveyance of the parking lot was impermissible. *Id.* at *1. The Chicago Park District moved to dismiss, but the court denied that motion as it applied to the PTD. *Id.* at *1, *7. In the wake of the court’s decision, Lucas dropped plans to site the museum in Chicago. Alex Stedman, *George Lucas Drops Plans for Museum in Chicago*, VARIETY (June 25, 2016, 10:01 AM), <http://variety.com/2016/film/news/george-lucas-museum-chicago-drops-plans-1201803673/> [<https://perma.cc/T63V-V9SW>].

²⁴⁴ 161 U.S. at 529.

²⁴⁵ *See id.*; Blumm & Paulsen, *supra* note 3, at 1471–73 (identifying twenty-two states that have expressly adopted a wildlife PTD, as well as twenty-two other states that use trust-like language to describe their sovereign ownership of wildlife).

²⁴⁶ *Owsichek v. Guide Licensing & Control Bd.*, 763 P.2d 488, 495 (Alaska 1988).

lenged as unconstitutional, although not on the basis of Alaska's PTD.²⁴⁷ The trial court upheld the Board's action, and Owsichek appealed.²⁴⁸ The Alaska Supreme Court concluded that the trust "impose[d] upon the state a trust duty to manage the fish, wildlife and water resources of the state for the benefit of all the people,"²⁴⁹ preventing the Board from creating exclusive guide areas allowing select guides to exclude competitors.²⁵⁰ Since *Owsichek*, the Alaska Supreme Court has acknowledged the state's wildlife trust in a number of other opinions.²⁵¹

In 2008, the California Court of Appeals upheld the state's public trust in wildlife and also concluded that members of the public had standing to challenge state wildlife management under the PTD in *Center for Biological Diversity v. FPL Group, Inc.*²⁵² Environmentalists sued a number of private wind energy owners and operators in California, alleging that more than five thousand wind turbines in Altamont Pass had killed tens of thousands of birds since the 1980s, and that the operators had violated the PTD and numerous state statutes.²⁵³ The environmentalists claimed that the bird deaths were due in large part to the operators' outdated turbines, and they challenged the government's decision to renew the operators' permits.²⁵⁴

A trial court dismissed the case ruling that the environmentalists lacked standing to sue a private party for violation of the public trust,²⁵⁵ and the California Court of Appeal affirmed.²⁵⁶ However, the appellate court stated

²⁴⁷ *Id.* at 488–91.

²⁴⁸ *Id.* at 491.

²⁴⁹ *Id.* at 495.

²⁵⁰ *Id.* at 496.

²⁵¹ See, e.g., *Pebble Ltd. P'ship. ex rel. Pebble Mines Corp. v. Parnell*, 215 P.3d 1064, 1074 (Alaska 2009) (explaining that "common law principles incorporated in the common use clause impose upon the state a trust duty to manage the fish, wildlife and water resources of the state for the benefit of all the people" (quoting *Pullen*, 923 P.2d at 60)) (citation omitted); *Anchorage Citizens for Taxi Reform v. Municipality of Anchorage*, 151 P.3d 418, 424 (Alaska 2006) (Observing that the Alaska Constitution imposes a "public trust responsibility . . . to take care of fish, wildlife, and water resources of the state [C]onclud[ing] that 'naturally occurring salmon are, like other state natural resources, state assets belonging to the state . . . for the benefit of all its people.'" (quoting *Pullen*, 923 P.2d at 61); *Brooks v. Wright*, 971 P.2d 1025, 1030–31 (Alaska 1999) (noting that the Alaska Constitution made the state the trustee of wildlife); *Pullen*, 923 P.2d at 60–61 (noting that the PTD "compel[s] the conclusion that fish occurring in their natural state are property of the state for purposes of carrying out its trust responsibilities . . . the state's interest in salmon migrating in state and inland waters warrant[s] characterizing such salmon as assets of the state which may not be appropriated") (internal citation omitted).

²⁵² 83 Cal. Rptr. 3d 588, 600–01 (Ct. App. 2008).

²⁵³ *Id.* at 592.

²⁵⁴ *Id.*

²⁵⁵ *Id.* According to the trial court, "No statutory or common law authority supports a cause of action by a private party for violation of the public trust doctrine arising from the destruction of wild animals." *Id.*

²⁵⁶ *Id.* at 604–05.

that the public could sue the state to enforce the sovereign's obligation to conserve wildlife as a public trust resource,²⁵⁷ and thus resist monopolization of wildlife resources.

5. The Atmosphere

Groups of individual children recently filed suits, asking state and federal courts to recognize an "atmospheric trust"—that is, a trust to protect the atmosphere from the harms of human-induced climate change.²⁵⁸ In seeking to require agencies to respond to greenhouse gas ("GHG") emissions causing climate change, the children claim that the PTD limits private activities that cause emissions to harm the atmosphere and thus the public. Courts in Alaska, New Mexico, Minnesota, Iowa, and Montana have dismissed such cases for lack of justiciability.²⁵⁹ The Alaska court suggested, however, that the result might be different if the children could show that GHG emissions were causing damage to trust resources like coastal tidelands and wetlands.²⁶⁰

In 2015, a Washington trial court concluded that since that state acknowledged that GHG emissions had deleterious effects on the state's water resources, including navigable waters, the PTD could impose limits on GHG emissions.²⁶¹ In April 2016, the Washington trial court ordered the state Department of Ecology to promulgate an emissions reduction rule by the end of the year and by 2017 make recommendations to the state legislature on science-based GHG reductions.²⁶² Similarly, in 2016, the Massachusetts Supreme Judicial Court found in favor of atmospheric trust plaintiffs,

²⁵⁷ *Id.* at 600–01 ("The interests encompassed by the public trust undoubtedly are protected by public agencies acting pursuant to their police power and explicit statutory authorization. Nonetheless, the public retains the right to bring actions to enforce the trust when the public agencies fail to discharge their duties.")

