

Michigan Journal of Environmental & Administrative Law

Volume 10 | Issue 1

2020

Natural Resources and Natural Law Part II: The Public Trust Doctrine

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Recommended Citation

Robert W. Adler, *Natural Resources and Natural Law Part II: The Public Trust Doctrine*, 10 MICH. J. ENVTL. & ADMIN. L. 225 (2020).

Available at: <https://repository.law.umich.edu/mjeal/vol10/iss1/5>

<https://doi.org/10.36640/mjeal.10.1.natural>

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NATURAL RESOURCES AND NATURAL LAW PART II: THE PUBLIC TRUST DOCTRINE

*Robert W. Adler**

Natural Resources and Natural Law Part I: Prior Appropriation *analyzed claims by some western ranchers, grounded in natural law, that they have property rights in grazing resources on federal public lands through prior appropriation. Those individuals advocated their position in part through civil disobedience and armed standoffs with federal officials. They also asserted that their duty to obey theistic natural law overrode any duty to obey the Nation's positive law. Similar claims that individual religious beliefs override positive law have been made recently regarding a range of other controversial issues, such as same-sex marriage, public insurance for birth control, and the right to bear arms. Prior appropriation doctrine is consistent with secular natural law theory. Existing positive law, however, accepts prior appropriation for western water rights but rejects its application to grazing rights on federal public lands, for reasons consistent with secular natural law. Natural law doctrine allows citizens to advocate for change but requires them to respect the positive law of the societies in which they live. Separation of church and state also bars natural law claims based on religious doctrine unless those principles are also adopted in secular positive law.*

This sequel addresses claims from the opposite side of the political-environmental spectrum, that natural law provides one justification for the public trust doctrine, and that courts should enforce an atmospheric public trust to redress catastrophic global climate change. Although some religious groups have embraced environmental agendas supported by religious doctrine, public trust claims are secular in origin. Just as natural law provides support for prior appropriation, it supports the idea that some resources, such as water, wildlife, and air, should be held in common rather than made available for private ownership. From this perspective, the two doctrines merge into a single issue of resource allocation. Which resources are best made available for appropriation as private property, and which are best left in common? Natural law theory helps to explain the liberty and welfare goals that inform those choices. Positive law embraces the public trust doctrine with respect to some natural resources, and does not preclude its applicability to the atmosphere or other common resources.

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INTRODUCTION

Natural Resources and Natural Law Part I: Prior Appropriation (“*Prior Appropriation*”)¹ evaluated claims by some western ranchers,² grounded partially in natural law, to appropriative property rights to federal public land resources. This companion article assesses similar natural law origins of the public trust doctrine,

1. Robert W. Adler, *Natural Resources and Natural Law Part I: Prior Appropriation*, 60 WM. & MARY L. REV. 739 (2019) [hereinafter *Prior Appropriation*].

2. Because I do not presume these views to be universal or even a majority position among western ranchers, I referred to advocates for this position as “natural law ranch advocates.” See *id.* at 746–747.

asserted from the opposite side of the political-environmental spectrum by environmental advocates. Those claims have heightened importance given litigation arguing that an atmospheric public trust obligates governments to combat climate change.³ The U.S. Court of Appeals for the Ninth Circuit recently ordered dismissal of one atmospheric trust case for lack of standing, reasoning that the alleged harm was redressable only by political branches of government.⁴

Prior Appropriation concluded that, whether or not one accepts the validity of natural law in U.S. jurisprudence, it does not support private property rights in federal public lands based on prior appropriation.⁵ First, personal beliefs, including those grounded in theistic versions of natural law, cannot override duly adopted positive law. The Establishment Clause of the First Amendment prevents any asserted supremacy of religious beliefs over applicable secular law, without impairing an individual's right to hold those beliefs under the Free Exercise clause.⁶ Moreover, a fundamental tenet of natural law is that, as members of an ordered society, individuals are bound to obey positive law even if they disagree with that law.⁷ The federal and state constitutions are the only means through which fundamental rights can be used to override positive law rules, and only through proper judicial process. Although there is a long tradition of using civil disobedience to protest perceived injustices, such as slavery, one must accept the legal consequences of that disobedience in order to employ the tactic.⁸

Second, although the prior appropriation doctrine of water law has some natural law origins,⁹ all western states ratified the doctrine in their positive law,¹⁰ and the federal government sanctioned their authority to do so.¹¹ With respect to grazing rights on public lands, by contrast, pursuant to its plenary authority under the

3. For discussions of atmospheric trust litigation and the crisis of catastrophic climate change it seeks to redress, see Mary Christina Wood & Dan Galpern, *Atmospheric Recovery Litigation: Making the Fossil Fuel Industry Pay to Restore a Viable Climate System*, 45 ENV'T L. 259 (2015).

4. *Juliana v. United States*, 947 F.3d 1159, 1165 (9th Cir. 2020). Other courts have also dismissed cases involving public trust doctrine implications on atmospheric conditions. *E.g.*, *Kanuk ex rel. Kanuk v. State, Dep't of Nat. Res.*, 335 P.3d 1088, 1102–03 (Alaska 2014) (dismissing the case on prudential grounds but mentioning that plaintiffs make “a good case”); *Chernaik v. Brown*, 436 P.3d 26, 35 (2019) (finding no conception of the public-trust doctrine in Oregon to impose fiduciary duties on the state to protect against the effects of climate change).

5. *Prior Appropriation*, *supra* note 1, at 804–05.

6. U.S. CONST. amend. I (“Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof . . .”).

7. *Prior Appropriation*, *supra* note 1, at 755 n.70, 759 n.92, 779.

8. *Id.* at 755–56, 779.

9. *Id.* at 780–86.

10. *Id.* at 789–93.

11. *Id.* at 789–92.

Property Clause,¹² the federal government rejected private property rights to federal grazing resources in favor of a license to graze and later a system of federal permitting.¹³ It is consistent with natural law for the federal government to categorize different public land and other resources for varying uses.¹⁴

Finally, it is debatable whether natural law supports claims to property rights in federal lands and resources based on historical use. Some scholars believe prior appropriation was a positive law response to the inadequacy of natural law-based riparian rights.¹⁵ If prior appropriation is a positive law doctrine, natural law cannot support prior appropriation rights to grazing or other public land resources in contravention of federal statutes and regulations.

Although ownership and use of federal public lands is an extremely important but contentious issue that commands significant public attention,¹⁶ the question of the legitimacy and utility of natural law extends well beyond that realm. Similar natural law-based claims have been made in the context of a wide range of high-profile public debates, including same-sex marriage, public funding of birth control, and the right to bear arms.¹⁷

Natural law has also been raised in the context of the public trust doctrine. *Prior Appropriation* noted that some advocates for broader use of the public trust doctrine for environmental protection, including climate change mitigation, cite natural law to support their claims.¹⁸ For example, what some courts and scholars

12. U.S. CONST. art. IV, § 3, cl. 2 (“The Congress shall have Power to dispose of and make all needful Rules and Regulations respecting the Territory or other Property belonging to the United States . . .”).

13. *Prior Appropriation*, *supra* note 1, at 768-88, 789-93.

14. See *Prior Appropriation*, *supra* note 1, at 803-04. This includes *res commune* or *res publicum* for resources believed to be most appropriate for common public use, such as national parks or wildlife refuges, and *res nullius* for resources such as water that can be made available for usufructuary rights so long as the corpus remains unimpaired or not substantially impaired for public uses such as navigation and fishing.

15. See Richard A. Epstein, *How Spontaneous? How Regulated?: The Evolution of Property Rights Systems*, 100 IOWA L. REV. 2341, 2356-63 (2015); *Prior Appropriation*, *supra* note 1, at 799-801.

16. See Kirk Johnson, *Siege Has Ended, but Battle Over Public Lands Rages on*, N.Y. TIMES, (Apr. 14, 2017), <https://www.nytimes.com/2017/04/14/us/public-lands-bundy-malheur-national-wildlife-refuge.html> (discussing public land controversy in the west and its implications).

17. *Prior Appropriation*, *supra* note 1, at 748-49. Some individuals have even objected to government requirements to wear masks during the COVID-19 pandemic because a mask would cover the “image of God.” See Ed Mazza, *GOP Lawmaker Opposes Coronavirus Face Masks Because They Cover ‘The Image of God,’* HUFFINGTON POST (May 5, 2020), https://www.huffpost.com/entry/ohio-masks-likeness-of-god-nino-vitale_n_5eb0c6d6c5b62b850f90eb42.

18. See, e.g., Gerald Torres & Nathan Bellinger, *The Public Trust: The Law’s DNA*, 4 WAKE FOREST J. L. & POL’Y 281 (2014); Michael C. Blumm & Rachel D. Guthrie, *Internationalizing the Public Trust Doctrine: Natural Law and Constitutional and Statutory Approaches to Fulfilling the Saxon Vision*, 45 U.C. DAVIS. L. REV. 741 (2012); George P. Smith II & Michael W. Sweeney, *The Public Trust Doctrine and*

identify as Roman law origins of the doctrine, as summarized in *The Institutes of Justinian*¹⁹ provides: “By the law of nature these things are common to mankind—the air, running water, the sea and consequently the shores of the sea.”²⁰ Other environmental advocates assert inherent or fundamental rights to a clean and healthy environment grounded similarly in natural law, among other sources.²¹

Environmental advocates cannot categorically reject natural law as a basis for property rights claims while simultaneously relying on natural law to support the public trust doctrine and other asserted environmental rights. To be consistent, these claims must be subjected to the same analysis and the same scrutiny as natural law-based claims made by natural law property advocates. To be valid, either the claims must be supported by duly adopted positive law in ways that are not true for property rights in federal lands, or they must have a firmer grounding in natural law principles, while not being contradicted by applicable positive law.

The purpose of this analysis is not to test the legitimacy of the public trust doctrine, any more than *Prior Appropriation* questioned the legitimacy of the prior appropriation doctrine. Prior appropriation clearly exists as a matter of the positive law governing water resources in the western states. The issue in *Prior Appropriation* was the extent to which natural law supports assertions that prior appropriation also applies to grazing and other public resources. Likewise, the public trust doctrine has existed in American law at least since the early nineteenth century.²² It is recognized widely in positive law (judicial, legislative, constitutional), but the scope, purpose, and substance of the doctrine remains disputed.²³ The critical question is where and how the doctrine applies, and whether it should expand to situations not previously

Natural Law: Emanations Within A Penumbra, 33 B.C. ENV'T AFF. L. REV. 307, 341 (2006); Richard A. Epstein, *The Public Trust Doctrine*, 7 CATO J. 411 (1987).

19. Some cases incorrectly identify the *Institutes of Justinian* as a source of law, as if this work was a formally adopted Roman legal code; it was actually part of a larger effort by Roman legal scholars, commissioned by Emperor Justinian in Byzantium toward the end of the Roman Empire (Sixth Century A.D.), to collect the body of Roman law into a single source. As such, it is more akin to a modern academic legal treatise or textbook than a legal code. See, e.g., Bruce W. Frier, *The Roman Origins of the Public Trust Doctrine*, 32 J. ROMAN ARCHAEOLOGY 641, 642 (2019); Ewa M. Davison, *Enjoys Long Walks on the Beach: Washington's Public Trust Doctrine and the Right of Pedestrian Passage over Private Tidelands*, 81 WASH. L. REV. 813, 830–31 (2006). A recent analysis co-authored by a law professor and a Roman law historian critiqued the same error by legal scholars, as well as the degree to which citation to the *Institutes* greatly oversimplifies the Roman law origins of the doctrine. J.B. Ruhl and Thomas A.J. McGinn, *The Roman Public Trust Doctrine: What Was it and Does it Support an Atmospheric Trust?*, available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3440244 (forthcoming 47 ECOLOGY L.Q. 1 (2020)).

20. J. INST. 2.1.1.

21. See *Prior Appropriation*, *supra* note 1, at 798–804.

22. See *Arnold v. Mundy*, 6 N.J.L. 1 (1821); *Carson v. Blazer*, 2 Binn. 475 (Penn. 1810). Including colonial cases and ordinances, the pedigree goes back even further. See Ruhl & McGinn, *supra* note 19, at 17–18 nn. 68, 73 (identifying colonial court decisions applying English common law trust doctrine).

23. See *infra* Section II.

recognized. This article evaluates the extent to which natural law supports such expansion but recognizes that any change must be implemented through positive law, via judicial evolution of the common law doctrine or by statute or constitution.

This analysis also does not revisit the legitimacy of natural law relative to the predominant modern focus on positive law. That debate has been waged elsewhere.²⁴ Rather, because some western property rights advocates and some environmental advocates both assert legal claims that are grounded in natural law, this analysis assumes the legitimacy of natural law as the source of some kinds of legal rights and obligations.

Part I of this Article explores competing theories about the legal history and sources of the public trust doctrine, including common law, constitutional law, and natural law. Part II analyzes the public trust doctrine according to the principles identified in *Prior Appropriation*, and evaluates the implications of the natural law perspective for the future of the doctrine. This article concludes that natural law supports and is consistent with the public trust doctrine and provides flexibility to apply it to the atmosphere and other common resources not yet subject to public trust scrutiny.

I. THE MULTIPLE ORIGINS AND SOURCES OF THE PUBLIC TRUST DOCTRINE

A. Introduction

Legal scholars have disputed the source and origins of the public trust doctrine extensively, without resolution.²⁵ The debate came in the wake of a now-famous article by Professor Joseph Sax urging courts to make more assertive use of

24. See H.L.A. HART, *THE CONCEPT OF LAW* (1961) (defending legal positivism); LON L. FULLER, *THE MORALITY OF LAW* (1964) (defending legal realism). See also H.L.A. Hart, *Positivism and the Separation of Law and Morals*, 71 HARV. L. REV. 593 (1958); Lon L. Fuller, *Positivism and Fidelity to Law—A Reply to Professor Hart*, 71 HARV. L. REV. 630 (1958).

25. See, e.g., Joseph D. Kearney & Thomas W. Merrill, *The Origins of the American Public Trust Doctrine: What Really Matters in Illinois Central*, 71 U. CHI. L. REV. 799 (2004); James R. Rasband, *The Disregarded Common Parentage of the Equal Footing and Public Trust Doctrines*, 32 LAND & WATER L. REV. 1 (1997); Douglas L. Grant, *Western Water Rights and the Public Trust Doctrine: Some Realism About the Takings Issue*, 27 ARIZ. ST. L.J. 423 (1995); Charles F. Wilkinson, *The Headwaters of the Public Trust: Some Thoughts on the Source and Scope of the Traditional Doctrine*, 19 ENV'T L. 425 (1989); Harrison C. Dunning, *The Public Trust: A Fundamental Doctrine of American Property Law*, 19 ENV'T L. 515 (1989); James L. Huffman, *A Fish Out of Water: The Public Trust Doctrine in a Constitutional Democracy*, 19 ENV'T L. 527 (1989); Richard A. Epstein, *The Public Trust Doctrine*, 7 CATO J. 411 (1987); Richard J. Lazarus, *Changing Conceptions of Property and Sovereignty in Natural Resources: Questioning the Public Trust Doctrine*, 71 IOWA L. REV. 631 (1986); Glenn J. MacGrady, *The Navigability Concept in the Civil and Common Law: Historical Development, Current Importance, and Some Doctrines that Don't Hold Water*, 3 FLA. ST. L. REV. 511 (1975).

the historical public trust doctrine to enhance protection of a range of public resources,²⁶ and intensified after some courts heeded Professor Sax's proposal.²⁷

At the more restrictive end of the spectrum, some believe the doctrine is a narrow element of property law applicable only to property underlying navigable waters, thus precluding further expansion to the atmosphere or to other resources.²⁸ Some scholars have proposed that the doctrine is incorporated into parts of the U.S. Constitution.²⁹ Other authors root the doctrine in a lengthy and diverse legal history, from the *Institutes of Justinian* to Magna Carta to Anglo-American common law.³⁰ These legal theories have included the idea that the public trust doctrine has origins in natural law,³¹ or that the doctrine is a fundamental attribute of sovereignty.³² As shown below, the sovereignty claim flows logically from other tenets of natural law.³³ Others believe the precise source of the doctrine is less relevant than its ability to fill important gaps in positive law pending an appropriate legislative response.³⁴

The applicable sources of law governing the public trust doctrine may help inform issues such as the propriety of applying the doctrine to the atmosphere and other public resources other than navigable waters. They may also be relevant to the degree to which there is a "floor" on applicability of the doctrine in individual states. Those issues were raised by the U.S. Supreme Court's decision in *Illinois Central Railroad Co. v. Illinois*,³⁵ which upheld an action by the Illinois Legislature invalidating a previous grant to a railroad company of title to extensive holdings

26. Joseph L. Sax, *The Public Trust Doctrine in Natural Resources Law: Effective Judicial Intervention*, 68 MICH. L. REV. 471 (1970).

27. See, e.g., *Matthews v. Bay Head Improvement Ass'n*, 471 A.2d 355 (N.J. 1984) (dry sand beaches); *Nat'l Audubon Soc'y v. Superior Court*, 658 P.2d 709 (Cal. 1983) (non-navigable tributaries); *Kootenai Env't Alliance v. Panhandle Yacht Club, Inc.*, 671 P.2d 1085 (Idaho 1983) (navigable lake).