²⁵⁸ See *Legal Action, OUR CHILDREN'S TRUST*, <https://www.ourchildrenstrust.org/us/federal-lawsuit/> [<https://perma.cc/6QNS-KSL7>] (providing updated information on such litigation). See generally Mary Christina Wood & Daniel M. Galpern, *Atmospheric Recovery Litigation: Making the Fossil Fuel Industry Pay to Restore a Viable Climate System*, 45 ENVTL. L. 259 (2015) (arguing that the PTD protects a viable climate system and outlining so-called atmospheric trust litigation).

²⁵⁹ See e.g., *Kanuk v. State Dep't of Nat. Res.*, 335 P.3d 1088, 1103 (Alaska 2014); *Filippone v. Iowa Dep't of Nat. Res.*, 829 N.W.2d 589 (Iowa Ct. App. 2013); *Aronow v. State*, No. A12-0585, 2012 WL 4476642, at *3 (Minn. Ct. App. Oct. 1, 2012); *Barhaugh v. Mont.*, No. OP 11-0258 (Mont. Sup. Ct. June 15, 2011) (mem.), <http://supremecourtdocket.mt.gov/search/case?case=14512> [<https://perma.cc/TS4M-N977>]; *Sanders-Reed ex rel. Sanders-Reed v. Martinez*, 350 P.3d 1221 (N.M. Ct. App. 2015).

²⁶⁰ *Kanuk*, 335 P.3d at 1103.

²⁶¹ *Foster ex rel. Foster v. Wash. Dep't of Ecology*, No 14-2-25295-1 SEA, 2015 WL 7721362 at *3–4 (Wash. Super. Nov. 19, 2015).

²⁶² *Foster ex rel. Foster v. Wash. Dep't of Ecology*, No 14-2-25295-1 SEA, at *20 (Wash. Super, Apr. 29, 2016), <http://westernlaw.org/sites/default/files/2016.04.29-WA%20ATL%20Final%20Decision%20Bench%20Ruling%20Transcript.pdf> [<https://perma.cc/JYW7-8HEX>].

stating that the state's Department of Environmental Protection had failed to carry out its statutory trust duties and ordered the agency to reduce annual GHG emissions.²⁶³

Also in 2016, the United States District Court for the District of Oregon declined to dismiss an atmospheric trust case against the federal government.²⁶⁴ The children-plaintiffs claimed that the federal government knows that carbon dioxide pollution causes catastrophic climate change, including ocean acidification, but failed to curtail fossil fuel emissions and allowed increased carbon pollution.²⁶⁵ They maintained that a series of government actions and inactions had violated the PTD as well as federal constitutional provisions, including the Due Process Clause.²⁶⁶ The government and several interveners involved in the manufacturing and petrochemical development industries sought to dismiss the case, asserting that the PTD provides no cognizable federal cause of action.²⁶⁷ The federal government also maintained that the PTD was a state law doctrine, inapplicable to the federal government,²⁶⁸ an argument that earlier succeeded in the D.C. Circuit.²⁶⁹ However, an Oregon magistrate judge disagreed with that proposi-

²⁶³ *Kain v. Dep't of Env'tl. Prot.*, 49 N.E.3d 1124, 1142 (Mass. 2016).

²⁶⁴ *Juliana v. United States*, No. 6:15-cv-01517-TC, at *23–24 (D. Or. Apr. 8, 2016), <http://ourchildrenstrust.org/sites/default/files/16.04.08.OrderDenyingMTD.pdf> [<https://perma.cc/N45R-5SLS>]. For an update on the case, see *infra* notes 331–344 and accompanying text, in the Postscript to this Article.

²⁶⁵ *Id.* at *2.

²⁶⁶ *Id.* The court explained:

Plaintiffs assert the actions and omissions of defendants that increased CO₂ emissions “shock the conscience,” and are infringing the plaintiffs’ right to life and liberty in violation of their substantive due process rights. Plaintiffs also allege defendants have violated plaintiffs’ equal protection rights embedded in the Fifth Amendment by denying them protections afforded to previous generations and by favoring short term economic interests of certain citizens. Plaintiffs further allege defendants’ acts and omissions violate the implicit right, via the Ninth Amendment, to a stable climate and an ocean and atmosphere free from dangerous levels of [carbon dioxide]. Finally, plaintiffs allege defendants have violated a public trust doctrine, secured by the Ninth Amendment, by denying future generations’ essential natural resources.

Id.

²⁶⁷ *Id.* at *4. The defendants also asserted that the youths lacked standing to bring suit, raised non-justiciable political questions, and failed to state a constitutional claim. *Id.*

²⁶⁸ *Id.* at *17–18; see *id.* at *20 (Explaining that the plaintiff’s claim “does not at all implicate the equal footing doctrine or public trust obligations of the State of Oregon. The public trust doctrine invoked instead is directed against the United States and its unique sovereign interests over the territorial ocean waters and atmosphere of the nation.”).