28. See, e.g., James L. Huffman, *Speaking of Inconvenient Truths—A History of the Public Trust Doctrine*, 18 DUKE ENV'T L. & POL'Y FORUM 1 (2007); Rasband, *supra* note 25; MacGrady, *supra* note 25; Lazarus, *supra* note 25; Lloyd R. Cohen, *The Public Trust Doctrine: An Economic Perspective*, 29 CAL. W. L. REV. 239 (1992).

29. See, e.g., Torres & Bellinger, *supra* note 18; Wilkinson, *supra* note 25; Epstein, *supra* note 18; Michael O'Loughlin, *Understanding the Public Trust Doctrine Through Due Process*, 58 B.C. L. REV. 1321 (2017).

30. See, e.g., Sax, *supra* note 26; Wilkinson, *supra* note 25; Smith & Sweeney, *supra* note 18; Hope M. Babcock, *The Public Trust Doctrine: What a Tall Tale They Tell*, 61 S.C. L. REV. 393 (2009).

31. See *supra* note 18.

32. See, e.g., MICHAEL C. BLUMM & MARY CHRISTINA WOOD, *THE PUBLIC TRUST DOCTRINE IN ENVIRONMENTAL AND NATURAL RESOURCES LAW* 3–7 (2013); Torres & Bellinger, *supra* note 18, at 291; Wood & Galpern, *supra* note 3, at 263, 273–78.

33. See *infra* Section I.E.4.

34. See Babcock, *supra* note 30.

35. 146 U.S. 387 (1892).

along the Chicago harbor. The Court grounded its holding in the historic public trust doctrine, but left unclear the source of law that applied, and whether the ruling was one of state or federal law.³⁶

The Supreme Court has since confirmed that each state has authority to determine the scope and applicability of the public trust doctrine in that state.³⁷ The Court has never held, however, that states are free to abandon the doctrine entirely, suggesting that it has some minimum federal contours. These issues remain unresolved, in part because most state variations in the doctrine reflect policy differences regarding the geographic scope of the doctrine,³⁸ or the resources to which the doctrine applies.³⁹ No state since the *Illinois Central* case has successfully eliminated the doctrine⁴⁰ or curtailed it as substantially as the Illinois legislature

36. Plaintiffs sued in state court, but defendants removed to federal court because the case as pleaded involved questions regarding construction of a federal statute and federal constitutional claims. *State v. Illinois Cent. R.R. Co.*, 16 F. 881, 886–87 (N.D. Ill. 1888). The decision on the merits, however, did not ultimately turn on federal law. Although the Court decided the case on what ultimately appeared to be Illinois law, the case was decided nearly a half century before *Erie R.R. Co. v. Tompkins*, 304 U.S. 64 (1938), holding that federal courts must defer to state courts on rulings of state law.

37. Several cases post-dating *Illinois Central* confirm this result. See, e.g., *PPL Montana, LLC v. Montana*, 656 U.S. 576, 604–605 (2012); *Phillips Petroleum Co. v. Mississippi*, 484 U.S. 469, 475 (1988); *Oregon ex rel. State Land Bd. v. Corvallis Sand & Gravel Co.*, 429 U.S. 363, 370–71 (1977); *Appleby v. City of New York*, 271 U.S. 364, 395 (1926) (noting that “the conclusion reached [in *Illinois Central*] was necessarily a statement of Illinois law....”). The Court had reached the same conclusion before *Illinois Central*. See *Barney v. Keokuk*, 94 U.S. 324, 338 (1876); *Packer v. Bird*, 137 U.S. 661, 661 (1891). At times, however, the Supreme Court has described the public trust doctrine as “American law.” E.g., *Idaho v. Coeur d’Alene Tribe of Idaho*, 521 U.S. 261, 284–86 (1997).

38. See also Robin Kundis Craig, *A Comparative Guide to the Western States’ Public Trust Doctrines: Public Values, Private Rights, and the Evolution Toward an Ecological Public Trust*, 37 *ECOL. L.Q.* 53, 58 (2010) [hereinafter *Western States’ Public Trust Doctrines*] (describing considerable variations in public trust doctrine among western states); Robin Kundis Craig, *A Comparative Guide to the Eastern Public Trust Doctrines: Classifications of States, Property Rights, and State Summaries*, 16 *PENN ST. ENV’T L. REV.* 1, 25 (2007) [hereinafter *Eastern States’ Public Trust Doctrines*] (finding wide variety of public trust doctrines among eastern states). Compare *Barney*, 94 U.S. at 325 (following Iowa doctrine that property adjacent to navigable waters extends only to high water line) with *United States v. Chandler-Dunbar Co.*, 229 U.S. 53, 61 (1913) (applying Michigan doctrine that technical title extends to middle of stream beneath navigable waters).

39. See cases cited *supra* note 27; see also *Eastern States’ Public Trust Doctrines*, *supra* note 38, at 16 (explaining that eastern states treat oceans, coasts, and Great Lakes differently than other “navigable waters”); *Western States’ Public Trust Doctrines*, *supra* note 38, at 78 (examining how western states assign states property interest in not only the bed of navigable waters, but in the water itself).

40. The Arizona Legislature attempted to do so by statute regarding most navigable waters, but that statute was invalidated based on the public trust doctrine and the Arizona Constitution. *Ariz. Ctr. for L. in the Pub. Int. v. Hassell*, 837 P.2d 158, 168–69 (Ariz. 1991); see also *San Carlos Apache Tribe v. County of Maricopa*, 972 P.2d 179, 199 (Ariz. 1999); *Defenders of Wildlife v. Hull*, 18 P.3d 722, 727–29 (Ariz. Ct. App. 2001).

attempted to do in the original railroad grant before a subsequent legislature revoked the grant.⁴¹

Ultimately, there is some truth to all of the above theories. The public trust doctrine has roots in both the civil law tradition of Western Europe dating to the Roman Empire and in the Anglo-American common law tradition. Its principles are consistent with those attributes of natural law that help explain the evolution of Anglo-American law. The public trust doctrine reached into colonial common law and statutory law; state constitutional, statutory, and common law; and federal constitutional, statutory, and common law. Rather than arguing for the dominance of one source or another, a more fulsome analysis and explanation of the public trust doctrine requires an explanation of how each source of authority fits together. Such an integrated analysis, however, should begin with an exploration of the historical roots of the doctrine.

B. *Historical Underpinnings of the Public Trust Doctrine*

There are at least two major historical foundations of the American public trust doctrine. One is the civil law tradition of the Roman Empire and parts of Europe thereafter. The other is medieval English law, embodied in Magna Carta and later statutes, which some argue simply restored what the English nobility and commoners viewed as their common law or “ancient” rights pre-dating the Norman Conquest. The relationship between those roots—and whether and how they intersect—is less clear. The history and details of both sources, and the degree to which they influenced American judges and legislatures, also remain disputed and unclear.

American common law began with the baseline of inherited English common law at the time of colonial settlement, but every state was free, through its judicial process, to modify that law as appropriate to its circumstances. Both Roman law and English common law have been invoked in state and federal jurisprudence and cannot be ignored as an influence on the development of the American doctrine. The more salient question is the extent to which this history should be considered when deciding the future scope and substance of public trust cases.

1. Roman Law

Most American courts finding public trust doctrine roots in Roman law cite to a brief summary statement in the *Institutes of Justinian*: “By the law of nature these things are common to mankind—the air, running water, the sea and consequently the

41. In a case somewhat similar to *Illinois Central*, but involving only the right of a railroad company to wharf out over extensive sections of Lake Erie, the Ohio Supreme Court affirmed that the state, as trustee, may not abandon its trust obligations over significant portions of a navigable waterway. *State v. Cleveland & Pittsburgh R.R. Co.*, 94 Ohio St. 61, 78–80 (1916).

shores of the sea.”⁴² This was the first in a series of general rules categorizing various kinds of property as common, private, or public.⁴³ As explained above, the *Institutes* were not a legal codification, but a legal textbook commissioned by Emperor Justinian in Byzantium, compiling earlier Roman law and accompanying a detailed Digest of Roman legal cases and other authorities.⁴⁴

Law professor J.B. Ruhl and Roman history professor Thomas A.J. McGinn recently critiqued, in a detailed and nuanced analysis, what they view as a gross oversimplification of the degree to which both proponents and opponents of public trust expansion analyze the influence of Roman law on the American doctrine.⁴⁵ Roman law governing ownership and access to rivers, seashores, and other public resources developed over a period of centuries and was considerably more complex than was reflected in the simple proclamations in the *Institutes*.⁴⁶ Ruhl and McGinn suggest that at least two Roman doctrines of property law, the *res communes omnium* (“things common to all”)⁴⁷ and the *res publicae* (“things in public use”),⁴⁸ provide support for the public trust concept. These doctrines, they conclude, may have influenced later jurists on this issue⁴⁹ and provided an historical foundation for what became the American public trust doctrine, although not as directly as some advocates suggest.⁵⁰

Even if Roman law addressed issues analogous to the modern public trust doctrine, by what pathway did it influence English or American jurists? Europe was in legal and political chaos during the centuries following the fall of the Western

42. J. INST. 2.1.1.

43. *Id.* at 2.1.1–2.1.6. Section 2.1.2 provided: “rivers and ports are public; hence the right of fishing in a port is common to all men.” Ensuing sections addressed riverbanks (2.1.4), and the seashore and the sea (2.1.5).

44. *See supra* note 19; Ruhl & McGinn, *supra* note 19, at 121. Some scholars believe nevertheless that this codification of centuries of Roman law was one of the most important contributions of the Eastern Roman Empire. *See* BERTRAND RUSSELL, *THE HISTORY OF WESTERN PHILOSOPHY* xvi, 373, 381 (1945).

45. *See* Ruhl & McGinn, *supra* note 19, at 126–132. Earlier efforts to critique the asserted Roman origins of the doctrine included MacGrady, *supra* note 25; and Patrick Deveney, *Title, Jus Publicum, and the Public Trust: An Historical Perspective*, 1 SEA GRANT L.J. 13 (1976). In fairness to Sax, in his seminal article, he acknowledged that the status of Roman law on this issue was “very confused.” Sax, *supra* note 26, at 475.

46. *See* Ruhl & McGinn, *supra* note 19, at 145–175; *see also* Frier, *supra* note 19, at 642–47. The Roman Empire, of course, went through multiple systems of governance.

47. *See* Ruhl & McGinn, *supra* note 19, at 145.

48. *See id.* at 168.

49. *See id.* at 168–172.

50. *See id.* at 176–178.

Roman Empire.⁵¹ Law and governance—to the extent it existed effectively at all—reflected persistent power struggles between the Roman Catholic Church, the Holy Roman Empire, emerging free city states, and monarchies that competed for power until the rise of nations such as France, Spain, and England.⁵² Scholars have long debated the nature and degree to which continental civil law from the Roman law tradition, and closely related canon law, directly influenced medieval English law, including Magna Carta and the rights it sought to protect.⁵³ Roman and canon law were used prominently in England in the thirteenth century.⁵⁴ Any argument that the Roman law public trust doctrine proceeded in a straight line to England, however, would require more specific tracing and evidence.

Moreover, in medieval feudal law and government in continental Europe, sovereignty and “public” ownership were vested in monarchs and the lesser nobility, not in the people at large.⁵⁵ The nobility often retained for themselves exclusive franchises in fisheries and other public resources or granted those rights to favored subjects.⁵⁶

Nevertheless, Roman law did not simply disappear in the medieval period.⁵⁷ Scholars have documented public trust concepts deriving from Roman law in the laws of medieval kingdoms and the evolving European nations,⁵⁸ although none

51. See generally RUSSELL, *supra* note 44, at 366–75; NIALL FERGUSON, *CIVILIZATION: THE WEST AND THE REST* 16–17, 257–59 (2011); see also THOMAS H. GREER & GAVIN LEWIS, *A BRIEF HISTORY OF THE WESTERN WORLD*, 139–177 (6th ed. 1992).

52. See GREER & LEWIS, *supra* note 51, at 209–14; RUSSELL, *supra* note 44, at 301–07, 478–87); Lorenzo Zucca, *A Genealogy of State Sovereignty*, 16 *THEORETICAL INQUIRIES* L. 399, 399–400, 401–02 (2015); Anne Orford, *Jurisdiction Without Territory: From the Holy Roman Empire to the Responsibility to Protect*, 30 *MICH. J. INT’L L.* 981, 981, 984–89 (2009).

53. See Thomas J. McSweeney, *Magna Carta, Civil Law, and Canon Law*, in *MAGNA CARTA AND THE RULE OF LAW* (Daniel B. Magraw Jr., Andrea Martinez & Roy E. Brownell II eds., 2014) 281, 282–83 (“The degree to which Roman and canon law have influenced the Anglo-American common law is a question that common law lawyers have been debating for a long time . . .”).

54. See *id.* at 306.

55. GREER & LEWIS, *supra* note 51, at 215–223 (explaining land ownership by kings and lords rather than the people at large); STEWART C. EASTON, *THE WESTERN HERITAGE* 205–209 (Holt & Rinehard and Winston eds., 1961) (explaining peasants’ use of land and duties owed to a lord); Michael Dillon, *Magna Carta and the United States Constitution*, in *MAGNA CARTA AND THE RULE OF LAW*, *supra* note 53, at 81, 83.

56. See *Arnold v. Mundy*, 6 N.J.L. 1, 49–50 (1821); Dillon, *supra* note 55, at 83.

57. See RUSSELL, *supra* note 44, at 302 (preservation of the Roman tradition in Italy, particularly among the lawyers), 369 (preservation of Roman law by Gothic kings), 429–31 (reliance on Roman law by Holy Roman Emperors in twelfth century), 445 (promulgation of legal code derived from Roman law by Emperor Frederick II in thirteenth century).

58. See, e.g., Wilkinson, *supra* note 25, at 429–30 (Spain and France); Lazarus, *supra* note 25, at 633–34 (Spanish legal codes and others); MacGrady, *supra* note 25, at 534–45 (Visigoth code, Spanish code, French law and codes).

appear to trace those continental codes directly to England. Moreover, legal scholars and theorists continued to write about Roman law concepts of *res communes omnium* and *res publicae* throughout the medieval period and through the seventeenth century work of Grotius,⁵⁹ a leading natural law theorist of the Enlightenment.⁶⁰ Details of continental public trust law varied, just as the doctrine varies from state to state in the United States.⁶¹ The underlying concept however, was consistent: recognition that some portions of the earth should remain in common.

2. Medieval English Law

It is possible that William the Conqueror imported some aspects of public trust law to England in 1066 as part of continental feudal law, which borrowed from Roman law.⁶² Some scholars have identified a contemporaneous (eleventh century) French statute purporting to guarantee open access to “public highways and byways, running water and springs, meadows, pastures, forest, heaths and rocks...”⁶³ Eleventh century Normandy was not yet part of France, however;⁶⁴ and although it is clear that William and his successors brought elements of continental feudal law to England,⁶⁵ any surviving evidence that he imported this particular French statute would require considerably more detailed historical digging.

Moreover, the practice of William and his successors was inconsistent with the idea of the public trust. One purported violation of English liberty redressed in Magna Carta was the monarchical practice of granting exclusive franchises in navigable waters and fisheries to favored lesser nobility.⁶⁶ The same was true for forests in which English people formerly enjoyed free access.⁶⁷ The original 1215

59. See Ruhl & McGinn, *supra* note 19, at 149-152.

60. See *Prior Appropriation*, *supra* note 1, at 757-58 & n.83; Zucca, *supra* note 52, at 409; Benjamin Straumann, *Early Modern Sovereignty and Its Limits*, 16 THEORETICAL INQUIRIES L. 423, 426-31 (2015).

61. See *supra* notes 38-39, 58 and accompanying text.

62. See RUSSELL, *supra* note 44; 1 WINSTON CHURCHILL, A HISTORY OF THE ENGLISH-SPEAKING PEOPLES, VOL. I, THE BIRTH OF BRITAIN 126-27 (Bantam ed. 1963) (1956); Nicholas A. Robinson, *The Charter of the Forest: Evolving Human Rights in Nature*, in MAGNA CARTA AND THE RULE OF LAW (Daniel B. Magraw Jr., Andrea Martinez & Roy E. Brownell II eds., 2014) 311, 317-18.

63. See Wilkinson, *supra* note 25, at 429 n.22.

64. See SIR MAURICE POWICKE, THE LOSS OF NORMANDY, 1189-1204: STUDIES IN THE HISTORY OF THE ANGEVIN EMPIRE 8 (2d ed. 1960) (1913).

65. See Ralph V. Turner, *The Making of Magna Carta: The Historical Background*, in MAGNA CARTA AND THE RULE OF LAW 17, 17-20 (Daniel B. Magraw Jr., Andrea Martinez, Roy E. Brownell II eds., 2014).