²⁶⁹ *Alec L. v. Jackson*, 863 F. Supp. 2d 11, 15 (D.D.C. 2012) *aff'd sub. nom. Alec L. ex rel. Loorz v. McCarthy*, 561 F. App'x 7, 8 (D.C. Cir. 2014) (mem.). In 2012, the United States District Court for the District of Columbia dismissed an atmospheric trust claim against the federal government, ruling that the question was a matter of state law. *Id.* The plaintiff-children alleged that federal agencies violated the public trust “by contributing to and allowing unsafe amounts of greenhouse gas emissions into the atmosphere” and asked the court to declare that the agencies’

tion, concluding that the federal government at least has public trust obligations concerning effects on trust resources that it controls, such as territorial seas.²⁷⁰ Thus the court declined to dismiss the youths' PTD claim.²⁷¹ The litigation is ongoing at the time of writing.²⁷²

As this discussion illustrates—and consistent with Holmes' famous dictum about the law reflecting the "felt necessities of the times"²⁷³—the scope of the American PTD has extended to an increasing number of natural resources, including traditionally non-navigable waters, uplands like beaches and parklands, groundwater, and even the atmosphere where it affects more traditional trust resources like navigable waters. In each instance, courts have protected public use of natural resources, guarding against government approval of privatization that could divest or injure public rights.

C. Preventing Privatization of Public Trust Resources

State courts have reinforced the PTD's sovereign restraint against alienating public resources, subject to the exceptions concerning conveyances that either serve public trust purposes or do not substantially impair public use of remaining trust resources.²⁷⁴ This non-alienation principle is an anti-monopoly concept with deep historical roots, and it continues to serve as a hallmark of the PTD.

1. Restraining Alienation of the Beds of Navigable Waters

In 1976, in *People ex rel. Scott v. Chicago Park District*, the Illinois Supreme Court invalidated a state statute that conveyed nearly 200 acres of

violation of the PTD ignored their duty to reduce global atmospheric carbon dioxide levels maintaining that the case arose from federal public trust law. *Id.* at 14–15. The court disagreed, concluding that the PTD is a matter of state—not federal—law. *Id.* at 15. Consequently, the court dismissed the case, also opining that the issue of an atmospheric trust was essentially an unreviewable political question. *See id.* at 17. The D.C. Circuit summarily affirmed in an unreflective opinion. Alec L. *ex rel. Looz v. McCarthy*, 561 F. App'x 7 (D.C. Cir. 2014) (mem.). For criticism of these opinions, see Blumm & Schaffer, *supra* note 3, at 400–02, 409.

²⁷⁰ *Juliana*, No. 6:15-cv-01517-TC, at *21–23. The court explained:

At this stage of the proceedings, the court cannot say that the public trust doctrine does not provide at least some substantive due process protections for some plaintiffs within the navigable water areas of Oregon. Accordingly, the court should not dismiss any claims under the public trust doctrine to that extent.

Id. at *23.

²⁷¹ *Id.* at *23–24. While this article was in press, the district court affirmed the magistrate judge's decision. *See infra* notes 331–344 and accompanying text.

²⁷² *See infra* notes 331–344 and accompanying text (discussing the ensuing decision by the United States District Court for the District of Oregon).

²⁷³ HOLMES, *supra* note 24, at 1.

²⁷⁴ *See Ill. Cent. R.R.*, 146 U.S. at 452; *see supra* notes 103–106 and accompanying text.

lakebed to a private company, concluding that it had violated the PTD.²⁷⁵ The statute at issue conveyed roughly 195 acres of lands submerged beneath Lake Michigan, enabling U.S. Steel to expand a plant, for just under twenty thousand dollars.²⁷⁶ The Illinois Attorney General filed suit against the company and the Chicago Park District, asking the trial court to invalidate the statute, and it did so, preventing the conveyance.²⁷⁷ On appeal, the Illinois Supreme Court also agreed with the Illinois Attorney General, stating that the state “holds title to submerged land . . . in trust for the people,” and that “governmental powers over these lands will not be relinquished.”²⁷⁸ The court suggested that conveyances of significant natural resources warranted strict scrutiny, noting that the Illinois Supreme Court had never upheld a grant whose primary purpose was to benefit a private interest.²⁷⁹ Echoing the sentiment that the PTD is responsive to changing conditions and values,²⁸⁰ the court concluded that the conveyance of the submerged lands adjacent to public beaches would “irretrievably remove [those areas] from the use of the people of Illinois,” thereby impairing public use of Lake Michigan.²⁸¹

²⁷⁵ 360 N.E.2d at 780–81.

²⁷⁶ *Id.* at 775. The Illinois Supreme Court explained:

The General Assembly passed Senate Bill 782 on June 17, 1963, and it was signed by the Governor on June 26, 1963. The bill, in essence, provided for the conveyance by the State of Illinois of 194.6 acres of land submerged in waters of Lake Michigan to the United States Steel Corporation . . . upon its paying to the State Treasurer \$19,460 and upon the Chicago Park District re-conveying to the State an interest in the land it had received by certain legislation.

Id. (internal citations omitted). The conveyance of the submerged lands at issue in *Illinois Central* was more than one thousand acres, over five times as large. 146 U.S. at 454.

²⁷⁷ *Scott*, 360 N.E.2d at 775.

²⁷⁸ *Id.* at 779.

²⁷⁹ *Id.* at 780. The court explained:

Courts in general have shown great circumspection in considering grants of this character It is obvious that Lake Michigan is a valuable natural resource belonging to the people of this State in perpetuity and any attempted ceding of a portion of it in favor of a private interest has to withstand a most critical examination.

Id. (internal citations omitted).

²⁸⁰ *Id.* (Explaining “there has developed a strong, though belated, interest in conserving natural resources and in protecting and improving our physical environment. The public has become increasingly concerned with dangers to health and life from environmental sources and more sensitive to the value and, frequently, the irreplaceability, of natural resources.”).