66. See *Arnold v. Mundy*, 6 N.J.L. 1, 3, 50-51 (1821).

67. See Robinson, *supra* note 62, at 311-17.

Magna Carta⁶⁸ sought to force King John to remove fish weirs that restricted public access to navigable rivers,⁶⁹ and to remove enclosures adjacent to rivers and forests.⁷⁰ The Great Writ also prohibited the King from granting future exclusive grants.⁷¹ Early American courts cited Magna Carta as authority for the nascent public trust doctrine on this continent.⁷²

Of course, the rights specified in Magna Carta are narrower and more specific than those covered by the modern public trust doctrine,⁷³ even in the “traditional” form reflected in *Illinois Central* and similar cases.⁷⁴ If the Charter was designed to prevent English monarchs from infringing on broader pre-existing rights, as some commentators suggest,⁷⁵ the relevant provisions in Magna Carta provide some evidence of a pre-existing public trust tradition of common access to natural resources in Magna Carta was not fully democratic given that Runnymede was part of a conflict between King John and the English Barons, not between the nobility and the people.⁷⁶ Nevertheless, although many provisions of Magna Carta addressed only the relative rights of knights and other nobles vis-a-vis the king, other liberties spelled out in the charter apply to “all free men of our kingdom,” and some of the rights are addressed to a “free man” or “any man” or anyone.⁷⁷ At the time, the term “free men” referred to landowners other than nobility who held land “free” of feudal obligations, which included approximately half of England’s population.⁷⁸

68. After Pope Innocent III annulled the 1215 version (sealed by King John) shortly after it was negotiated at Runnymede, the Charter was reissued multiple times with various changes. For a summary, see Turner, *supra* note 65, at 42–44 (discussing citations of Magna Carta by Chief Justice Taft in *Appleby v. New York*, and by Chief Justice Taney in *Martin v. Waddell’s Lessee*). See also *infra* Section II.C.

69. Magna Carta, § 33, available at <https://www.bl.uk/magna-carta/articles/magna-carta-english-translation#> (British Museum trans. 2014).

70. *Id.*, at §§ 47, 52–53.

71. See *Appleby v. City of New York*, 271 U.S. 364, 382 (1926); *Martin v. Waddell’s Lessee*, 41 U.S. (16 Pet.) 367, 410 (1842).

72. See Wermiel, *Magna Carta in Supreme Court Jurisprudence*, in *MAGNA CARTA AND THE RULE OF LAW* 111, 137 (Daniel B. Magraw Jr., Andrea Martinez & Roy E. Brownell II eds., 2014).

73. See David Clark, *Magna Carta Unchained: The Great Charter in Modern Commonwealth Law*, in *MAGNA CARTA AND THE RULE OF LAW* 247, 266 (Daniel B. Magraw Jr., Andrea Martinez & Roy E. Brownell II eds., 2014).

74. See *infra* Section II.C.

75. See Clark, *supra* note 73, at 266.

76. See Turner, *supra* note 65; Sandra Day O’Connor, *Foreword*, in *MAGNA CARTA AND THE RULE OF LAW* xi, xii–xiii (Daniel B. Magraw Jr., Andrea Martinez & Roy E. Brownell II eds., 2014); CHURCHILL, *supra* note 62, at xv–xi, 185–86.

77. Magna Carta, *supra* note 69, §§ 27, 28, 30, 39, 40. See O’Connor, *supra* note 76, at xiii.

78. See Turner, *supra* note 65, at 35.

The idea of an English public trust doctrine pre-dating the Norman conquest brings into question the origins of that doctrine. Rome ruled large portions of Britain for four centuries beginning in the middle of the first century A.D.,⁷⁹ bringing core principles of law that unified the Roman Empire.⁸⁰ Although the *Justinian Institutes* were written over a century after Rome withdrew from Britain,⁸¹ the Roman public trust doctrine can be traced to as early as the second century,⁸² within the period of Roman rule. Documentation of the extent to which Roman law influenced early English common law is sparse, however, and English common law developed based on multiple legal traditions.⁸³ Alternatively, the public trust doctrine may have evolved independently in England,⁸⁴ based on similar principles that

79. The perception that Roman occupation began with Julius Caesar a century earlier is misleading. Julius Caesar mounted two armed incursions into Britain beginning in 55 B.C. to subdue troublesome tribes, but promptly left without leaving any significant aspects of Roman rule or civilization. See CHURCHILL, *supra* note 62, at 1–4, 10–12. The invasion that led to Roman colonization began a century later under Emperor Claudius, *see id.* at 13–14, and Roman rule continued until the end of the fourth century. *See id.* at 13–33.

80. *See id.* at 21, 26–28, 31.

81. *See* Ruhl & McGinn, *supra* note 19, at 121; CHURCHILL, *supra* note 62, at 31–41.

82. *See* Ruhl & McGinn, *supra* note 19, at 163–165; Frier, *supra* note 19, at 642.

83. Churchill described the evolution of English law as “a body of custom which, whatever its ultimate sources may be—folkright brought from beyond the seas by Danes, and by Saxons before them, maxims of civil jurisprudence culled from Roman codes—is being welded into one Common Law.” CHURCHILL, *supra* note 62, at x–xi; *see also id.* at 46–47 (describing the mingling of Saxon law with earlier Celtic law); 82, 88–89 (discussing influx of Danish customs and principles of justice into Anglo-Saxon society, and the efforts of King Alfred and King Edward “the Confessor” to assimilate these multiple sources of law and custom into a unified “common law” of England). Yet he also noted that English common law diverged significantly from the civil law codes influenced by Rome. *See id.* at 163–65. Professor Thomas Lund expressed uncertainty about the degree of influence Roman law had on English common law, *see* THOMAS LUND, *THE CREATION OF THE COMMON LAW: THE MEDIEVAL YEAR BOOKS DECIPHERED* 1–3, 45 (2015), but noted its declining influence when the clerics abandoned judicial posts because of their reluctance to swear a preference for secular rather than ecclesiastical doctrine. *Id.* at 23–34. *See also id.* at 350–51 (noting differences between codified law according to Roman methods and case law according to the English common law method). *But see id.* at 223 (documenting influence of Roman doctrine of *res judicata*).

84. Some scholars hypothesize that Lord Matthew Hale’s late eighteenth century treatise on maritime law, LORD MATTHEW HALE, *A TREATISE RELATIVE TO THE MARITIME LAW OF ENGLAND* (1787), was the first real manifestation of the English public trust doctrine. *See* Cohen, *supra* note 28, at 251 (arguing that the doctrine only took hold in England in late eighteenth century based on Hale’s treatise); MacGrady, *supra* note 25, at 7 (arguing that the *prima facie* rule of sovereign ownership was not adopted in England until 1795, by which time most of the English shoreline was in private ownership). Others trace the English common law roots to the seminal thirteenth century compilation of English common law by Henry de Bracton and collaborators. *See* Huffman, *supra* note 28, at 343; Lazarus, *supra* note 25, at 635. The reference is to Henry de Bracton’s *On the Laws and Customs of England*. *See* LUND, *supra* note 83, at 2. Yet the Bracton compilers did not write on a clean slate any more than did the authors of the *Institutes of Justinian*. This was simply the first effort to compile the case law produced by early English jurists into a set of general “common law” principles. *See* LUND, *supra* note 83, at 2–3.

certain lands and natural resources are shared and not amenable to private ownership. That possibility suggests that the concept was more universal than local, and thus a manifestation of natural law.

Magna Carta's companion, the "Charter of the Forest,"⁸⁵ provides additional support for the idea that medieval English law and custom protected rights of common access to natural resources, including forests and their associated wildlife and aquatic resources.⁸⁶ The Celtic tribes and others that inhabited Britain before the Romans arrived and after they left showed a strong history of individual liberty, without a highly structured central government, and a strong subsistence reliance on common resources.⁸⁷ That dependence on forests for subsistence resources and the economy generally persisted into the thirteenth century,⁸⁸ and rights to forest use were protected to some degree by pre-Norman monarchs.⁸⁹ In creating Royal Forests, the Norman and Angevin kings displaced "the customary access of many, including commoners, to forest areas."⁹⁰ They also added large areas of forests previously subject to open access to the Royal Forests, thus closing them off to use by lesser nobles or commoners absent payments (or fines) to the king.⁹¹ Much as the modern public trust doctrine protects common access to essential shared resources and prohibits government alienation of those resources to private parties, the Forest Charter sought to restore common access to those forest resources, thus protecting the "liberties of the forest" pre-dating Norman rule.⁹²

Some argue that the lasting influence of Magna Carta and the Forest Charter on many aspects of Anglo-American law is a "myth" based more on re-interpretations of the Charter in the seventeenth and eighteenth centuries by jurists such as Sir Edward Coke and William Blackstone.⁹³ Moreover, from the modern lens

85. Three provisions of the original 1215 Magna Carta addressed restoration of pre-existing rights of both nobles and commoners to use forests and forest resources. These provisions were deleted from the first reissued Magna Carta in 1217, but replaced with a separate, more detailed explication of forest rights and governance. See Robinson, *supra* note 62, at 313.

86. According to Professor Robinson, the "forests" subject to the Forest Charter "consisted not merely of trees, but included meadows, grasslands, heaths, moors, streams, wetlands ... along with longstanding commoners' usufructs for pasturage or collecting wood." *Id.* at 325.

87. See CHURCHILL, *supra* note 62, at 7–10, 19 (noting "the primary right of men to die and kill for the land they lived in"), 22 (noting the rebellion of "a vast host of broken, hunted men resolved on death or freedom"), 24.

88. See Robinson, *supra* note 62, at 316, 325.

89. See *id.* at 317 (discussing forest governance under Edward the Confessor, who ruled from 1042–1066).

90. *Id.* at 317.

91. See *id.* at 317–18.

92. *Id.* at 314, 317–18.

93. See Turner, *supra* note 65, at 44–46; Dillon, *supra* note 55, at 98–107.

of an industrial society, those aspects of Magna Carta and the Forest Charter pertaining to fish weirs and forest access may appear quaint and insignificant compared to the provisions now associated with lofty legal doctrines such as due process of law and habeas corpus.⁹⁴ But those provisions bear a closer resemblance to their modern manifestations in the public trust doctrine than do other provisions of Magna Carta to their respective modern analogs.⁹⁵

The English public trust doctrine may reflect elements of Roman law during the Roman occupation; Continental law imported by the Normans; centuries of customary access to common resources in England under the Celtic, Saxon, and other traditions that comprised the melting pot of British law, custom, and culture; or a combination of them all. Regardless of the sources, English common law embraces a principle, consistent with natural law theory,⁹⁶ that some portions of the earth are best made available for private ownership, while others are better left in common.

3. Implications for American Public Trust Law

Whether the American public trust doctrine derived from a single source or many, the details are not necessarily critical to analysis of the doctrine and its future.⁹⁷ The basic idea is that some portions of the earth are amenable to private ownership, while other areas (the air, running water, the sea, and the seashore, as well as forest and other common resources) should remain as some form of public commons, or in some form of public ownership. As one U.S. court noted recently, “Justinian derived the doctrine from the principle that the public possesses inviolable rights to certain natural resources.”⁹⁸ During the period in which American public trust law developed, American jurists routinely relied on multiple sources of authority to identify the “best” or “true” doctrines that should apply to a particular

94. See O'Connor, *supra* note 76, at xii (referring to the fish weir provision as “mundane”); *c.f.* JACK N. RAKOVE, ORIGINAL MEANINGS, POLITICS AND IDEAS IN THE MAKING OF THE CONSTITUTION 329–30 (First Vintage Books ed. 1997) (1996) (noting that the Federalists, in opposing the need for enumerated rights in the Constitution, “lampooned” a proposal to enumerate the right to hunt, fowl, and to fish on navigable waters and other public property). Of course, the fact that some delegates proposed such an amendment indicates that many Americans at the time viewed rights to natural resource access as important to their freedom and welfare.

95. See Dillon, *supra* note 55, at 91–97 (comparing provisions of Magna Carta with provisions of the U.S. Constitution and concluding that “there is scant evidence of Magna Carta having a cornerstone or fountainhead impact on the U.S. Constitution as it emerged from the Constitutional Convention in 1787”).

96. See *infra* Section I.E.3.

97. See Ruhl & McGinn, *supra* note 19, at 177.

98. *Lawrence v. Clark County*, 254 P.3d 606, 608 (Nev. 2011). As discussed above, the doctrine was not “derived” by Emperor Justinian, see Davison, *supra* note 19, but the basic point about the principles the doctrine reflect remains valid.

issue.⁹⁹ The following sections evaluate the extent to which U.S. public trust principles reflect common law, constitutional law, and natural law.

C. *The Public Trust Doctrine as Common Law*

Scholars continue to debate the legal sources and origins of the American public trust doctrine.¹⁰⁰ The lion's share of judicial authority, however, suggests that it derived most directly from English common law,¹⁰¹ and was inherited first by the British colonies and later by the states that succeeded them,¹⁰² or by later-admitted states under the Equal Footing Doctrine.¹⁰³ The Nevada Supreme Court, for example, noted recently that, although the public trust doctrine was "thought to be" traceable to Roman law, it was clearly "adopted by the common law courts of England . . ."¹⁰⁴ Likewise, the U.S. Supreme Court indicated that "its principles can be found in the English common law . . ."¹⁰⁵

Rooting the public trust doctrine in English common law, however, does not resolve disagreements regarding the nature and breadth of that authority. Some scholars argue that, even if the public trust doctrine is a correct statement of English common law modified by American law,¹⁰⁶ it simply confirms government title to a narrow category of lands beneath navigable waters.¹⁰⁷ As such, the doctrine is not appropriately expanded to other resources and functions. Other scholars suggest that submerged land is simply one example of a broader principle, and that courts can

99. See *Prior Appropriation*, *supra* note 1, at 770–73.

100. See *Kearney & Merrill*, *supra* note 25, at 803.

101. See *PPL Montana, LLC v. Montana*, 656 U.S. 576, 603–04 (2012) (although also noting roots in Roman civil law); *Packer v. Bird*, 137 U.S. 661, 667–68 (1891); *Pollard's Lessee v. Hagan*, 44 U.S. (3 How.) 212, 228–29 (1845); *Lawrence*, 254 P.3d at 609; *Ariz. Ctr. For L. in the Pub. Int. v. Hassell*, 837 P.2d 158, 161 (Ariz. 1991); *Nat'l Audubon Soc'y v. Superior Court*, 658 P.2d 718 (Cal. 1983) (although also noting roots in Roman civil law); *Kootenai Env't. Alliance v. Panhandle Yacht Club, Inc.*, 671 P.2d 1085, 1088 (Idaho 1983) (on rehearing); *Gough v. Bell*, 22 N.J.L. 441, 454–55 (N.J. 1850); *Carson v. Blazer*, 2 Binn. 475, 477–78, 484 (Penn. 1810).

102. See *Shively v. Bowlby*, 152 U.S. 1, 14–18 (1894); *Illinois Ctr. R. Co. v. Illinois*, 146 U.S. 387, 456 (1892); *Pollard's Lessee*, 44 U.S. at 222–23; *Arnold v. Mundy*, 6 N.J.L. 1, 49–53 (1821).

103. See *Shively*, 152 U.S. at 26–28; *Pollard's Lessee*, 44 U.S. at 222–23.

104. *Lawrence*, 254 P.3d at 609; see also *Hassell*, 837 P.2d at 161 (doctrine "originates in a common-law doctrine, dating back at least as far as Magna Charta . . ."); *Kootenai Env't Alliance v. Panhandle Yacht Club, Inc.*, 671 P.2d 1085, 1088 (Id. 1983) (describing doctrine as "one of the dominant principles of the English common law.").

105. *PPL Montana*, 565 U.S. at 604.

106. Not all scholars agree, with some arguing that American courts misinterpreted and misapplied the English doctrine. See James L. Huffman, *Why Liberating the Public Trust Doctrine is Bad for the Public*, 45 ENV'T L. 337, 339–49 (2015).

107. See *Lazarus*, *supra* note 25, at 691; Huffman, *supra* note 28, at 527, 541, 561.

modify the doctrine to suit new circumstances and to protect other common resources.¹⁰⁸

A related disagreement involves the degree to which the government holds title to lands underlying navigable waters, or other resources, subject to trust limitations. Some argue that the government holds those resources like other public property, and can dispose of them subject to applicable positive law.¹⁰⁹ These scholars question whether principles of trust law even apply to public resources, despite the longstanding use of that terminology.¹¹⁰ At the other extreme is the idea that public trust resources, by their very nature, are unalienable.¹¹¹ In the middle is a body of authority defining or limiting the reasons for which public trust resources can be privatized,¹¹² by whom,¹¹³ to what extent,¹¹⁴ and with what qualifications.¹¹⁵

108. See Babcock, *supra* note 30; Sax, *supra* note 26; Epstein, *supra* note 18. Cf. Robinson, *supra* note 62, at 315, 344 (arguing that the principles adopted originally in the Charter of the Forest, arguably a precursor to the modern public trust doctrine, see *supra* Section II.B.2, have evolved to suit the changing needs and values of ensuing generations).

109. See Huffman, *supra* note 106, at 368–69; Cohen, *supra* note 28, at 274–76.

110. See Huffman, *supra* note 28, at 534–41; Lazarus, *supra* note 25, at 656–68.

111. See Torres & Bellinger, *supra* note 18, at 284–87.

112. See *Appleby v. City of New York*, 271 U.S. 364, 383–84 (1926) (authorizing grants for adequate compensation and pursuant to plan of harbor improvement in the public interest); *Illinois Cent. R.R. Co. v. Illinois*, 146 U.S. 387, 453 (1892) (allowing grants if “used in promoting the interests of the public” or “for the improvement of the navigation and use of the waters”); *In re Trempealeau Drainage Dist.*, 131 N.W. 838, 840–41 (Wisc. 1911) (authorizing draining of wetlands to improve navigation); *Ward v. Mumford*, 32 Cal. 365, 372–73 (Cal. 1867) (authorizing grants to improve navigation as consistent with the trust); *Eldridge v. Cowell*, 4 Cal. 80, 87 (Cal. 1854) (authorizing plan for filling lots in San Francisco Bay “to subserve the public good”); *Gough v. Bell*, 22 N.J.L. 441, 458–59 (N.J. Sup. Ct. 1850) (authorizing grants for public purposes), 466–68 (noting grants for dams, docks, and other improvements).