²⁸¹ *Id.* at 780–81. The court also dismissed the steel company’s defense that the conveyance of the lakebed would provide public benefits of employment and economic improvement because those public benefits would be merely “incidental” to the dominant purpose of furthering the steel company’s interest. *Id.* at 781 (“Any benefit here to the public would be incidental. We judge that the direct and dominating purpose here would be a private one.”).

Similarly, in 1990, in *Lake Michigan Federation v. U.S. Army Corps of Engineers*, a federal district court declared that the state of Illinois had violated that PTD when it granted part of Lake Michigan's bed for an expansion of a college campus.²⁸² The state legislature had conveyed submerged Lake Michigan lands to Loyola University of Chicago ("Loyola" or "the university") to fill eighteen-and-a-half acres of lakebed and build an athletic facility, bike and walking paths, and a lawn.²⁸³ The university planned to grant public access to the latter areas, but only subject to conditions.²⁸⁴ The court distilled three basic principles from public trust case law:

First, courts should be critical of attempts by the state to surrender valuable public resources to a private entity. Second, the public trust is violated when the primary purpose of a legislative grant is to benefit a private interest. Finally, any attempt by the state to relinquish its power over a public resource should be invalidated under the doctrine.²⁸⁵

Applying these essential principles, the court decided that the grant of the lakebed to Loyola violated the PTD because the conveyance primarily benefited the university while relinquishing public control over the eighteen-and-a-half acres of publicly held lakebed.²⁸⁶ The decision thus prevented private monopolization of public trust lands.

Judicial restraints on alienation of trust resources have also been commonplace in other states. For example, in 1991, in *Arizona Center for Law in the Public Interest v. Hassell*, the Arizona Court of Appeals invalidated a legislative grant of riverbed lands to private landowners.²⁸⁷ A state statute attempted to relinquish most of the state's ownership of those lands.²⁸⁸ A public interest group challenged the statute under the state's PTD, as well as a gift clause in the Arizona Constitution restricting governmental disposi-

²⁸² 742 F. Supp. at 442.

²⁸³ *Id.* at 443.

²⁸⁴ *Id.*

²⁸⁵ *Id.* at 445 (internal citations omitted).

²⁸⁶ *Id.* at 445–47.

²⁸⁷ *Hassell*, 837 P.2d at 174.

²⁸⁸ *Id.* at 161. The court explained:

In 1985, Arizona officials upset longstanding assumptions about title to riverbed lands by asserting that the state owned all lands in the beds of Arizona watercourses that were navigable when Arizona was admitted to the Union. The 38th Arizona Legislature responded by enacting [a 1987 law] substantially relinquishing the state's interest in such lands. The validity of that statute is the subject of this appeal.

Id. (internal citations omitted).

tion of public resources.²⁸⁹ The court relied on both to invalidate the state grant, explaining that the state must supply a public purpose and obtain fair consideration to the public before alienating public resources—particularly public trust resources, which must be managed for present and future generations.²⁹⁰ The court declared “the state’s responsibility to administer its watercourse lands for the public benefit is an inabrogable attribute of statehood itself.”²⁹¹ Consequently, the state had to administer the riverbeds consistent with public trust purposes.²⁹² Because the legislature had failed to assess the value of the riverbeds to present and future generations, the court held that the attempted riverbed conveyance violated the PTD.²⁹³

Similarly, in *Lawrence v. Clark County* in 2011, the Nevada Supreme Court limited the ability of the state legislature to direct the Colorado River Commission to transfer lands to a county that included the dry riverbed and banks of the Colorado River.²⁹⁴ The state’s Land Registrar transferred most of the land as directed by the legislature but withheld three hundred thirty acres abutting the Colorado River, much of which was dry, because he be-

²⁸⁹ *Id.* at 163; see ARIZ. CONST. art. IX, § 7 (“Neither the State, nor any county, city, town, municipality, or other subdivision of the State shall ever . . . make any donation or grant, by subsidy or otherwise, to any individual, association, or corporation . . .”).

²⁹⁰ *Hassell*, 837 P.2d at 170. The court explained:

The gift clause offers a well-established constitutional framework for judicial review of an attempted legislative transfer of a portion of the public trust. We hold that when a court reviews a dispensation of public trust property, as when a court reviews the dispensation of any other property, the two *Wistuber* elements—public purpose and fair consideration—must be shown. The gift clause surely requires no less for public trust property than for other holdings of the state . . . Yet public trust land is not like other property. As the Supreme Court said in *Illinois Central*, a state’s title to lands under navigable waters is different in character from that which the state holds in lands intended for sale. The state might sell ordinary property for fair consideration for the public purpose of enhancing the state fisc. Such a showing, however, would not suffice to validate a dispensation from the public trust. Because the state may not dispose of trust resources except for purposes consistent with the public’s right of use and enjoyment of those resources, any public trust dispensation must also satisfy the state’s special obligation to maintain the trust for the use and enjoyment of present and future generations.

Id. (internal citation and quotation omitted).

²⁹¹ *Id.* at 168.

²⁹² *Id.*; see also *id.* at 170 (“Because the state may not dispose of trust resources except for purposes consistent with the public’s right of use and enjoyment of those resources, any public trust dispensation must also satisfy the state’s special obligation to maintain the trust for the use and enjoyment of present and future generations.”).

²⁹³ *Id.* at 172–74 (considering “whether the dispensation satisfies the state’s special obligation to maintain the trust for the use and enjoyment of present and future generations,” and concluding that “[t]he legislature established no basis to assess the value as a public resource of the parcels that it relinquished wholesale by its act,” and thus invalidating the law).

²⁹⁴ 254 P.3d 606, 609, 617 (Nev. 2011).

lieved that the lands remained subject to the state's PTD.²⁹⁵ The county filed suit, arguing that because the land was no longer submerged beneath navigable water, it was not subject to the public trust.²⁹⁶ A trial court ruled in favor of the county, agreeing that the disputed land was not subject to the public trust because it was no longer within the current channel of the Colorado River.²⁹⁷ The registrar appealed.²⁹⁸

The Nevada Supreme Court reversed, observing that “a state holds the banks and beds of navigable waterways in trust for the public and subject to restraints on alienability.”²⁹⁹ Interpreting both the state constitution and pertinent statutes,³⁰⁰ the court explained that the “public trust doctrine is . . . not simply common law easily abrogated by legislation; instead, the doctrine constitutes an inseverable restraint on the state's sovereign power.”³⁰¹ The court therefore remanded the case to the lower court, instructing the court to determine whether the dry riverbed had been submerged beneath navigable water at statehood and, if so, whether the conveyance of trust lands was consistent with the PTD.³⁰²

²⁹⁵ *Id.* at 608.

²⁹⁶ *Id.* The registrar filed a counterclaim for declaratory relief, requesting a declaration that the land “was subject to the public trust doctrine and therefore was not transferable.” *Id.*

²⁹⁷ *Id.* Although Nevada had never expressly adopted the PTD, the court ruled that the tenets of the doctrine had been present in Nevada case law for at least forty years. *See id.* at 609; *State v. Bunkowski*, 503 P.2d 1231 (Nev. 1972); *State Eng'r v. Cowles Bros., Inc.*, 478 P.2d 159 (Nev. 1970).

²⁹⁸ *Lawrence*, 254 P.3d at 608.

²⁹⁹ *Id.* at 607.

³⁰⁰ *Id.* at 612–13; *see* NEV. CONST., art. VIII, § 9 (“The State shall not donate or loan money, or its credit, subscribe to or be, interested in the Stock of any company, association, or corporation, except corporations formed for educational or charitable purposes.”); NEV. REV. STAT. § 321.0005 (2016) (“the policy of this State regarding the use of state lands to be that state lands must be used in the best interest of the residents of this State, and to that end the lands may be used for recreational activities, the production of revenue and other public purposes”); *Id.* § 533.025 (“The water of all sources of water supply within the boundaries of the State whether above or beneath the surface of the ground, belongs to the public.”).

³⁰¹ *Lawrence*, 254 P.3d at 613; *see also id.* (“In sum, although the public trust doctrine has roots in the common law, it is distinct from other common law principles because it is based on a policy reflected in the Nevada Constitution, Nevada statutes, and the inherent limitations on the state's sovereign power, as recognized by *Illinois Central*.” (citing *Ill. Cent. R.R.*, 146 U.S. at 453); *Robinson Twp.*, 83 A.3d at 948 (interpreting Article I of the Pennsylvania Constitution to affirm PTD rights as “inherent and indefeasible” components of citizenship (quoting *Pap's A.M. v. City of Erie*, 812 A.2d 591, 603 (Pa. 2002))).

³⁰² *Lawrence*, 254 P.3d at 616–17. The Nevada Supreme Court found:

Because we find the reasoning enunciated in *Hassell* persuasive and harmonious with our own gift clause and public trust jurisprudence, we adopt the *Hassell* approach to reviewing dispensations of public trust property. Accordingly, when assessing such dispensations, courts of this state must consider (1) whether the dispensation was made for a public purpose, (2) whether the state received fair consideration in exchange for the dispensation, and (3) whether the dispensation satisfies “the

2. Restraints on Alienation in State Constitutions

The PTD is often entrenched in state constitutions, making legislative evasions difficult. For example, in 1999, building on principles established in the 1991 Arizona PTD case, *Hassell*,³⁰³ the Arizona Supreme Court again invoked the state's constitutional PTD in *San Carlos Apache Tribe v. Superior Court ex rel. County of Maricopa*, invalidating a statute that purported to prohibit courts from considering the PTD in water rights adjudications.³⁰⁴ The San Carlos Apache Tribe challenged the statute that governed rights in the state's surface waters, and the trial court upheld the law.³⁰⁵ The tribe appealed, and the Arizona Supreme Court reversed on public trust grounds,³⁰⁶ announcing:

The public trust doctrine is a constitutional limitation on legislative power to give away resources held by the state in trust for its people. The Legislature cannot order the courts to make the doctrine inapplicable to these or any proceedings It is for the courts to decide whether the public trust doctrine is applicable to the facts. The Legislature cannot by legislation destroy the constitutional limits on its authority.³⁰⁷

The court consequently invalidated the statute, reading the PTD's antimonopoly principle into the state's constitution.³⁰⁸

In another constitutional PTD decision, the Supreme Court of Pennsylvania invalidated parts of a state statute aimed at facilitating natural gas hydrofracturing ("fracking") as violative of the PTD in *Robinson Township*

state's special obligation to maintain the trust for the use and enjoyment of present and future generations."

Id. (citing and quoting *Hassell*, 837 P.2d at 170).

³⁰³ *Hassell*, 837 P.2d at 158; see *supra* notes 287–293 and accompanying text (discussing this case).

³⁰⁴ 972 P.2d 179, 186 (Ariz. 1999).

³⁰⁵ *Id.* at 186, 199. The Arizona Supreme Court explained:

The public trust is not an element of a water right in an adjudication proceeding held pursuant to this article [of the Constitution]. In adjudicating the attributes of water rights pursuant to this article, the court shall not make a determination as to whether public trust values are associated with any or all of the river system or source.

Id. at 199 (quoting ARIZ. REV. STAT. § 45-263(B) (1998)).