113. See *Appleby*, 271 U.S. at 382 (authorizing legislative grants); *Illinois Cent. R.R. Co.*, 146 U.S. at 460 (by the legislature, with reservation of the power of future legislatures to change); *Gough*, 22 N.J.L. at 456–58 (authorizing valid grants by legislature acting as representatives of the people as sovereign).

114. See *Shively v. Bowlby*, 152 U.S. 1, 48–50 (1894) (restricting federal grants of submerged lands held in trust for states to cases of “some international duty or public exigency”); *Illinois Cent. R.R. Co.*, 146 U.S. at 451–58 (limiting to discrete parcels but prohibiting for entire public harbor); *Gough*, 22 N.J.L. at 459 (not permissible for “all the waters of the state”).

115. See *United States v. Chandler-Dunbar Water Power Co.*, 229 U.S. 53, 62 (1913) (qualifying private title to submerged lands as “subordinate to the public right of navigation” and “the absolute power of Congress over the improvement of navigable rivers”); *Illinois Cent. R.R. Co.*, 146 U.S. at 457–58 (only with “an implied reservation of the public right”); *Martin v. Waddell’s Lessee*, 41 U.S. (16 Pet.) 367, 411 (1842) (requiring that grants from the trust must be strictly construed); *State v. Cleveland & Pittsburgh R.R. Co.*, 94 Ohio St. 61, 69 (Ohio 1916) (any state title subject to federal government’s paramount rights of navigability); *People v. California Fish Co.*, 166 Cal. 576, 589 (Cal. 1913) (holding that owners took title subject to easement servitude for navigation and commerce); *Taylor v. Underhill*, 40 Cal. 471, 473 (1871) (prohibiting sales that would materially interfere with navigation).

If these are purely issues of common law, they can be changed through the positive law of any jurisdiction. American courts have expressly modified English common law regarding the public trust doctrine when they found particular aspects of that law inapplicable or unsuited to the conditions in North America.¹¹⁶ Likewise, legislatures have the authority to modify or override even longstanding common law doctrines.¹¹⁷

Yet although states have discretion regarding the scope and applicability of the public trust doctrine,¹¹⁸ no state has successfully¹¹⁹ eliminated it. Moreover, the U.S. Supreme Court and state courts suggest that such an effort would be impermissible.¹²⁰ No court, however, has articulated a universal baseline for protection of public trust resources. Moreover, if such a baseline exists, it cannot be justified on common law grounds alone. Rather, it must be grounded either in a binding principle of constitutional law; or in a fundamental principle of law that is rooted so deeply in our legal tradition or our concept of natural rights and liberties that it is immutable. Those possibilities are explored in the following subsections.

D. *The Public Trust Doctrine as Constitutional Law*

The Supreme Court has held that certain aspects of the public trust doctrine are governed or influenced by the U.S. Constitution. It is important, however, to distinguish the specific public trust issues to which the Constitution applies from those aspects of the doctrine governed by common law.

116. *See, e.g., Shively*, 152 U.S. at 11–26 (surveying ways in which English common law trust rule had been modified in U.S. states); *Matthews v. Bay Head Improvement Ass'n*, 471 A.2d 355, 365–66 (N.J. 1984) (expanding public trust protection to dry beaches recognizing modern uses and “the dynamic nature of the public trust doctrine”); *Nat'l Audubon Soc'y v. Superior Court*, 658 P.2d 709, 719–22 (Cal. 1983) (recognizing earlier changes in geographic scope of navigable waters, and expanding protection to address water diversions from non-navigable tributaries to navigable waters); *Marks v. Whitney*, 491 P.2d 374, 380 (Cal. 1971) (expanding trust purposes to include ecological, aesthetic, and scientific uses and values); *Elder v. Burrus*, 25 Tenn. 358, 365–67 (Tenn. 1845) (holding English rule on geographic scope of navigability not suited to conditions in Tennessee); *Wilson v. Forbes*, 13 N.C. 30 (N.C. 1828) (holding English tidal rule inapplicable to circumstances in North Carolina); *Palmer v. Mulligan*, 3 Cai. 307, 318 (N.Y. 1826) (finding English rule regarding ebb and flow of tide unsuitable to Hudson River).

117. *See United States v. Texas*, 507 U.S. 529, 534 (1993) (indicating a presumption for retaining longstanding common law unless a statute overrides plainly and directly).

118. *See supra* notes 38–39 and accompanying text.

119. *See supra* note 40 (describing unsuccessful attempt by Arizona legislature to relinquish state public trust claims to majority of the state's navigable waters).

120. *See, e.g., Appleby v. City of New York*, 271 U.S. 364, 393 (1926); *Illinois Cent. R.R. Co. v. Illinois*, 146 U.S. 387, 451–55 (1892); *California Fish Co.*, 166 Cal. at 591; *Arnold v. Mundy*, 6 N.J.L. 1, 49–53 (N.J. 1821).

1. Allocation of Trust Authority

In *Martin v. Waddell*¹²¹ and in *Pollard's Lessee v. Hagan*,¹²² the Supreme Court clarified that states, not the federal government, hold title to lands underlying navigable waters. Just as the British Crown as sovereign held title beneath navigable waters in trust for the British people, the Colonies held that trust on behalf of the settlers; and after the Revolution, the people of each state became sovereign and held that trust through their duly elected governments.¹²³ Later-admitted states enjoy the same rights on an "equal footing" with the original states.¹²⁴

In cases delineating the federal navigational servitude,¹²⁵ however, the Supreme Court interpreted the Commerce Clause of the Constitution¹²⁶ as a cession by the states of that portion of sovereignty necessary to empower the federal government to protect navigable waters for interstate and international commerce.¹²⁷ To the extent that the public trust doctrine protects the common use and preservation of navigable waters for public uses such as navigation, fishing, and commerce, the federal navigation servitude divides that trust authority and responsibility between the state and federal governments.¹²⁸ When the Supreme Court has addressed

121. *Martin v. Waddell's Lessee*, 41 U.S. 367 (1842).

122. *Pollard's Lessee v. Hagan*, 44 U.S. 212 (1845).

123. *See Martin*, 41 U.S. at 409–16.

124. *Pollard's Lessee*, 44 U.S. at 221–22. The "equal footing" doctrine with respect to state ownership and control of navigable waters was one application of a general principle, adopted by Congress in early state Acts of Admission, that new states should be admitted with the "same rights of freedom, sovereignty, and independence" as existing states. *See id.* at 221. Although the "equal footing" language appears nowhere in no constitutional text, it implements the State Admission Clause. U.S. CONST., art. IV, §3, cl. 1.

125. *See generally* Robert W. Adler, *The Ancient Mariner of Constitutional Law: The Historical, Yet Declining Role of Navigability*, 90 WASH. U. L. REV. 1643, 1676–82 (2013) (surveying cases).

126. U.S. CONST. art. I § 8 cl. 3.

127. *See PPL Montana, LLC v. Montana*, 656 U.S. 576, 591 (2012) (states gained title to lands beneath navigable waters "subject only to the 'paramount power of the United States to control such waters for purposes of navigation in interstate and foreign commerce.'"); *see also* *United States v. Grand River Dam Auth.*, 363 U.S. 229, 231 (1960); *United States v. Twin Cities Power Co.*, 350 U.S. 222, 224 (1956); *United States v. Chandler-Dunbar Water Power Co.*, 229 U.S. 53, 62–63 (1913). This doctrine had antecedents in Supreme Court jurisprudence establishing plenary federal Commerce Clause authority over navigable waters. *See Monongahela Navigation Co. v. United States*, 148 U.S. 312 (1893); *South Carolina v. Georgia*, 93 U.S. 4 (1876); *Gilman v. City of Philadelphia*, 70 U.S. (3 Wall.) 713 (1865); *Gibbons v. Ogden*, 22 U.S. 1 (1824).

128. *See Chandler-Dunbar Co.*, 229 U.S. at 63 ("Congress possesses all the powers [over navigable waters] which existed in the states before adoption of the national Constitution, and which have always existed in the Parliament in England.").

conditions under which states may alienate trust property, it has underscored that any such dispositions remain subject to the federal navigation servitude.¹²⁹

Navigable waters are not the only area in which the states ceded some of their control over public trust resources to the federal government pursuant to the Commerce Clause and other constitutional authority. For example, states retain police power authority to manage and protect wildlife within their territory even though the Supreme Court rejected the doctrine of state “ownership” of wildlife.¹³⁰ With respect to some kinds of wildlife, including interstate and international migratory birds¹³¹ and threatened and endangered species,¹³² however, the states ceded to the federal government some level of trust responsibility and authority as well. Arguably, the same is true for protection of atmospheric resources. Although states have authority and responsibility as *parens patriae* to protect common resources from air pollution,¹³³ the Clean Air Act¹³⁴ reflects the federal government’s authority to redress interstate pollution and pollution that otherwise affects interstate commerce.¹³⁵

In addition, where the federal government held lands in territorial status prior to the creation of new states, despite its “plenary authority” over public lands¹³⁶ under the Property Clause,¹³⁷ it held lands underlying navigable waters in trust for

129. See *Chandler-Dunbar Co.*, 229 U.S. at 60–62 (holding that, when state law confers technical title to beds of navigable waters to adjacent landowners, title remains subject to the federal servitude); *Shively v. Bowlby*, 152 U.S. 1, 14–18 (1894) (holding that title to discrete parcels states grant to private parties remains subject to those rights the states surrendered to federal government). *Accord Illinois Central*, 146 U.S. at 465 (Shiras, J., dissenting).

130. *Hughes v. Oklahoma*, 441 U.S. 322, 329–36 (1979) (rejecting state effort to restrict interstate trade in wildlife as Commerce Clause violation but confirming the state’s police power authority over wildlife). Earlier, the Supreme Court had upheld state efforts to restrict interstate wildlife exports as sovereigns who hold wildlife in trust for their people. *Geer v. Connecticut*, 161 U.S. 519, 529–30 (1896).

131. See *Missouri v. Holland*, 252 U.S. 416, 430–35 (1920) (upholding Migratory Bird Treaty Act pursuant to federal power to enter into and enforce treaties with foreign nations).

132. See, e.g., *Gibbs v. Babbitt*, 214 F.3d 483 (4th Cir. 2000), *cert. denied*, 531 U.S. 1134 (upholding applicability of Endangered Species Act to intrastate population of red wolves based on tourism and other interstate impacts).

133. See, e.g., *Georgia v. Tennessee Copper Co.*, 206 U.S. 230 (1907) (affirming state power to redress interstate air pollution to protect the shared resources of its citizenry, including air, forests, and agricultural resources).

134. 42 U.S.C. §§ 7401-515.

135. See *Connecticut v. E.P.A.*, 696 F.2d 147, 156 (2d Cir. 1982).

136. See *Kleppe v. New Mexico*, 426 U.S. 529, 539–40 (1976); *Prior Appropriation*, *supra* note 1, at 750.

137. U.S. CONST. art IV, § 3, cl.2.

future states.¹³⁸ This preserved the rights of future states to be admitted on an equal footing with the original states and all other previously admitted states. Thus, under multiple provisions of the Constitution, the federal government held pre-statehood sovereign lands subject to two distinct, but related, trusts. First, it held those lands in trust for the future states themselves. Consistent with that trust, any alleged conveyances of sovereign lands to other parties were subject to strict judicial scrutiny and a presumption against such conveyances absent clear indications to the contrary.¹³⁹ Second, until those states were admitted, the federal government that held those lands as sovereign, bound itself by the traditional public trust doctrine.¹⁴⁰

2. Substance of the Public Trust Doctrine

None of the above principles of constitutional law dictate or authorize the federal government to dictate, legislatively or judicially, the substance of the public trust doctrine. There are three ways, however, in which federal constitutional provisions potentially implicate the substance of the public trust doctrine.

First, although the Commerce Clause is the constitutional vehicle through which the states conceded part of their public trust authority and responsibility to the federal government,¹⁴¹ it also grants substantive authority to Congress.¹⁴² Nothing in the text of the Commerce Clause, however, expressly invokes the public trust doctrine, much less instructs Congress about how to exercise such authority. This is logical given that the cession of public trust authority is simply one of many areas in which the states, in adopting the broadly phrased Commerce Clause, ceded authority over interstate and international commerce. The Commerce Clause provides no additional substantive guidance regarding the many other spheres in which it authorizes Congress to regulate interstate and foreign commerce. At a minimum, however, it confers federal public trust authority only regarding issues that fall within the reach of Commerce Clause power.

Second, by making state alienation of public trust resources subject to residual federal authority under the Commerce Clause and the federal navigational servitude, the U.S. Constitution provides one way to impose a floor on the public trust doctrine. The Commerce Clause and the federal navigational servitude ensure that public trust protection of common public resources—at least those affecting

138. See *Shively v. Bowlby*, 152 U.S. 1, 28–31 (1894); *Knight v. U.S. Land Ass'n*, 142 U.S. 161, 183–84 (1891); *Pollard's Lessee v. Hagan*, 44 U.S. 212, 222–23 (1845).

139. See *Idaho v. United States*, 533 U.S. 262, 272–73 (2001).

140. See *Shively*, 152 U.S. at 48–50.

141. See *supra* notes 114–16 and accompanying text.

142. U.S. CONST. art. I, § 8, cl. 3 (empowering Congress to “regulate Commerce with foreign Nations, and among the several States, and with the Indian Tribes.”).

interstate and foreign commerce—depends on application of public trust principles by both the states and the federal government.

The Property Clause of the Constitution also potentially influences the federal government's administration or supervision of sovereign public trust resources.¹⁴³ For two seemingly opposite but ultimately consistent reasons, however, the Property Clause lacks any substantive standards governing the use and management of public trust resources. With respect to public lands, the Property Clause grants Congress "plenary authority," unfettered discretion to determine how that property best serves the public interest, including the grant or sale of those lands to others.¹⁴⁴ If public trust resources are viewed as a part of the nation's property like any other, Congress would have discretion to alienate that property. Congress could abandon public trust resources, a result the Supreme Court did not sanction with respect to state public trust resources in *Illinois Central* and other cases.¹⁴⁵ The Property Clause as interpreted generally, therefore, appears to provide no substantive constraints on the federal government's disposition of trust resources.

Just as states hold sovereign lands in a different capacity from other public property, however, the federal government exercises Commerce Clause and navigational servitude authority in a manner distinct from its management of public lands generally. With respect to pre-statehood sovereign lands, the Equal Footing doctrine obligated the federal government to manage public trust resources in the same capacity as any future state, and to preserve them in trust for future states.¹⁴⁶ With respect to sovereign lands held by states, the Commerce Clause and the federal navigational servitude confer residual authority to protect and manage those resources for the traditional public trust uses of commerce and navigation.¹⁴⁷ Neither the Equal Footing Clause nor the Commerce Clause, however, delineate substantive principles regarding the exercise of the trust.

One must look elsewhere to find substantive rules or constraints on state and federal use, protection, and disposition of public trust resources. The third potential constitutional vehicle for doing so is the Ninth Amendment.¹⁴⁸ Debate continues regarding the extent to which the Ninth Amendment is an independent

143. U.S. CONST. art. IV, § 3, cl. 2 ("The Congress shall have Power to dispose of and make all needful Rules and Regulations respecting the Territory or other Property belonging to the United States; and nothing in this Constitution shall be so construed as to Prejudice and Claims of the United States, or of any particular State.").

144. *See* *Kleppe v. New Mexico*, 426 U.S. 529, 539 n.136 (1976); *Prior Appropriation*, *supra* note 1, at 750.

145. *See supra* notes 35–36 and accompanying text.

146. *See supra* notes 138–39 and accompanying text.

147. *See supra* notes 125–29 and accompanying text.

148. U.S. CONST. amend. IX ("The enumeration in the Constitution, of certain rights, shall not be construed to deny or disparage others retained by the people.").

source of unenumerated rights, and if so, the appropriate source of those rights.¹⁴⁹ I assumed a positive answer to that question in analyzing natural law support for prior appropriation, and do so here as well. If the legal rules governing the public trust doctrine are simply a matter of state and federal common law, they can be changed via common law process or by statute. Unless the government's duty as sovereign to maintain and protect those resources protects fundamental rights rooted so deeply in our legal tradition that they are viewed as inalienable, and thus "retained by the people." That possibility is explored next.