³⁰⁶ *San Carlos Apache Tribe*, 927 P.2d at 186.

³⁰⁷ *Id.* at 199 (citing *Hassell*, 837 P.2d at 166–68) (internal citation omitted) (applying both the separation of powers doctrine and the state's constitutional gift clause).

³⁰⁸ *Id.* at 202 (invalidating a provision "making the public trust doctrine inapplicable to these proceedings").

v. *Commonwealth*.³⁰⁹ The law, Act 13, prevented local governments from using land use authority to restrict fracking.³¹⁰ Several municipalities challenged the law, claiming that fracking significantly harmed the environment, and thus that Act 13 violated Pennsylvania's constitutional PTD.³¹¹ Although the lower court dismissed the constitutional public trust claims,³¹² it also ruled that some of the law's provisions were an unconstitutional violation of substantive due process under the state constitution.³¹³

The Supreme Court of Pennsylvania affirmed the lower court's ruling invalidating provisions of Act 13 that preempted local ordinances, but a plurality of the court did so on PTD grounds.³¹⁴ The plurality decided that Pennsylvania's constitutional public trust required the state "to prevent degradation, diminution, and depletion of our public natural resources, which it may satisfy by enacting legislation that adequately restrains actions of private parties likely to cause harm to protected aspects of our environment."³¹⁵ Con-

³⁰⁹ *Robinson Twp.*, 83 A.3d at 913. See generally John C. Dernbach, *The Potential Meanings of a Constitutional Public Trust*, 45 ENVTL. L. 463 (2015) (detailing the significance of *Robinson Twp.*, 83 A.3d 901, and anticipating the implications of recognizing the PTD in the Pennsylvania Constitution).

³¹⁰ *Robinson Twp.*, 83 A.3d at 915.

³¹¹ *Id.* at 913, 915–16; see PA. CONST. art. I, § 27. The Constitution of the Commonwealth of Pennsylvania mandates:

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.

PA. CONST. art. I, § 27.

³¹² *Robinson Twp.*, 83 A.3d at 930.

³¹³ *Id.* In Pennsylvania, substantive due process requires the legislature to act in the best interest of the larger community and must balance competing concerns within this framework. *Id.* at 931–32. A concurring opinion endorsed the reasoning of the lower court, agreeing that the statute's preemption of local laws violated substantive due process by failing to protect the interests of neighboring property owners and changing the character of neighborhoods based on irrational classifications. *Id.* at 1001, 1002–03 (Baer, J. concurring).

³¹⁴ *Id.* at 977–82 (plurality opinion).

³¹⁵ *Id.* at 979; see also *id.* at 974 ("The Commonwealth's obligations as trustee to conserve and maintain the public natural resources for the benefit of the people, including generations yet to come, create a right in the people to seek to enforce the obligations."). The court explained:

As trustee, the Commonwealth is a fiduciary obligated to comply with the terms of the trust and with standards governing a fiduciary's conduct. The explicit terms of the trust require the government to conserve and maintain the corpus of the trust. The plain meaning of the terms conserve and maintain implicates a duty to prevent and remedy the degradation, diminution, or depletion of our public natural resources. As a fiduciary, the Commonwealth has a duty to act toward the corpus of the trust—the public natural resources—with prudence, loyalty, and impartiality.

Id. at 957 (internal citation and quotation marks omitted).

trary to that public trust directive, the statute's goals were not to "effectuate the constitutional goal to protect and preserve Pennsylvania's natural environment," but instead to "provide a maximally favorable environment for industry operators to exploit Pennsylvania's oil and gas resources . . ." ³¹⁶ As the plurality explained:

The public natural resources implicated by the "optimal" accommodation of industry here are resources essential to life, health, and liberty: surface and ground water, ambient air, and aspects of the natural environment in which the public has an interest. As the citizens illustrate, development of the natural gas industry in the Commonwealth unquestionably has and will have a lasting, and undeniably detrimental, impact on the quality of these core aspects of Pennsylvania's environment, which are part of the public trust. . . . By any responsible account, the exploitation of the Marcellus Shale Formation will produce a detrimental effect on the environment, on the people, their children, and future generations, and potentially on the public purse. . . . ³¹⁷

Consequently, the court struck down Act 13's preemption of local zoning requirements as unconstitutional, although only a plurality thought that the law had violated the public trust provision in the state constitution. ³¹⁸

³¹⁶ *Id.* at 975.

³¹⁷ *Id.* at 975–76. The court elaborated:

The industry uses two techniques that enhance recovery of natural gas from these "unconventional" gas wells: hydraulic fracturing or "fracking" . . . and horizontal drilling. Both techniques inevitably do violence to the landscape. Slick-water fracking involves pumping at high pressure into the rock formation a mixture of sand and freshwater treated with a gel friction reducer, until the rock cracks, resulting in greater gas mobility. Horizontal drilling requires the drilling of a vertical hole to [5500 to 6500] feet—several hundred feet above the target natural gas pocket or reservoir—and then directing the drill bit through an arc until the drilling proceeds sideways or horizontally. One unconventional gas well in the Marcellus Shale uses several million gallons of water.

Id. at 914–15.

³¹⁸ *Id.* at 977–78. The court explained:

The Commonwealth, by the General Assembly, declares in Section 3303 [of Act 13] that environmental obligations related to the oil and gas industries are of statewide concern and, on that basis, the Commonwealth purports to preempt the regulatory field to the exclusion of all local environmental legislation that might be perceived as affecting oil and gas operations. Act 13 thus commands municipalities to ignore their [public trust] obligations under Article I, Section 27 [of the Pennsylvania Constitution] and further directs municipalities to take affirmative actions to undo existing protections of the environment in their localities. The police power, broad as it may be, does not encompass such authority to so fundamentally disrupt these expectations respecting the environment.

The plurality saw the law's prohibition of new zoning ordinances as inconsistent with the PTD because it prevented local governments from protecting vulnerable trust resources in local neighborhoods.³¹⁹ Chief Justice Castille explained that the effect of Act 13 was to impermissibly harm the properties and communities most affected by the environmental hazards associated with fracking.³²⁰ As he declared, "[t]his disparate effect is irreconcilable with the express command that the trustee will manage the corpus of the [public] trust for the benefit of 'all the people.' A trustee must treat all beneficiaries equitably in light of the purposes of the trust."³²¹ Underlying *Robinson Township* is a strong antimonopoly sentiment affirming local community control over privatization of natural gas resources affecting groundwater.

As these decisions illustrate, restraints on government alienation of public resources, first established in *Illinois Central*, remain alive and vibrant.³²² As in *Illinois Central*, alienation restraints protect public access to trust resources, preventing private monopolies that would interfere with public use.³²³ They also require public oversight for private uses of trust resources to ensure against unnecessary degradation that harms the public.

Id. The other member of the majority thought Act 13 violated substantive due process. *Id.* at 1001 (Baer, J., concurring); see *Lawrence*, 254 P.3d at 609, 617.

³¹⁹ *Robinson Twp.*, 83 A.3d at 979–82.

³²⁰ *Id.* at 980–82. In describing Act 13, the court explained:

[The] requirement that local government permit industrial uses in all zoning districts is that some properties and communities will carry much heavier environmental and habitability burdens than others Imposing statewide environmental and habitability standards appropriate for the heaviest of industrial areas in sensitive zoning districts lowers environmental and habitability protections for affected residents and property owners below the existing threshold and permits significant degradation of public natural resources. The outright ban on local regulation of oil and gas operations (such as ordinances seeking to conform development to local conditions) that would mitigate the effect, meanwhile, propagates serious detrimental and disparate effects on the corpus of the [public] trust.

Id. at 980–81. Further, the court explained:

In Pennsylvania, terrain and natural conditions frequently differ throughout a municipality, and from municipality to municipality. As a result, the impact on the quality, quantity, and well-being of our natural resources cannot reasonably be assessed on the basis of a statewide average. Protection of environmental values, in this respect, is a quintessential local issue that must be tailored to local conditions.

Id. at 979.

³²¹ *Id.* at 980 (internal citation omitted).

³²² See *supra* notes 94–116 and accompanying text (discussing this case and its future implications).

³²³ See *supra* notes 94–116 and accompanying text (discussing this case).

CONCLUSION

The American PTD is rooted in long-held antimonopoly sentiment. From its inception in U.S. law in the early nineteenth century, the doctrine has protected the public against state attempts to create private monopolies over natural resources, beginning with oyster harvesting in tidal waters and soon extending inland to navigable waters and wildlife.³²⁴ In the United States Supreme Court's seminal decision of *Illinois Central Railroad v. Illinois*, the Court held that the PTD prevented the state from sanctioning private monopolization of Chicago Harbor, thus preserving the harbor and lakefront for present and future public use.³²⁵ Ensuing case law invoked the PTD to combat private threats to other important natural resources, including non-tidal and traditionally non-navigable waters, as well as wildlife and upland resources like beaches and parklands.³²⁶ Courts are now being asked to consider antimonopoly protection for additional public resources, including groundwater and the atmosphere.³²⁷

The PTD found footing in American jurisprudence nearly two centuries ago.³²⁸ Although commentators have written extensively about the doctrine's development and significance,³²⁹ the antimonopoly roots of the PTD have not been closely examined. Public trust advocates seeking to enforce or expand the scope of the doctrine should ground the PTD in its deep antimonopoly origins, which help to clarify the basis of the widespread sentiment that certain natural resources have public values too significant to be subject to exclusive private control.³³⁰

³²⁴ See *supra* notes 38–92 and accompanying text (discussing early public trust cases that prevented landowner monopolization of wildlife resources in tidal waters).

³²⁵ See *supra* notes 95–106 and accompanying text (discussing this case).

³²⁶ See *supra* notes 107–257 and accompanying text (reviewing twentieth and twenty-first century public trust cases that strengthen restraints on alienation of natural resources and expand protection to various non-traditional resources).

³²⁷ See *supra* 258–273 and accompanying text (discussing the claimed public trust in the atmosphere, which seeks to prevent further climate change).

³²⁸ See *supra* notes 38–92 and accompanying text (reviewing the earliest nineteenth-century public trust cases).

³²⁹ For example, a recent Westlaw search for secondary sources with “public trust” in their titles yielded 437 results (last searched June 26, 2016).

³³⁰ See, e.g., *Lamprey v. Metcalf*, 53 N.W. 1139, 1143 (Minn. 1893) (“To hand over . . . lakes to private ownership . . . would be a great wrong upon the public for all time, the extent of which cannot, perhaps, be now even anticipated.”); see also *supra* notes 129–139 and accompanying text (discussing *Lamprey*).