E. *The Public Trust Doctrine as Natural Law*

Courts have used language sounding in natural law to support the public trust doctrine, either expressly or by implication. That was true most often at times when natural law was more prominent in U.S. jurisprudence,¹⁵⁰ but recent judicial decisions have also invoked natural law to support public trust principles.¹⁵¹

Other legal scholars have addressed the relevance of natural law to the public trust doctrine, although from different perspectives than I present below. In an early treatment of the issue based on libertarian theory, Richard Epstein adopts a consequentialist view¹⁵² in which he asks what set of rules best promote and correct voluntary transactions, and what role government should play in protecting common property from government intrusion.¹⁵³ He ultimately adopts the view that any property held in common in the "original position" that pre-dated civil society warrants public trust protection.¹⁵⁴ George Smith and Michael Sweeney reach a nearly opposite conclusion, arguing for a much more restrictive application of the public trust doctrine,¹⁵⁵ based on a significantly theistic view of natural law.¹⁵⁶ Gerald Torres and Nathan Bellinger argue that the public trust reflects pre-existing or inherent rights that are "merely secured by government" and hence are "the chalkboard on which the Constitution is written."¹⁵⁷

149. See *Prior Appropriation*, *supra* note 1, at 777–78.

150. See, e.g., *Arnold v. Mundy*, 6 N.J.L. 1, 49–50 (N.J. 1821); see also *Prior Appropriation*, *supra* note 1, at 771–74 (identifying when natural law was most predominant in U.S. jurisprudence).

151. See, e.g., *Robinson Twp. v. Commonwealth of Pennsylvania*, 83 A.3d 901, 947–48 (Pa. 2013).

152. Epstein, *supra* note 18, at 412 n.1 ("what general set of legal institutions will advance the welfare of the public at large").

153. *Id.* at 413–14.

154. *Id.* at 428.

155. See Smith & Sweeney, *supra* note 18.

156. See *supra* note 6 and accompanying text.

157. Torres & Bellinger, *supra* note 18, at 288.

As argued in *Prior Appropriation*, in a society governed by positive law, natural law alone cannot support a significant legal doctrine, particularly where duly enacted positive law provides otherwise.¹⁵⁸ To that extent, I agree with Professor Huffman that unbounded reliance on vague principles of natural law to disrupt settled legal expectations is inconsistent with democracy.¹⁵⁹ Individuals and governments are bound to obey positive law even if it conflicts with their views about what is just, under principles of natural law or otherwise. That is particularly true in the United States with respect to theistic sources of natural law, given constitutional separation of church and state,¹⁶⁰ and absent a parallel in secular law.¹⁶¹ Despite that limitation, as discussed below, natural law reasoning remains relevant to the history and evolution of the public trust doctrine, particularly when properly bounded by checks and balances and other institutional constraints.

1. Natural Law in American Public Trust Jurisprudence

Natural law principles can inform or support a legal doctrine adopted via positive law. They can guide judicial analysis of common law issues of first impression.¹⁶² They can influence judicial exercise of equitable doctrines by shedding light on what is just from an historical perspective.¹⁶³ They can serve as a benchmark to determine whether a statute offends fundamental rights protected by the Ninth Amendment, although the debate continues about the standards that apply to Ninth Amendment analysis, and the appropriate sources of those standards.¹⁶⁴

Early American courts cited natural law to bolster analysis of the English public trust doctrine. Chief Justice Kirkpatrick relied heavily on natural law in *Arnold v. Mundy*,¹⁶⁵ arguably the most influential early state court public trust decision.¹⁶⁶ In

158. *Prior Appropriation*, *supra* note 1, at 779.

159. *See Huffman*, *supra* note 28.

160. U.S. CONST. amend. I.

161. *See Prior Appropriation*, *supra* note 1, at 779–80. For example, the Biblical Commandment that there is only one God is purely religious, whereas the prohibition against murder is a universally recognized principle of law. *See id.* at 755 n.66 and accompanying text.

162. *See id.* at 771–72.

163. *See id.* at 772–73.

164. *See id.* at 777–78.

165. 6 N.J.L. 1 (N.J. 1821).

166. Courts often cite *Illinois Central* as the seminal or “lodestar” case in U.S. public trust jurisprudence, *see, e.g.*, *Kootenai Env’t Alliance v. Panhandle Yacht Club, Inc.*, 671 P.2d 1085, 1088–89 (Idaho 1983); *Nat’l Audubon Soc’y v. Superior Court*, 658 P.2d 709, 719 (Cal. 1983), although one U.S. Supreme Court decision confers that honor on *Shively v. Bowlby*. *See Phillips Petroleum Co. v. Mississippi*, 484 U.S. 469, 473 (1988). *Arnold v. Mundy* predated all of the relevant U.S. Supreme Court cases, however, and the Supreme Court relied on Chief Justice Kirkpatrick’s reasoning as early as *Martin v.*

analyzing the grant from King Charles II to the Duke of York establishing the East Jersey settlement, Justice Kirkpatrick wrote:

If we shall find some things contained in it, which by the laws of England, as well as of all other civilized countries, *and even by the very law of nature itself*, are declared to be the common property of all men, then, by every fair rule of construction, we are to consider these things as granted to him, as the representative of the sovereign, and as a trustee to support the title for the common use
....¹⁶⁷

Moreover, Justice Kirkpatrick relied heavily on natural law in articulating what may be the most frequently quoted portion of his holding, and elsewhere in his opinion:

The sovereign power itself, therefore, cannot, consistently with the principles of the law of nature and the constitution of a well-ordered society, make a direct and absolute grant of the waters of the state, divesting all citizens of their common right. It would be a grievance which could never be long borne by a free people.¹⁶⁸

Consistent with the practice at the time of citing natural law as part of a multi-faceted analysis,¹⁶⁹ Chief Justice Kirkpatrick relied on natural law, along with the civil and common laws, to justify his holding.¹⁷⁰

Waddell's Lessee, 41 U.S. 367, 433–44 (1842), and in both *Illinois Cent. R.R. Co. v. Illinois*, 146 U.S. 387, 456 (1892), and in *Shively v. Bowlby*, 152 U.S. 1, 14–18 (1894).

167. *Arnold v. Mundy*, 6 N.J.L. 1, 70 (N.J. 1821) (emphasis added).

168. *Id.* at 78 (emphasis added). *See also id.* at 71 (“Of [the kind of property common to all citizens] according to the writers upon the law of nature and of nations, and upon the civil law, are the air, the running water, the sea, the fish, and the wild beasts.”); *id.* at 72 (property “destined for the common use and immediate enjoyment of every individual citizen, according to his necessity, being the immediate gift of nature to all men, and, therefore, called the common property”) (italics in original).

169. *See Prior Appropriation*, *supra* note 1, at 772.

170. *See* 6 N.J.L. at 75–76 (“On the whole, therefore, I am of opinion, that by the law of nature, which is the only true foundation of all the social rights; that by the civil law, which formerly governed almost all the civilized world, and which is still the foundation of the polity of almost every nation in Europe, that by the common law of England ...[n]avigable waters are common to all citizens.”).

Other early state courts relied on natural law to explain the public trust doctrine,¹⁷¹ although not universally.¹⁷² Some state courts rooted public trust principles in natural rights that formed a key part of Enlightenment political theory, without using the term “natural law.”¹⁷³ Even in modifying the result in *Arnold v. Mundy* by clarifying that the state legislature had power to dispose of discrete trust resources where consistent with the purposes of the trust, the New Jersey Supreme Court continued to rely on natural law principles.¹⁷⁴

The U.S. Supreme Court also relied on natural law in its early public trust jurisprudence. Although Justice Thompson dissented from the result in *Martin v. Waddell's Lessee*, he agreed with the basic natural law principle supporting the state public trust doctrine, paraphrasing Chief Justice Kirkpatrick:

The sovereign power itself, therefore, cannot consistently with the principles of the laws of nature, and the constitution of a well-ordered society, make a direct and absolute grant of the waters of the state, divesting all the citizens of a common right. It would be a grievance which could never be long borne by free men.¹⁷⁵

Likewise, in *Illinois Central*, Justice Field quoted with approval those portions of *Arnold v. Mundy* citing “the law of nature and the constitution of a well-ordered society.”¹⁷⁶ Other references to natural law in the Supreme Court’s nineteenth century public trust jurisdiction are more subtle, but still grounded in natural law reasoning.¹⁷⁷

171. See, e.g., *Palmer v. Mulligan*, 3 Cai. R. 307, 320 (N.Y. Sup. Ct. 1805) (referring to principles *ex jure naturae* [from natural law] as governing rights to divert streams).

172. See *Carson v. Blazer*, 2 Binn. 475, 483–87 (Penn. 1810) (extending state ownership to beds of waters navigable in fact rather than those influenced by the ebb and flow of the tides, modifying English common law to suit geography of Pennsylvania); *Eldridge v. Cowell*, 4 Cal. 80, 87 (1854) (rooting early California public trust law in “the law of nations, and the common and civil law”).

173. See, e.g., *Commonwealth v. Alger*, 61 Mass. 53, 67–68, 70 (Mass. 1851) (rooting public rights to navigable waters in Massachusetts in traditional English liberties as used in Magna Carta, the Declaration of Rights, and similar principles of English law).

174. See *Gough v. Bell*, 22 N.J.L. 441, 456–57 (N.J. 1850) (acknowledging that legislature is not omnipotent in exercising trust discretion because constrained by constitutional provisions and because its “powers are abridged by fundamental laws”); see also *id.* at 459 (quoting with approval statement in *Arnold* rejecting state’s ability to make absolute grants to all state waters “consistently with the laws of nature”).

175. *Martin v. Waddell's Lessee*, 41 U.S. 367, 420 (1842) (Thompson, J., dissenting).

176. *Illinois Cent. R.R. Co. v. Illinois*, 146 U.S. 387, 456 (1892).

177. See, e.g., *The Propeller Genesee Chief v. Fitzhugh*, 53 U.S. 443, 458 (1851) (applying congressional determination of navigability more generally because those distinctions “are founded in truth and reason”).

The Supreme Court most expressly relied on natural law to support its holding that sovereigns have a trust responsibility to manage common wildlife resources for the benefit of the public at large.¹⁷⁸ Tracing the origins of the common ownership doctrine to Roman law, in which wild animals are designated as “*ferae naturae*, which, having no owner, were considered as belonging in common to all the citizens of the state,”¹⁷⁹ Justice White wrote:

There are things which we acquire the dominion of, *as by the law of nature, which the light of natural reason causes every man to see*, and others we acquire by the civil law; that is to say, by methods belonging to the government. *As the law of nature is more ancient*, because it took birth with the human race it is proper to speak first of the latter. (1) Thus, all the animals which can be taken upon the earth, in the sea, or in the air,— that is to say, wild animals, — belong to those who take them ... because that which belongs to nobody is *acquired by the natural law* by the person who first possesses it.¹⁸⁰

Justice White explained why state regulation of wildlife was consistent with this natural law theory,¹⁸¹ and how those principles were adopted as positive law both in European civil codes¹⁸² and in English common law.¹⁸³ He concluded:

While the fundamental principles upon which the common property in game rest have undergone no change, the development of free institutions had led to the recognition of the fact that the power or control lodged in the state, resulting from this common ownership, is to be exercised, like all other powers of government, as a trust for the benefit of the people, or for the benefit of private individuals as distinguished from the public good.¹⁸⁴

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

179. *Id.* at 522.

180. *Id.* at 523 (emphasis added).

181. *Id.* at 524.

182. *Id.* at 526 (citing articles 714 and 715 of the Napoleonic Code).

183. *Id.* at 526–27 (quoting Blackstone’s analysis of the natural law basis for a public trust in common resources such as light, air, water, and animals).

184. *Id.* at 529.

In his dissent in *Geer*, Justice Field rooted his decision in natural law regarding ownership of resources that are not the property of anyone “until they are brought into subjection or use by the labor or skill of man,” and “[t]hat which belongs to nobody is acquired by the natural law by the first person who possesses it.”¹⁸⁵ Justice Field’s dissent was not based on any disagreement with the fundamental principle that wildlife is a common resource held in trust by the government as sovereign until individual animals are reduced to private ownership. Rather, he would have rejected as a Commerce Clause violation the position that a state could exercise the trust to the exclusion other states.¹⁸⁶ To support that constitutional position, he continued to rely on natural law, arguing that exclusionary state regulation “would convert [wildlife] from the freedom of use which belongs to property in general to the limited use of the persons or communities where found”¹⁸⁷ In other words, exclusive state trust ownership did more to restrict than to promote the common liberty supported by natural law.

When the Supreme Court overruled the state “ownership” doctrine of *Geer* based on the same objections raised by Justice Field in his dissent,¹⁸⁸ it did nothing to reject the principle that wildlife is a shared resource that is incapable of “ownership,” either by an individual or by the state. Rather, it referred to state ownership as a legal fiction to justify the state’s legitimate interest in regulating and protecting wildlife for common benefit. As a matter of federalism, the constitutional treatment of wildlife under *Hughes* is no different than the Supreme Court’s treatment of navigable waters discussed earlier.¹⁸⁹ States have responsibility to manage and protect wildlife as a shared resource for the benefit of their citizens, just as states have responsibility to do so with respect to navigable waters. But in ratifying the Constitution, states ceded that portion of their sovereignty regarding wildlife as necessary to empower the federal government to regulate and protect wildlife in interstate and foreign commerce.

The key difference between wildlife and navigable waters is in the positive law implementation of the natural law principle. With respect to the beds of navigable waters, it makes sense to provide that the state as sovereign holds *jus publicum* title on behalf of the public at large, subject to the federal government’s superior authority to regulate navigability for Commerce Clause purposes.

185. *Id.* at 539 (Field, J., dissenting).

186. *Id.* at 538, 541.

187. *Id.* at 542.

188. *Hughes v. Oklahoma*, 441 U.S. 322, 329–36 (1979) (citing Justice Field’s dissent in *Geer*, 161 U.S. at 535).

189. *See supra* Section I.D.1.

“Ownership” makes little sense with respect to a non-stationary resource such as wildlife,¹⁹⁰ but public trust authority and responsibility remains.

Consistent with the decline in the use of natural law by American judges beginning in the twentieth century and its replacement by legal positivism as the primary mode of legal analysis,¹⁹¹ modern public trust cases have largely abandoned their overt natural law trappings, except in two respects. First, modern cases continue to cite Roman law as foundational,¹⁹² and that law refers to “the law of nature.”¹⁹³ Second, in describing the public trust as an “ancient doctrine of common law,” courts implicitly recognize that early common law was influenced strongly by natural law.¹⁹⁴

The Pennsylvania Supreme Court recently adopted natural law reasoning in construing the state’s constitutional environmental rights provision. In *Robinson Township v. Commonwealth*, the Court described the Declaration of Rights in Article I of Pennsylvania’s Constitution as “the terms of the social contract between government and the people that are of such ‘general, great and essential’ quality as to be ensconced as ‘inviolable.’”¹⁹⁵ It then described those as “inherent in man’s nature and preserved rather than created by the Pennsylvania Constitution.”¹⁹⁶ Despite the fact that the Pennsylvania Environmental Rights Amendment¹⁹⁷ was adopted long after the initial adoption of the Pennsylvania Constitution,¹⁹⁸ the Court deemed it as “[a]mong the inherent rights of the people.”¹⁹⁹

By now, American public trust jurisprudence has developed a firm footing in the nation’s positive law, both through the common law²⁰⁰ and to some extent

190. See *Missouri v. Holland*, 252 U.S. 416, 434 (“To put the claim of the State upon title is to lean upon a slender reed. Wild birds are not in the possession of anyone; and possession is the beginning of ownership.”).

191. See *Prior Appropriation*, *supra* note 1, at 774–76.

192. See *Huffman*, *supra* note 28 (tracing the history of the public trust doctrine from Roman times to today).

193. See *id.* at 7.

194. See *e.g.*, *Ariz. Ctr. For L. in the Pub. Int. v. Hassell*, 837 P.2d 158, 166 (Ariz. Ct. App. 1991).

195. *Robinson Twp. v. Commonwealth of Pennsylvania*, 83 A.3d 901, 947 (Pa. 2013).

196. *Id.* at 948.

197. See PA. CONST. art. I, § 27.

198. For a detailed history and interpretation of amendment, see generally John C. Dernbach, *Taking the Pennsylvania Constitution Seriously When It Protects the Environment: Part I—An Interpretive Framework for Article I, Section 27*, 103 DICKINSON L. REV. 693 (1999).

199. *Robinson Twp.*, 83 A.3d at 948. Perhaps not coincidentally, it was Pennsylvania delegates to the Constitutional Convention who proposed an amendment to guarantee common access rights of hunting on public lands and fishing in navigable waters. See *Rakove*, *supra* note 94, at 329–30.

200. See *supra* Section I.C.

through the Commerce Clause and other provisions of the U.S. Constitution.²⁰¹ It also has roots in natural law reasoning. Analysis of those natural law roots remains important in deciding two important legal issues: first, whether states have the authority to eliminate the doctrine or to curtail it; and second, the extent to which the doctrine is limited to the beds of navigable waters, or whether it is legitimate to expand the doctrine to protect other resources, including the atmosphere. Natural law provides support or explanatory context for both the Roman public trust doctrine and the public trust doctrine as it developed in English common law, and as reflected in Magna Carta and the Charter of the Forest.

2. Greco-Roman Natural Law and the Roman Public Trust Doctrine

Some Roman Law scholars link the Roman public trust doctrine to natural law. It is not clear, however, how much the Roman public trust derived from concepts of natural law as opposed to a pragmatic balancing of public and private rights in certain resources.