POSTSCRIPT

On November 10, 2016, the United States District Court for the District of Oregon refused to dismiss *Juliana v. United States*, a case brought by twenty-one youth plaintiffs asserting that the federal government violated their constitutional due process rights to life, liberty, and property, as well as the government's duty to manage public resources in trust for the people and for future generations.³³¹ The government jeopardized these rights, the youths claimed, by fossil fuel policies that threaten a healthful atmosphere, thereby threatening human life, causing widespread property damage, and dramatically altering the earth's ecosystems.³³² By allowing the claim to proceed, Judge Ann Aiken rejected the government's claim that the case represented a non-justiciable political question, upheld the children's standing to sue, and ruled that the children had stated a valid claim based on the government's alleged interference with fundamental due process rights.³³³

The court also ruled that the government had a PTD duty to protect trust property, including the territorial seas.³³⁴ Because greenhouse gas pollution of the atmosphere produces ocean acidification and rising ocean temperatures, it jeopardizes trust resources, including "at a minimum, the territorial seas."³³⁵ Interpreting the PTD as grounded in, and enforceable through, the U.S. Constitution's Due Process Clause,³³⁶ the court stated, "no government can legitimately abdicate its core sovereign powers."³³⁷ Judge Aiken found a valid PTD claim in the plaintiffs' assertion that government "nominally retain[ed] control over trust assets while actually allowing their depletion and destruction,"³³⁸ and applied the PTD to the federal govern-

³³¹ *Juliana v. United States*, No. 15-ev-01517-TC, 2016 WL 6661146, *2–3 (D. Or. Nov. 10, 2016). The court was cognizant of the importance of the issues before it from the outset. *See id.* at *3 ("This is no ordinary lawsuit.").

³³² *Id.* at *16. Concerning the due process right, the court relied upon the precedents of *Roe v. Wade* and *Obergefell v. Hodges*. *Juliana*, 2016 WL 6661146 at *15; *see* *Obergefell v. Hodges*, 135 S. Ct. 2584, 2598–99 (2015) (recognizing a fundamental right to marry); *Roe v. Wade*, 410 U.S. 113, 152–53 (1973) (recognizing a fundamental right to an abortion). The court also located the fundamental right to a healthy environment in the Ninth Amendment. *Juliana*, 2016 WL 6661146 at *15.

³³³ *Juliana*, 2016 WL 6661146 at *3–9 (discussing the political question), *9–14 (discussing standing), *14–17 (discussing due process).

³³⁴ *Id.* at *20.

³³⁵ *Id.* at *20–21.

³³⁶ *Id.* at *25 (noting that fundamental rights are those that are implicit in ordered liberty or deeply rooted in the nation's history and tradition (citing *McDonald v. City of Chi.*, 561 U.S. 742, 761, 767 (2010))).

³³⁷ *Juliana*, 2016 WL 6661146 at *18.

³³⁸ *Id.* at *19–21.

ment.³³⁹ Further, she ruled that the PTD was not inconsistent with the Constitution's Property Clause³⁴⁰ and was not displaced by federal statutes like the Clean Air and Water Acts.³⁴¹ The court accurately described the PTD as one of the "inherent aspects of sovereignty" preserved by but not created by the Constitution.³⁴²

Juliana may also be framed in antimonopoly policy terms.³⁴³ The effect of federal actions and inaction over the decades have created an impermissible atmospheric monopoly enjoyed by fossil-fuel polluters at the expense of the general public, dependent on the atmosphere for life and a healthy environment.³⁴⁴ The decision means that the case will proceed to trial or settlement concerning whether the government's actions concerning atmospheric pollution actually violated the children's due process and PTD rights.

³³⁹ *Id.* at *23–24 (finding unpersuasive a decision to the contrary in *Alec L. v. Jackson*, 863 F. Supp. 2d 11, 12, 15 (D.D.C. 2012) *aff'd sub. nom.* *Alec L. ex rel. Loorz v. McCarthy*, 561 F. App'x 7, 8 (D.C. Cir. 2014) (mem.)). The court explained:

[E]ven though *Illinois Central* interpreted Illinois law, its central tenets could be applied broadly . . . because it "invoked the principle in American law recognizing the weighty public interests in submerged lands." . . . There is no reason why the central tenets of *Illinois Central* should apply to another state, but not to the federal government.

Juliana, 2016 WL 6661146 at *44–45 (quoting *Idaho v. Coeur d'Alene Tribe*, 521 U.S. 261, 285 (1997)). See generally Blumm & Schaffer, *supra* note 3 (arguing that *Illinois Central* was not based on Illinois state law).

³⁴⁰ *Juliana*, 2016 WL 6661146 at *23 (Noting that although *Kleppe v. New Mexico*, 426 U.S. 529, 539 (1976), stated that the Property Clause was "without limitations" the Court did not have the issue of whether federal authority to manage public lands despite violating "individual constitutional rights or run afoul of public trust obligations.").

³⁴¹ *Id.* at *24 (distinguishing *American Electric Power Co. v. Connecticut*, 564 U.S. 410, 424 (2001), which ruled that the Clean Air Act displaced federal common law nuisance claims).

³⁴² *Id.* at *25. As an inherent attribute of sovereignty, the "obligation . . . cannot be legislated away." *Id.* at *24; see also *id.* at *25 ("Governments, in turn, possess certain powers that permit them to safeguard the rights of the people, these powers are inherent in the authority to govern and cannot be sold or bargained away.").

³⁴³ See *Juliana*, 2016 WL 6661146 at *18–19.

³⁴⁴ See *id.* at *26. Judge Aiken closed by stating that federal courts "have been . . . overly deferential in the area of environmental law, and the world has suffered for it . . ." *Id.* (citing Judge Alfred T. Goodwin, *A Wake-Up Call for Federal Judges*, 2015 WISC. L. REV. 785, 785–86, 788). Judge Goodwin was the author of *State ex rel. Thornton v. Hay*, ruling that the doctrine of custom protected the public's use of Oregon ocean beaches. 462 P.2d 671, 672 (Or. 1969); see Blumm & Doot, *supra* note 219, at 407–09. (discussing the *Hay* decision).