The *Institutes of Justinian* expressly use the words “by the law of nature.” In addition, Frier notes that the *Institutes* describe natural law as prior to the civil law of individual states, and that the notion of *res communes* “antedate[s] the emergence of civil government, which through law gradually establishes and protects other types of property, but . . . leaves certain things (the air, the sea, the seashore, larger rivers) in their original, pre-legal condition.”²⁰² This is similar to later Enlightenment theories about the evolution of property from pre-state to state status.²⁰³

Early Greek philosophers debated the value of public versus common property in a well-ordered society, often arguing against extensive private property in favor of a sharing of common resources.²⁰⁴ The Romans ultimately adopted a system of private property,²⁰⁵ but that does not presumptively conflict with the Roman public trust doctrine any more than our system of private property conflicts with the American public trust doctrine. Both assume that some resources are more valuable if held in common. Roman law imposed constraints on the sovereignty of an otherwise absolute ruler,²⁰⁶ which logically included restraints on the ability of the

201. See *supra* Section I.D.

202. Frier, *supra* note 19, at 642–43. See also Ruhl & McGinn, *supra* note 19, at 155-156 (linking the Roman public trust doctrine to “a very early period in human experience, the Golden Age, when no property was held in private, but all in common”).

203. See *infra* Section I.E.3.

204. See RUSSELL, *supra* note 44, at 111, 231 (Cynics), 252 (Stoics). *But see id.* at 243, 246 (demonstrating contrary view of Epicureans).

205. See WILLIAM WARWICK BUCKLAND, *TEXTBOOK OF ROMAN LAW* 182 (2d ed. 1932) (explaining that wealth or private property could be held in several forms).

206. See Straumann, *supra* note 60, at 434.

sovereign (whether in the form of an Emperor or other authority) to alienate common resources.

Although there were antecedents,²⁰⁷ natural law during the Roman Empire manifested most prominently in Stoic philosophy.²⁰⁸ Stoicism focuses on individual behavior and virtue rather than on property and the relationship between the individual and the state.²⁰⁹ According to at least one historian of philosophy, however, the Stoics influenced the evolution of natural law and natural rights during the Enlightenment:

The doctrine of natural right, as it appears in the sixteenth, seventeenth, and eighteenth centuries, is a revival of a Stoic doctrine, though with important modifications. It was the Stoics who distinguished *jus naturale* from *jus gentium*. Natural law was derived from first principles of the kind held to underlie all general knowledge. By nature, the Stoics held, all human beings are equal. Marcus Aurelius, in his *Meditations*, favours ‘a polity in which there is the same law for all, a polity administered with regard to equal rights and equal freedom of speech, and a kingly

207. See RUSSELL, *supra* note 44, at 11 (noting the influence of the concept of fate on Greek thought, suggesting it as a source of natural law), 27 (discussing early Greek concept of justice as dictated by a natural law that sets eternal boundaries), 114 (explaining the influence of fate or necessity on the concept of justice in Plato’s *Republic*). See also Hadley Arkes, *A Natural Law Manifesto or an Appeal from the Old Jurisprudence to the New*, 87 NOTRE DAME L. REV. 1245, 1248 (2012) (quoting Aristotle’s view that “law sprang from the nature of only one kind of creature”); Daniel R. Heimbach, *Natural Law in the Public Square*, 2 LIBERTY U. L. REV. 685, 689–91 (2008) (discussing natural law theories of Protagoras, Socrates, Plato, Aristotle, and Cicero); Robert P. George, *Natural Law, the Constitution, and the Theory and Practice of Judicial Review*, 69 FORDHAM L. REV. 2269, 2269 (2001) (tracing natural law theory to Aristotle); Kirk A. Kennedy, *Reaffirming the Natural Law Jurisprudence of Justice Clarence Thomas*, 9 REGENT U. L. REV. 33, 41–44 (1997) (tracing natural law theory from Greek philosophers through the Catholic tradition); Note, *Natural Law for Today’s Lawyer*, 9 STAN. L. REV. 455, 459 (1957) (noting natural law roots from Greece and Rome, including the Justinian Institutes).

208. See *infra* Section I.E.2.

209. See RUSSELL, *supra* note 44 (distinguishing between Stoic rejection of materialism in favor of virtue and democratic idea that equality and justice must also include power and property). Any reference to “Greek philosophy,” of course, must reflect that it was, itself, extremely diverse. For example, although Plato pre-dated the stoics by several centuries, his *Utopia* advocated an authoritarian system and envisioned only limited private property. See *id.* at 108, 113–15, 119. The cynics rejected the idea of private property altogether. See *id.* at 231. Aristotle took an intermediate view: “Property should be private, but people should be so trained in benevolence as to allow the use of it to be largely common. Benevolence and generosity are virtues, and without private property they are impossible.” *Id.* at 188–89. For a contemporary example of the degree to which Stoicism focuses on the individual, see generally RYAN HOLLIDAY & STEPHEN HANSELMAN, *THE DAILY STOIC, 366 MEDITATIONS ON WISDOM, PERSEVERANCE, AND THE ART OF LIVING* (2016).

government which respects most of all the freedom of the governed.²¹⁰

In the face of centuries of Greco-Roman history in which privileges were reserved for an elite class of nobles or wealthy citizens and merchants, Stoic natural law established the idea of natural rights and human equality. To the extent that the public trust doctrine supports equal access by all members of a society to common resources as a matter of fundamental rights (as opposed to economic efficiency), as explained in the following section, this was a critical evolution.

3. Enlightenment Natural Law and the English Public Trust Doctrine

Natural law in the Enlightenment supports the English public trust more clearly than is true with respect to Stoic natural law and the Roman public trust because the relationship between individuals and their governments is better reflected in Lockean notions of private versus public property.²¹¹ This is important because American courts inherited public trust law from English common law, and to some extent from its manifestation in Magna Carta and the Charter of the Forest, irrespective of whether Roman civil law influenced English public trust law.²¹²

Natural law in the Enlightenment is not based primarily on theistic sources.²¹³ It relies on reason to deduce the optimal relationship between individuals and the state.²¹⁴ The theory begins with hypothetical pre-political societies,²¹⁵ which

210. RUSSELL, *supra* note 44, at 270. Russell believed that the “self-evident” truths in the Declaration of Independence reflected the application to political rights of the idea of self-evident maxims in mathematics from Greek geometry. *Id.* at 36. *See also*, Straumann, *supra* note 60, at 425–31.

211. *See, e.g.*, *Prior Appropriation*, *supra* note 1, at 781, 800; Epstein, *supra* note 15, at 2346; Eric T. Freyfogle, *Ethics, Community, and Private Land*, 23 *ECOL. L.Q.* 631, 636–37 (1996); Morton J. Horowitz, *The History of Public/Private Distinction*, 130 *U. PA. L. REV.* 1423, 1424 (1982). *But see* Terry W. Frazier, *Protecting Ecological Integrity Within the Balancing Function of Property Law*, 28 *ENV'T L.* 53, 60 (1998) (arguing that “Neo-Lockeans” have lulled environmentalists into use of Lockean ideas).

212. *See supra* Section I.C.

213. It would have been perilous for Reformation and Enlightenment writers to disassociate themselves entirely from religion. *See generally* Peter Laslett, *Introduction to JOHN LOCKE, TWO TREATISES OF GOVERNMENT* (Peter Laslett, ed., Cambridge Univ. Press 1988) (1690) (detailing the political and religious constraints Locke faced in writing the Two Treatises and other works). Often, they cited and analyzed religious text to refute theories such as the divine right of kings supported by others, as was true, for example, for Locke’s entire first treatise. *See generally* LOCKE, *supra* note 213, bk. I (containing detailed refutation, based Biblical text, of Sir Robert Filmer’s defense of the divine right of kings).

214. *See Prior Appropriation*, *supra* note 1, at 757–60; LOCKE, *supra* note 213, bk. II, ch. 2, § 12 (asserting that there is a law of nature based on reason); ch. 6, § 57 (asserting that freedom depends on the law of reason).

215. It is not clear whether any of the liberal theorists of the Enlightenment believed literally that early societies acted in the ways they described, as opposed to using hypotheticals to describe and explain

Locke and others called “the state of nature,”²¹⁶ and then speculates about the agreements, or “social contracts,” reached by individuals and their rulers in establishing governments.²¹⁷ Individuals in the state of nature enjoyed “perfect freedom,” or liberty, and “perfect equality,” because no government existed to restrict freedom to take whatever action was consistent with the well-being of individuals or their family or other group.²¹⁸ This included unlimited access to the “commons” for purposes of hunting, fishing, gathering, and other activities necessary for subsistence.²¹⁹ In this sense, perfect liberty for all was perfectly egalitarian, but inconsistent with private property because that would limit the ability of anyone but a property owner to engage in hunting, fishing, foraging, and other subsistence activities without trespassing.

Under this construct, perfect freedom works until there is conflict between two or more individuals, competing for the same resource or otherwise. Natural law theorists postulated that pre-society individuals were bound by a “Law of Nature . . . which obliges every one,” and instructing that “being all equal and independent, no one ought to harm another in his Life, Health, Liberty, or Possessions.”²²⁰ To prevent or redress violations of this fundamental rule, individuals could resort to self-help, grounded in the natural right to self-defense and self-preservation and the obligation

their views of more perfect governments. See RUSSELL, *supra* note 44, at 550 (describing Hobbes’s Leviathan as presenting “an explanatory myth” to explain why people accept government with its limits on freedom). Recent science suggests that humans began to band into primitive societies extremely early in history, see YUVAL NOAH HARARI, *SAPIENS* 22–28 (2015), but also note that early human societies varied dramatically in their social order and forms of governance. See *id.* at 42–45.

216. See LOCKE, *supra* note 213, bk. II, ch. 2; see also RUSSELL, *supra* note 44, at 550 (describing Hobbes’ description of the “state of nature”).

217. See LOCKE, *supra* note 213, bk. II, ch. 8 (describing the beginning of political societies). See also RUSSELL, *supra* note 44 at 550 (describing Hobbes’s description of the “social contract”). Hobbes differed from Locke and later Rousseau in arguing that the social contract was between individuals agreeing to cede all power to a ruler, thus supporting his views of absolute monarchy. Locke and Rousseau, by contrast, believed the contract was between individuals and their government, thus preserving rights for individuals and preserving the rights of citizens to rebel against their government for violation of the contract. See RUSSELL, *supra* note 44, at 551. The degree to which any such “agreements” came in the form of overt discussion and understanding, as opposed to tacit acknowledgment or acceptance, is obviously a matter of sheer speculation and likely varied widely across cultures and societies. More formal and clearly conscious written agreements, in the form of written constitutions or other governance agreements, came much later in history. See, e.g., *Robinson Twp. v. Commonwealth of Pennsylvania*, 83 A.3d 901, 947–48 (Pa. 2013) (explaining that Article I of the Pennsylvania Constitution reflected a “social contract” between the people and the Commonwealth regarding fundamental rights that had been reserved).

218. See LOCKE, *supra* note 213, bk. II, ch. 2, § 4; See also RUSSELL, *supra* note 44, at 550.

219. See Freyfogle, *supra* note 211, at 633; CHURCHILL, *supra* note 62, at 7 (describing use of common forests and other resources for hunting and fishing in early Britain); RUSSELL, *supra* note 44, at 634 (noting that the poor status of rural laborers in Locke’s time was mitigated by the commons, to which people had important rights); Robinson, *supra* note 62.

220. LOCKE, *supra* note 213, bk. II, ch. 2, § 6.

to “preserve the rest of Mankind.”²²¹ Locke and others recognized, however, that a society in which individuals judge their own cause is inherently problematic.²²² Thus, it made sense to forego the perfect liberty reflected in self-help in return for a system of impartial justice.

Beginning with a theistic perspective, Locke suggested that God gave the Earth to humanity in common, along with all of the fruits of nature.²²³ He then reasoned, however, that people must be able to appropriate resources to subsist,²²⁴ and that individuals or groups were not likely to invest their labor and capital in farming or other endeavors involving individual parcels of land or other resources absent security of ownership.²²⁵ That led to Locke’s famous maxim that private property is justified when an individual, through labor or other investment, adds value to a previously common resource.²²⁶ Why would one invest time and labor to plant crops, dig for minerals, or engage in other economically useful activities if one could not reap profits from the resulting increase in value?

In accepting private property and its suggested benefits, however, individuals ceded their “perfect freedom” on land reduced to individual ownership.²²⁷ But societies needed to decide which resources remained so fundamental to the common welfare that “more collective liberty and welfare would be lost by allowing private ownership than society gained by privatizing those resources.”²²⁸ Even as the parent of the liberal theory of private property rights, Locke noted that private property was justified only “where there is enough, and as good left in common for

221. *Id.* at bk. II., ch.2, §§ 6–7.

222. *Id.* at bk. II, ch. 2, § 13; bk. II, ch. 3, § 21.

223. *Id.* at bk. II, ch. 5, §§ 25–26. He included common resources such as water in a fountain, *id.* at § 29, and fish and wildlife, *id.* at § 30.

224. *Id.* at § 26.

225. An alternative, proposed by both Plato and later Thomas More, among others, was a Utopian society in which all wealth was owned collectively. See RUSSELL, *supra* note 44, at 128, 519.

226. LOCKE, *supra* note 213, bk. II, ch. 5, § 27 (“Whatsoever then he removes out of this state that Nature hath provided, and left it in, he hath mixed his Labour with, and joyned to it something that is his own, and thereby makes his Property”); *id.* at § 37 (individual ownership increases land productivity); see also Eric T. Freyfogle, *Community and the Market in Modern American Property Law*, in LAND, PROPERTY, AND THE ENVIRONMENT 382, 634 & nn.8–9 (John F. Richards, ed. 2002).

227. *Cf.* Freyfogle, *supra* note 226, at 382, 388 (noting that recognition of intensified private land use resulted in loss of community and individual liberty values).

228. Far from advocating purely individual rights, Locke argued that government was beneficial for the preservation of the “common good.” See LOCKE, *supra* note 213, bk. II, ch. 9, § 131. See also Alice Ingold, *Commons and Environmental Regulation in History: The Water Commons Beyond Property and Sovereignty*, 19 THEORETICAL INQUIRIES L. 425, 440 (2018) (noting that even in the “age of property,” the commons “stood out as an exception”).

others,”²²⁹ that commons remain so by compact,²³⁰ and that governments have the authority to retain land in public ownership.²³¹ Despite changing economies, individuals did not abandon hunting and fishing on common land. Moreover, commerce depended on navigable waters and other common “public highways.”²³² Allowing private property owners to monopolize public highways and certain other resources was inequitable²³³ and could do more to impair than to support growing and evolving economies.²³⁴

This linkage between the public trust and Enlightenment natural law theory was also important to interpretations of Magna Carta and the Charter of the Forest by Coke and Blackstone, and the use of those ideas in the Colonies and in early judicial opinions in the American Republic. Coke framed the charters as reaffirmations of pre-existing, “ancient” English liberties, including rights to rely on public natural resources for subsistence and other purposes, at a time that was contemporaneous with early British settlements in North America.²³⁵ Blackstone merged that idea with Locke’s theories of natural rights, and Blackstone’s Commentaries were the primary vehicle through which those linked ideas reached lawyers and political activists in the North American colonies.²³⁶ Some scholars argue that Locke’s theory of property rights was directed more at evolving practices in the

229. See LOCKE *supra*, bk. II, ch. 5, § 27.

230. *Id.* at § 28.

231. See *id.* at § 35. In this section, Locke asserts that public land is held in common by compact, but is protected by positive law.

232. This explains the intensive focus in early American law on protection of navigable waters as public highways for common use. See, e.g., *Pollard’s Lessee v. Hagan*, 44 U.S. (3 How.) 212, 229 (1845); *Martin v. Waddell’s Lessee*, 41 U.S. (16 Pet.) 367, 410, 414 (1842); see generally Adler, *supra* note 125, at 1684–86.

233. See Eric T. Freyfogle, *Ownership and Ecology*, 43 CASE W. L. REV. 1269, 1295 (1993) (noting that Locke bounded his theory of private property, as a matter of equity, by circumstances in which others have access to similar resources).

234. See Alison Rieser, *Ecological Preservation as a Public Property Right: An Emerging Doctrine in Search of a Theory*, 15 HARV. ENV’T L. REV. 393, 400–01 (1991) (arguing that common access to some resources promotes greater “scale returns” and higher overall value); Carol Rose, *The Comedy of the Commons: Custom, Commerce, and Inherently Public Property*, 53 U. CHI. L. REV. 711, 728–29 (1986) (citing socially optimal resource allocation as justification for public trust theory).

235. See Turner, *supra* note 65, at 44–45. See also Dillon, *supra* note 55, at 98–101 (noting Coke’s view that English common law pre-dated the Norman conquest, and that Magna Carta merely reconfirmed those principles); Clark, *supra* note 73, at 266 (noting that public fishing rights in navigable waters predated Magna Carta, and the Charter merely eliminated the Crown’s ability to restrict those rights).

236. See Turner, *supra* note 65, at 46 (noting that Blackstone was the standard text for apprentice lawyers in North America, and that for the colonists, “Magna Carta continued to be fundamental law, standing above both king and Parliament and unalterable by statute.”); Dillon, *supra* note 55, at 99 (“Ultimately, it was Coke transmitted through Blackstone that brought the ‘mythic’ Magna Carta and Cokes ‘exalted conception of the common law’ to the colonies in North America.”).

North American colonies than at Britain, in which property rights were already secure.²³⁷ Moreover, Blackstone republished and re-invigorated the Forest Charter, principles of which were then adopted and cited by courts and attorneys in the United States.²³⁸

The public trust doctrine reflects a societal determination, consistent with natural law, about what resources should remain in common to protect liberty and promote the common welfare. Resources such as the “air, the running waters, the sea and the seashore” were logical candidates for common access. Land can easily be parceled in ways that allows everyone to have a fair share for themselves. The same is not true for a river, in which privatization of one segment could allow only some individuals to ship their goods to market, or to charge others monopolistic fees to do so.²³⁹ The precise legal means of doing so, via active public ownership (*res publicum*) or through some legal concept of a commons (*res communes*) reflected particular positive law applications of the natural law principle that certain lands and resources were too valuable as a matter of common liberty to cede to private ownership.

4. The Public Trust Doctrine as an Attribute of Sovereignty

Courts routinely describe government ownership of public trust resources as an attribute of sovereignty.²⁴⁰ As emphasized by Chief Justice Taney in *Martin v. Waddell*: “[W]hen the revolution took place, the people of each state became themselves sovereign; and in that character hold the absolute right to all their navigable waters, and the soils under them, for their own common use”²⁴¹ This

237. See Martti Koskenniemi, *Sovereignty, Property and Empire: Early Modern English Contexts*, 18 THEORETICAL INQUIRIES L. 355, 380–81 (2017).

238. See Robinson, *supra* note 62, at 320–22.

239. See Carol M. Rose, *Given-ness and Gift: Property and the Quest for Environmental Ethics*, 24 ENV'T L. 1, 2, 6 (1994) (arguing that resources that are beyond anyone's control, such as air and water, are “outside the comfortable range of property,” as are resources such as entire stocks of fish and wildlife that cannot be compartmentalized into individual parts); see also Craig Anthony Arnold, *The Reconstitution of Property: Property as a Web of Interests*, 26 HARV. ENV'T L. REV. 281, 309 (2002) (arguing that water is unsuitable for privatization); Epstein, *supra* note 18, at 415 (asserting that each river segment is worth little unless all are subject to common ownership).

240. See, e.g., PPL Montana, LLC v. Montana, 656 U.S. 576, 589 (2012) (states hold title to beds of navigable waters “in their capacity as sovereigns”); Idaho v. United States, 533 U.S. 262, 272 (2001) (ownership of lands submerged by navigable waters is “strongly identified with the sovereign power of government,” quoting Montana v. United States, 450 U.S. 544, 552 (1981)); Idaho v. Coeur d'Alene Tribe of Idaho, 521 U.S. 261, 286 (1997) (describing “the perceived character of submerged lands, a perception which underlies and informs the principle that these lands are tied in a unique way to sovereignty”); Pollard's Lessee v. Hagan, 44 U.S. (3 How.) 212, 221 (1845) (providing rationale for state trust ownership under equal footing doctrine justified because new states have the “same rights of freedom, sovereignty, and independence” as existing states).

241. *Martin v. Waddell's Lessee*, 41 U.S. (16 Pet.) 367, 410 (1842). See also Arnold v. Mundy, 6 N.J.L. 1, 49 (N.J. 1821) (“the wisdom of [English] law has placed [trust resource] in the hands of the

has been true not only for navigable waters, but also for common resources such as wildlife²⁴² and air.²⁴³ Legal scholars also note that the public trust doctrine has roots in sovereignty, implying that sovereign trust duties cannot lightly be altered and may not be eliminated.²⁴⁴

Locke's theory of government maintains that people themselves are sovereign and cede only those rights necessary to serve necessary governmental functions.²⁴⁵ One of those essential functions, hence a fundamental obligation of sovereignty, is to protect private property.²⁴⁶ We would not accept governmental failure to protect private property any more than we would accept its failure to protect us from foreign invasion. Locke's justification for private property included several conditions designed to prevent some individuals or groups from monopolizing key resources, which would violate the tenet that government exists to maximize collective, not individual, freedom.²⁴⁷ Locke's definition of the "property" government is obligated to protect is much broader than either the lay or legal concept of property suggests. It includes "Lives, Liberties, and Estates, which I [Locke] call by the general Name, Property."²⁴⁸ Individuals would not have ceded a large portion of their freedom to the government to protect the rights of the few, meaning that government has as much of a sovereign obligation to protect common property as it does to protect private property. Natural law reasoning supports the idea that the sovereign has an obligation to enforce public trust resource protection for the common good.²⁴⁹

Likewise, who is to regulate, manage, or protect common pool resources to ensure they are not overused or otherwise degraded or destroyed? As portrayed most famously by Garrett Hardin in *The Tragedy of the Commons*, unregulated common

sovereign power, to be held, protected, and regulated for the common use and benefit"), 53 ("the people, through their legislatures, manage and regulate trust resources in their sovereign capacity.").

242. See *Geer v. Connecticut*, 161 U.S. 519, 521 (1896) (control by the people "in their united sovereignty").

243. *Georgia v. Tennessee Copper Co.*, 206 U.S. 230, 237 (1907) ("This is a suit by a state for an injury to it in its capacity of quasi-sovereign. In that capacity the state has an interest independent of and behind the titles of its citizens, in all the earth and air within its domain.")

244. See, e.g., WOOD, *supra* note 3, at 125–42; Michael C. Blumm & Courtney Engel, *Proprietary and Sovereign Public Trust Obligations: From Justinian to Hale to Lamprey to Oswego Lake*, 43 VERMONT L. REV. 1 (2018); Torres & Bellinger, *supra* note 18, at 285–86. But see Lazarus, *supra* note 25, at 633 (presenting competing perspective that public property basis for protecting natural resources is giving way to sovereign regulatory power).

245. See *supra* Section I.E.3.

246. See LOCKE, *supra* note 213, bk. II, ch. 9, §§ 123–24.

247. See *supra* notes 250–53 and accompanying text.

248. LOCKE, *supra* note 213, bk. II, ch. 9, § 123 (italics and capitalization in original).

249. See *supra* note 228 and accompanying text.

property incentivizes each individual to consume a greater portion of the resource because the individual reaps all of the resulting profits while accompanying damage to common resources is shared equally.²⁵⁰ Climate change is the most profound current example of that phenomenon, but history holds many others.

Governments can adopt different positive law means to protect common trust resources. Government can assume formal title to a common resource and manage it accordingly.²⁵¹ It can decree that certain resources, such as wildlife, are inherently incapable of private ownership, but that use of those resources can be regulated for the public benefit.²⁵² It might allow for usufructuary property rights in defined portions of common resources such as water, but with ownership or public trust oversight held by the common government.²⁵³ The precise form chosen as a matter of positive law is less important than the proper assumption by the government of its sovereign obligation to manage and protect public trust resources.

II. IMPLICATIONS OF NATURAL LAW FOR THE PAST AND FUTURE OF THE PUBLIC TRUST DOCTRINE

Prior Appropriation identified several core principles against which to evaluate the legitimacy of claims asserted by western property rights advocates based on prior appropriation. Although these principles are not equally applicable to claims by environmental advocates based on the public trust doctrine, parallel analysis requires that all be analyzed here with respect to the public trust doctrine as well. These principles help to explain how the public trust doctrine developed in the past, but they also suggest guidelines for its future evolution.

A. Temporal and Societal Context

The first principle from *Prior Appropriation* is that natural law has not been a fixed concept throughout history. It reflects the political and social context of the time.²⁵⁴ Thus, assertions that natural law justifies extensions of prior appropriation doctrine or public trust doctrine, or that such extensions would upset longstanding

250. Garrett Hardin, *The Tragedy of the Commons*, 162 *SCIENCE* 1243 (1968) (“Freedom in a commons brings ruin to all . . .”).

251. This is the legal form used for navigable waters, in which English and American law distinguishes between *jus publicum* and *jus privatum*, with different associated rights and obligations. See *Idaho v. Coeur d’Alene Tribe of Idaho*, 521 U.S. 261, 286 (1997); *Shively v. Bowlby*, 152 U.S. 1, 11–14 (1894).

252. This is what the U.S. Supreme Court ultimately decided with respect to wildlife. *Hughes v. Oklahoma*, 441 U.S. 322, 329–36 (1979).

253. See *Nat’l Audubon Soc’y v. Superior Court*, 658 P.2d 709, 712 (Cal. 1983).

254. See *Prior Appropriation*, *supra* note 1, at 778–79.

legal expectations or contravene democratic principles, “must be analyzed and applied in our current political and social context, not through the lens of a past era.”²⁵⁵

In the case of prior appropriation, as applied to grazing or other resources, federal positive law governing public lands makes perfect sense.²⁵⁶ Federal multiple-use management of common resources reflects the current social and political context in which large segments of the public use public lands for recreation and other common uses, while smaller numbers of profit-seeking individuals and businesses use public lands for more traditional resource extraction purposes. To the extent that natural law is relevant to federal land policy, it justifies societal decisions to retain some land and resources in the public domain.²⁵⁷ U.S. positive law supports that regime. Thus, although natural law would also support making public grazing land available for appropriation, natural law ranch advocates bear the burden of convincing the key decisionmaker, Congress, to modify positive law to do so.

Likewise, to the extent that the public trust doctrine has origins in natural law, it should be analyzed and applied through the lens of contemporaneous natural resource use and values. The applicable principle of natural law is that, in forming civil societies, individuals ceded to government the authority to make certain resources available for private property, but to reserve other resources for common use and protection.²⁵⁸ This applies regardless of whether one interprets natural law from a perspective of liberty,²⁵⁹ economic efficiency, or both.²⁶⁰ Collective freedom and economic welfare are both maximized by holding some resources in common rather than privatizing them. Different societies implement that concept through their positive law as appropriate to their circumstances, but natural law remains a tool to evaluate the justice of those choices.

In early, sparsely settled societies, there may have been little or no need to use positive law to protect common resources that had been shared through local custom and practice.²⁶¹ That changed as land and resource use intensified, as competition for resources increased, and as individuals or groups sought to monopolize what was formerly common.²⁶² Thus, the Roman public trust doctrine evolved in response to conflicts caused when wealthy citizens built coastal villas that

255. *Id.*

256. *See id.* at 802–04.

257. *See supra* Section I.E.

258. *See supra* Section I.E.

259. *See Freyfogle, supra* note 227, at 395.

260. *See Epstein, supra* note 18, at 414–15.

261. *See Rose, supra* note 239, at 13–14.

262. *See Freyfogle, supra* note 227, at 386–88.

interfered with traditional access by local fishers.²⁶³ As manifested in Magna Carta, the Charter of the Forests, and in common law,²⁶⁴ the English public trust doctrine protected “ancient rights” to common resource access against the intrusion of the Norman and Angevin monarchs. Yet even in England, subsequent generations have modified and reinterpreted the principles inscribed in the Charter of the Forest to suit new values and conditions.²⁶⁵ The significant focus on navigable waters as the principle contested resource²⁶⁶ made sense for an island nation reliant on maritime commerce.²⁶⁷ The same was true in the British Colonies and later the United States, which depended heavily on navigable waters for travel and trade, for subsistence resources, and for national defense.²⁶⁸

In the modern world, resource conflicts have changed and intensified. We face problems never before encountered, some of which could not have been imagined when we entered any particular social contract. Climate change is the clearest and most compelling current example, but it is only one of many with which courts asked to modify or extend the public trust doctrine have struggled in recent decades. Given the common law nature of the public trust doctrine, courts and legislatures are free to apply it to other appropriate resources so long as those applications are consistent with otherwise applicable principles of positive law in the jurisdiction.²⁶⁹

In response to this challenge, both state and federal American courts recognized early in our history that narrow geographic limitations to the concept of navigability that may have applied in England were not appropriate to the geography of North America.²⁷⁰ More recently, courts in diverse U.S. jurisdictions have recognized that the public trust doctrine is grounded in broader principles than protection of the traditional “triad” of navigability doctrine resources (navigation, commerce, and fishing). In expanding public trust protections to include ecological and aesthetic resources and values, for example, the California Supreme Court wrote:

263. See Ruhl & McGinn, *supra* note 19, at 49–51.

264. See *supra* notes 87–91 and accompanying text.

265. See *supra* note 115.

266. See Russell, *supra* note 44, at 634–35 (describing ongoing controversy over Acts of Parliament that enriched aristocrats by enclosing commons at the expense of commoners).

267. See Wilkinson, *supra* note 25; Adler, *supra* note 125.

268. See Wilkinson, *supra* note 25; Adler, *supra* note 125.

269. This includes the constitutional prohibition against taking private property without due process and just compensation. U.S. CONST. amend. V. See *infra* Section II.B.

270. See *The Propeller Genesee Chief v. Fitzhugh*, 53 U.S. 443, 458 (1851); *Carson v. Blazer*, 2 Binn. 475 (Penn. 1810); Adler, *supra* note 125, at 1656–59.

There is a growing public recognition that one of the most important public uses of the tidelands—a use encompassed within 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 environments which provide food and habitat for birds and marine life, and which favorably affect the scenery and climate of the area.²⁷¹

Public trust cases have involved other common resources that are explained by the same natural law reasoning, such as wildlife,²⁷² wetlands,²⁷³ and public parklands.²⁷⁴

The U.S. Supreme Court has enunciated similar principles regarding protection of the atmosphere and other common resources with respect to regional air pollution, but clothed in *parens patriae* language rather than the public trust doctrine.²⁷⁵ Extension of public trust principles to the atmosphere would appear to fit squarely within these principles. It is a common resource that is inappropriate for private ownership. It confers common economic and other welfare, including preservation of life itself. Allowing some interests to jeopardize atmospheric integrity impedes individual and collective liberty and welfare, and one the very ends of government Locke identified is “mutual preservation” of those collective values.²⁷⁶

B. Duty to Obey Positive Law

The second relevant principle from *Prior Appropriation* is that “individuals must respect and obey the positive law of the society in which they live, because that is the foundation on which all civil society is based.”²⁷⁷ That principle was particularly relevant to property rights asserted by natural law ranch advocates because they overtly asserted that they were not bound by federal law.²⁷⁸ Natural law ranch

271. *Marks v. Whitney*, 491 P.2d 374, 380 (Cal. 1971).

272. *See Geer v. Connecticut*, 161 U.S. 519, 522–29 (1896).

273. *See Just v. Marinette County*, 201 N.W.2d 761 (Wisc. 1972).

274. *See Gould v. Greylock Reservation Comm'n*, 215 N.E.2d 114 (Mass. 1966).

275. *See Georgia v. Tennessee Copper*, 206 U.S. 230 (1907).

276. *See LOCKE, supra* note 213, bk. II., ch. 9, § 123. *See also id.* at bk. II, ch. 1, §§ 3, 6 (admonishing that “no one ought to harm another in his Life, Health, Liberty, or Possessions,” and that government power is designed to protect against violations of that principle); bk. II, ch. 9, § 130 (providing that people part with natural liberty “as the good, prosperity, and safety of the Society shall require”) (capitalization in original).

277. *Prior Appropriation, supra* note 1, at 779.

278. *See id.* at 743–45.

advocates are entitled to argue for changes in federal land law and policy consistent with their understanding of natural law, but unless they prevail in those arguments through legitimate political or judicial process, they either must obey the law or accept the legal consequences of their actions.²⁷⁹ Proponents of extension of the public trust doctrine and other fundamental environmental rights also assert that existing positive law is inadequate to protect their rights, however,²⁸⁰ and those claims should be evaluated according to the same principles.

In the United States, individual reliance on theistic versions of natural law to violate positive law is also limited through the Establishment Clause of the First Amendment²⁸¹ and the Oath or Affirmation Clause in Article VI.²⁸² Religious doctrine cannot confer a legally enforceable source of natural law unless a principle is so universally accepted or independently enshrined in positive law that it has become the law of the land.²⁸³ Rather, the federal and state constitutions are the exclusive source of law governing judicial review of duly adopted legislation. Natural law principles, however, may guide cases not addressed directly by legislation or constitutional provisions, or help jurists fill in gaps in legislation or constitutional provisions.²⁸⁴

Thus, to the extent that natural law ranch advocates rely on personal religious beliefs to justify property rights, those beliefs are not a valid source of legal rights. Congress rejected those assertions through legislation adopted under its Property Clause power, as did the federal courts in interpreting those statutes.²⁸⁵ Some faith-based groups support environmental protection agendas,²⁸⁶ and scholars

279. *See id.* at 756.

280. *See id.* at 745.

281. U.S. CONST. amend. I.

282. U.S. CONST. art. VI, cl.3.

283. A clear example is that some of the Ten Commandments, such as “Thou shalt not kill” or “Thou shalt not steal” are universally recognized tenets of civil law, although subject to varying implementation. *See Prior Appropriation, supra* note 1, at 760–65. Early Puritan settlers recognized the distinction between those portions of the Decalogue that address an individual’s relationship to God as inappropriate for civil law implementation, and those portions that address an individual’s duties in a civil society, which can be the proper subject of civil law. *See* JOHN M. BARRY, ROGER WILLIAMS AND THE CREATION OF THE AMERICAN SOUL: CHURCH, STATE, AND THE BIRTH OF LIBERTY 206 (2012).

284. *See Prior Appropriation, supra* note 1, at 770–78; Babcock, *supra* note 30.

285. *See Prior Appropriation, supra* note 1, at 793–98.

286. For example, Pope John Paul II released a statement, *Peace with God Creator, Peace with All Creation*, in which environmental protection is framed a moral issue where all are called upon to do their part. MESSAGE OF HIS HOLINESS POPE JOHN PAUL II, PEACE WITH GOD THE CREATOR, PEACE WITH ALL CREATION (1990), http://www.vatican.va/content/john-paul-ii/en/messages/peace/documents/hf_jp-ii_mes_19891208_xxiii-world-day-for-peace.html (last visited Aug. 22, 2020); For examples in other religious traditions, see, e.g., AMERICAN-BASED JEWISH ENVIRONMENTAL ORGANIZATIONS, <http://aytzim.org/resources/educational-materials/155abjeo> (last visited Aug. 22, 2020);

and others have analyzed religious texts regarding the extent to which their teachings support proper stewardship of natural resources.²⁸⁷ I know of no claims, however, that theistic principles should dictate environmental or natural resources law directly, and certainly not that they should override positive law.

C. Manner of Implementation

The third and final principle identified in *Prior Appropriation* is that the system of law adopted in our constitutional system of government dictates and limits the manner in which concepts of natural law may be used or asserted.²⁸⁸ This implicates both constitutional limits on government action, and institutional or process-based requirements designed to ensure accountability and democratic governance.

1. Constitutional Limits

In the case of the public trust doctrine, the key constitutional issue involves applicability of the provisions of the U.S. Constitution that prohibit unlawful taking of private property without due process and just compensation.²⁸⁹ As is true with virtually every other aspect of public trust law, this issue has been contested. Some scholars caution that public trust protection might limit applicability of the doctrine or require compensation to the extent that those protections impair private property.²⁹⁰ Others believe public trust protection is authorized under long-accepted background principles of law, either generally or with respect to specific categories of common property.²⁹¹

GREENMUSLIMS.ORG, <https://www.greenmuslims.org/> (last visited Aug. 22, 2020); LDS EARTH STEWARDSHIP, <https://ldsearthstewardship.org/> (last visited Aug. 22, 2020).

287. See generally ARTHUR WASKOV, TORAH OF THE EARTH: EXPLORING 4,000 YEARS OF ECOLOGY IN JEWISH THOUGHT (Arthur Waskov, ed. 2000); see also David Horell & Anna Davis, *Engaging the Bible in GCSE and A Level of Religious Studies: Environmental Studies as a Test Case*, BRITISH J. RELIGIOUS EDUC. Vol. 36, No. 1, at 72, 78 (2014); Quiang Luo, *Daoism and Environmental Sustainability: A Completely Different Way of Thinking*, PROCEEDINGS OF INTERNATIONAL WORKSHOP ON SUSTAINABLE CITY REGION, at 164–171; Christopher Key Chapple, *Hinduism, Jainism, and Ecology*, THE FORUM ON RELIGION AND ECOLOGY YALE, <http://fore.yale.edu/religion/hinduism/>; Donald K. Swearer, *Buddhism and Ecology: Challenge and Promise*, THE FORUM ON RELIGION AND ECOLOGY YALE, <http://fore.yale.edu/religion/buddhism/>.

288. See *Prior Appropriation*, *supra* note 1, at 779–80.

289. U.S. CONST. amend. V, amend. IV, § 1. See Grant, *supra* note 25.

290. See Grant, *supra* note 25; Huffman, *supra* note 28, at 528, 558–59.

291. See Rieser, *supra* note 234; Joseph L. Sax, *Property Rights and the Economy of Nature: Understanding Lucas v. South Carolina Coastal Council*, 45 STAN. L. REV. 1433, 1447–50 (1993); Freyfogle, *supra* note 233, at 1296–97; Fred P. Bosselman, *Limitations Inherent in the Title to Wetlands at Common Law*, 15 STAN. ENV'T L.J. 247 (1996).

The takings issue has been mitigated to some extent by the familiar “bundle of sticks” concept of property law,²⁹² under which public trust protection need not prevent privatization of land that contains common pool resources. For example, one can own a parcel of land through which a herd of deer migrates. Under American wildlife law, the landowner does not “own” the herd of deer, which is now considered an “unownable” resource under U.S. law.²⁹³ The landowner can, however, exercise the property right to limit access to private property for purposes of hunting those deer, leaving them available for hunting on public or other private lands. The landowner can also reduce individual deer to possession and ownership by successfully hunting them, subject to any applicable state regulations regarding season, bag limits, age and size, etc. Likewise, in the context of the public trust over navigable waters, American courts have accepted the distinction between *jus privatum* and *jus publicum* title to the same property, to serve different purposes; and the federal government retains a navigational servitude in those same waters.²⁹⁴

Early American trust doctrine cases involving shellfish beds illustrate the utility of this fine-tuned approach to the tension between resources that have more value as a common pool and those that are more efficiently made available as private property. Wild shellfish collected in tidal waters fall within the geographic scope of the English common law public trust. Preserving those resources for common access promoted collective freedom and welfare, particularly in regions of Colonial America in which fishing and foraging for shellfish was essential to subsistence.²⁹⁵ Cases such as *Arnold v. Mundy*²⁹⁶ and *Gough v. Bell*,²⁹⁷ however, involved the rights of individuals to plant oysters in specified parcels of tidal lands for which title for other purposes had been granted to others. Those circumstances implicate the Lockean idea that resources should be available for private ownership so that individuals may reap the profits from their labor and skill in tilling the land and nursing their crops to harvest.

Planting oysters in tidal waters falls in a grey area between those resources subject to natural law principles justifying private property and natural law principles justifying common access. That explains why courts struggled with the applicability of public trust principles to those facts and circumstances. It also explains the ultimate resolution that state legislatures should resolve such middle ground cases of public trust management as a matter of positive law, and as appropriate to the particular circumstances of that jurisdiction. Indeed, the resolution upheld by the New Jersey Supreme Court in *Gough v. Bell* was to allow exclusive oyster beds subject

292. See Arnold, *supra* note 239, at 289–91 (explaining but critiquing “bundle of sticks” metaphor).

293. See *Hughes v. Oklahoma*, 441 U.S. 322, 329–36 (1979).

294. See Rieser, *supra* note 234, at 398 & n.27.

295. See *Martin v. Waddell's Lessee*, 41 U.S. 367, 414 (1842).

296. *Arnold v. Mundy*, 6 N.J.L. 1 (N.J. 1821).

297. *Gough v. Bell*, 22 N.J.L. 441 (N.J. 1850).

to state regulation.²⁹⁸ That is consistent with the manner in which states regulate the harvesting of other fish and wildlife, and reflects a rational judgment about how to balance private property and public access to the common pool resource of tidal areas suitable for shellfish harvest.

The issue becomes more challenging to the extent that government seeks to extend public trust protection to resources not formerly subject to protection, or that have not previously been recognized as part of the trust “corpus.” How takings jurisprudence applies to those assertions may depend on the degree to which the doctrine inhered in particular forms of property historically.²⁹⁹ For example, the Supreme Court has ruled that the federal navigation servitude is not subject to the strictures of the takings clause.³⁰⁰ Although the navigation servitude cases pre-date *Lucas*, they reflect that the servitude exists as a fundamental attribute of sovereignty that predates any private property rights to the beds of navigable waters.

Indeed, *Illinois Central* involved the takings issue as an important but often-neglected subsidiary issue. Arguably, the real dispute between the majority and the dissent involved takings rather than a fundamental dispute about American public trust law. Justice Field, who was “normally a staunch defender of individual liberty and private property,”³⁰¹ sanctioned compensation to the extent that the railroad company incurred actual property losses as a result of the legislature’s withdrawal of portions of the original grant, and remanded for a determination of the company’s riparian rights to wharf out.³⁰² In dissent, Justice Shiras did not disagree with the majority’s statement of public rights in navigable waters, but saw no immediate violation of public rights and would have required the legislature to wait to see if the railroad acted in derogation of those rights and to exercise eminent domain if it believed necessary.³⁰³

Thus, one obvious solution to the takings problem would be for government to compensate landowners for any loss of property rights caused by affording public trust protection to a resource previously not deemed subject to the trust. By using eminent domain power the government would expand the trust corpus, just as government must use eminent domain to expand its land holdings to build a new road. That solution would be extremely expensive, however, presenting a large disincentive for budget-conscious governments and a tax-averse public to act.

298. *Id.* at 456–61.

299. See *Lucas v. South Carolina Coastal Council*, 505 U.S. 1003, 1026–32 (1992) (holding that the takings issue turns on the nature and extent of property loss and the extent to which existing limitations to protect common interests restrict title as a “background principle” of law). A full analysis of the takings issue is beyond the scope of this article but has been addressed elsewhere. See *Grant*, *supra* note 25.

300. See *supra* note 137 and accompanying text.

301. See Epstein, *supra* note 18, at 423.

302. *Illinois Cent. R.R. Co. v. Illinois*, 146 U.S. 387, 439–57 (1892).

303. *Id.* at 474 (Shiras, J., dissenting).

Property rights advocates would respond that this would pose a useful, if not essential, check on the tendency of government to expand public trust protections. Government would expand the trust corpus only if it believed that the value to the public was sufficient to incur the accompanying costs.

Imposing this cost on government, however, arguably violates the whole idea of the public trust doctrine, particularly as informed by natural law. Professor Epstein noted that the failure of government to administer the public trust properly by allowing private use—particularly monopolistic use—of trust resources constitutes a kind of reverse eminent domain, an unlawful private taking of public property without due process or just compensation.³⁰⁴ If one accepts the idea that people never agreed to cede that portion of their liberty with respect to natural resources that are fundamental to life, health, and welfare, such as water and air or basic environmental integrity, why should the public need to “buy back” those resources from private property owners who, by virtue of having acquired other property rights, gain monopolistic or other significant control over them?

The core problem, then, is distinguishing between those resources that should be available for private appropriation, and those intended to be reserved in common. As explained above, relying exclusively on those resources that have historically been protected by positive law does not solve the problem, and leads to inappropriately narrow results, because public trust law evolved only as needed to address particular problems relevant at particular times and in particular societies.³⁰⁵ The challenge is where and how to apply the public trust doctrine to new, often unforeseen problems. This is directly analogous to the “Griswold problem” in Ninth Amendment jurisprudence.³⁰⁶ The Ninth Amendment may have reserved unenumerated rights that warrant constitutional protection, but if they are not enumerated, how are we to know what counts? The public trust component of the social contract may have reserved certain kinds of resources for common use and benefit, but how are we to know which count?

Although the idea of an atmospheric public trust has generated considerable controversy,³⁰⁷ it actually seems to present one of the clearest cases for trust protection. That is not simply because “air” is mentioned expressly in the *Institutes of Justinian*. It is because the atmosphere is so clearly a fundamental and essential common resource that it is incapable of being divided for purposes of ownership. If navigable waterways merit public trust protection, how can the same not be true for the atmosphere? And to the extent that public trust protection is a sovereign

304. See Epstein, *supra* note 18, at 419.

305. See *supra* Section II.A.

306. See *Prior Appropriation*, *supra* note 1, at 777–78.

307. See *supra* note 3.

obligation analogous to national defense or the protection of private property,³⁰⁸ preventing catastrophic climate change appears to be a simple case rather than a close call.

When the issues are not clear, the harder questions are who should decide what resources warrant trust protection, what level of protection to provide, and through what positive law methods. Those issues are addressed in the following section.

2. Institutional and Process Limits

One argument against the applicability of vague, unwritten concepts of natural law to confer such wide-reaching power in the face of changing circumstances, at least in the United States and other republican forms of government, is that it threatens principles of representative democracy and allows unbridled judicial activism.³⁰⁹ Reliance on natural law principles that are foundational to our concept of government to inform important decisions about law and policy, however, says nothing about who has the power to make those decisions, or when or under what circumstances. Important structural checks inherent in the separation of powers built into the U.S. Constitution limit the force of this critique.³¹⁰

First, judicial application of the public trust doctrine is subject to legislative discretion. In the case of the federal government's residual authority to protect navigability, federal courts apply the federal navigational servitude doctrine, but defer to the plenary discretion of Congress in deciding which waterways require protection or improvement for purposes of navigability, and through what means.³¹¹ Similarly, because the states retain sovereignty over traditional public trust property, state legislatures have discretion to dispose of trust properties so long as those grants are consistent with or designed to serve the purposes of the trust.³¹² Thus, state legislatures remain free to check inappropriate state court actions under the public

308. *See supra* Section I.E.3.

309. *See Huffman, supra* note 28; Cohen, *supra* note 28, at 252.

310. One scholar proposed that the public trust doctrine be limited entirely to a process-based canon of construction. *See* William D. Araiza, *The Public Trust Doctrine as an Interpretive Canon*, 45 U.C. DAVIS L. REV. 693 (2012).

311. *See* United States v. Chandler-Dunbar Water Power Co., 229 U.S. 53, 62 (1913).

312. *See* Appleby v. City of New York, 271 U.S. 364, 382–84 (1926); Illinois Cent. R.R. Co. v. Illinois, 146 U.S. 387, 452–53 (1892).

trust doctrine.³¹³ Whether the Ninth Amendment or other authority establishes a substantive floor on state public trust doctrine responsibility remains to be seen.³¹⁴

Second, legislative or executive branch actions pursuant to the public trust doctrine, or actions allegedly in violation of public trust principles, remain subject to judicial review in both federal and state courts (depending on where jurisdiction is found appropriate); and state judicial decisions are subject to review in the U.S. Supreme Court for violation of federal constitutional law. In particular, all interpretations and applications of the public trust doctrine are subject to checks under the U.S. Constitution and the constitutions of many states. Given that any federal authority over public trust resources in navigable waters reflects a cession of those aspects of the trust affecting interstate and foreign commerce, any federal exercise of trust authority is bounded by the scope of the Commerce Clause.³¹⁵ Although federal control over navigability affecting private title to lands beneath navigable waters requires no compensation because that title is held subject to the federal navigation servitude, assertions of public trust authority over other public trust resources are subject to takings scrutiny, whether or not that scrutiny ultimately requires compensation.³¹⁶ Finally, some state constitutions have express provisions defining public trust resources and the principles according to which they must be managed.³¹⁷

The answer to issues of institutional accountability in making and implementing public trust doctrine decisions is not to throw up our collective hands and abandon the trust. It is to ensure, as we do with analogous challenging public decisions, that our system of constitutional checks and balances works as intended.

CONCLUSION

At the outset of his classic *The History of Western Philosophy*, Bertrand Russell asked: “Are there really laws of nature, or do we believe in them only because of our innate love of order?”³¹⁸ We may ask a similar question: Is there really such a thing as natural law, or do we believe in it only because of our innate love of justice?

Prior Appropriation assumed that natural law claims used to support the two doctrines were inconsistent and needed to be resolved. But the above analysis shows that the issues in Part I (Prior Appropriation) and Part II (The Public Trust

313. Professor Babcock appears to agree in arguing that, even if the public trust doctrine is a “legal fiction,” it is a useful fiction in allowing judges to use common law to fill gaps in trust doctrine implementation pending legislative action displacing that common law. See Babcock, *supra* note 30, at 395.

314. See *supra* Section II.C.

315. See *id.*

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

317. See, e.g., *Robinson Twp. v. Commonwealth of Pennsylvania*, 83 A.3d 901 (Pa. 2013); *Ariz. Ctr. for L. in the Pub. Int. v. Hassell*, 837 P.2d 158 (Ariz. 1991).

318. RUSSELL, *supra* note 44, at xiii.

Doctrine) merge. Both involve the degree to which, in forming civil societies, it was desirable to make all property and all resources available for private appropriation and exclusive use and control, or to retain some kinds of property and resources in common. As shown above, both the appropriation and public trust concepts are supported by the Lockean ideals that helped to inform the principles on which our constitutional system of government was based.

In this context, natural law ranch advocates and public trust doctrine advocates make similar claims, from opposite sides of this spectrum. Ranch advocates argue for extension of prior appropriation doctrine to include property rights to grazing and other resources on public lands. Federal positive law has rejected that idea in favor of an alternative system of making those resources available through grazing leases and federal regulation to protect the common values of the resource. It is difficult to see how that balance violates any basic principle of natural law.

Public trust advocates argue for an extension of the public trust doctrine to encompass the atmosphere to combat catastrophic global climate change, and other resources they deem essential to the common welfare. Positive law does not yet support all of those claims, but unlike the claims of natural law ranch advocates, neither does it preclude them. Although those claims may pose difficult policy choices, they are consistent with, if not fully supported by, principles of natural law.

Thus, the natural law underpinnings of the public trust doctrine allow flexibility in the manner in which a state or other jurisdiction interprets the scope of the doctrine (the resources to which it applies) and the manner in which the trust is administered (who may access resources and under what conditions). So long as made consistently with constitutional and other applicable positive law in the jurisdiction, those judgments can change over time as circumstances change and as knowledge and understanding progress. Conceptually, this is no different than other ways in which different jurisdictions implement natural law differences as appropriate to their circumstances and community values but bound by a unifying minimum principle.

The idea of an atmospheric public trust is one good example, and perhaps the most important example of our times, of inherent flexibility in the public trust doctrine. In accepting early in history that “the air” was a shared resource essential to the welfare of all of humanity, neither the Romans nor those who conceptualized the English common law doctrine could have foreseen the dramatic rise in greenhouse gas emissions and the impact it would have on the atmosphere. The sovereign obligation to protect and manage the collective resource, remains, however, despite drastically changing circumstances. Indeed, that obligation is arguably at its highest when those changes jeopardize the resource—and human welfare—so catastrophically.