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PROTECTION OF BIODIVERSITY UNDER THE PUBLIC TRUST DOCTRINE

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Humans are responsible for the most rapid process of extinction of species in the history of the planet. The common estimate of the rate of extinction is one species every fifteen minutes.[1] This has led to increasing recognition of the importance of biodiversity, defined as:

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1. WILLIAM H. RODGERS, JR., ENVIRONMENTAL LAW 995 (2d ed. 1994). In 1973 when the ESA was being considered by Congress, the Committee was "informed that species were still being lost at the rate of about one per year . . . and 'the pace of disappearance of species' appeared to be 'accelerating.'" Tennessee Valley Auth. v. Hill, 437 U.S. 153, 176 (1978) (citing H.R. No. 93-412,

> [T]he variety of organisms considered at all levels, from genetic variants belonging to the same species through arrays of species to arrays of genera, families, and still higher taxonomic levels, includ[ing] the variety of ecosystems, which comprise both the communities of organisms within particular habitats and the physical conditions under which they live.[2]

Congress has expressed its concern over the extinction of species in the Endangered Species Act (ESA),[3] but the effectiveness of the Act has been somewhat limited—witness the extinction in 1987 of the Dusky Sparrow, listed under the ESA.[4] In addition, national policy as expressed in numerous federal and state laws extends protection to wildlife long before these creatures or plants become endangered.[5] New avenues are needed if we are successfully to preserve biodiversity. The public trust doctrine provides such a new avenue and fills a critical need.

The public trust doctrine is an ancient Roman legal doctrine that has been applied in both England and the United States. The doctrine traditionally addressed questions of public access to and use of commercially navigable waters for navigation, fisheries and various other uses of the underlying seabeds, lake bottoms, and riverbeds.[6] In recent years, the public trust doctrine has been invoked to protect birds and other wildlife, water quality, ecological and environmental values, and different types of recreation.[7] Although no public trust case has applied the doctrine to protect biodiversity per se, it seems clear by analogy to existing case law that the doctrine could be an effective tool for protecting biodiversity, particularly where the species at issue are aquatic or associated with riparian ecosystems. This article will examine why the public trust doctrine is important for the protection of biodiversity and what it might accomplish.

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at 4 (1973)). "The value of this genetic heritage is, quite literally, incalculable." 133 CONG. REC. H11,248-02 (1987).

2. EDWARD O. WILSON, THE DIVERSITY OF LIFE 393 (1992).
3. 16 U.S.C. §§ 1531-44 (1988).
4. RODGERS, *supra* note 1, at 1023.
5. *See infra* notes 37-53 and accompanying text.
6. Orion Corp. v. State, 747 P.2d 1062, 1072 (Wash. 1987).
7. *Id*. at 1073.

I. THE ORIGIN AND NATURE OF THE DOCTRINE

The public trust doctrine originated from the widespread practice of using navigable waters as public highways for navigation, commerce, and fisheries.[8] It was first articulated in the Institutes of Justinian in 533 C.E.[9] In England, the first recorded reference to something resembling the public trust doctrine appeared in the Magna Carta.[10] The public trust was one of the incidents of sovereignty—perceived as an aspect of natural law existing outside the confines of any constitution or other government—enabling or limiting document like the Magna Carta. In the United States, where the states hold title to the beds of navigable streams, it was earlier applied to the beds of fresh water bodies, as well as to the seabed.[11]

In his widely cited article, Professor Joseph Sax summarized what he called the central substantive thought in public trust litigation: "[w]hen a state holds a resource which is available for the free use of the general public, a court will look with considerable skepticism upon *any* governmental conduct which is calculated *either* to reallocate that resource to more restricted uses *or* to subject public uses to the self-interest of private parties."[12] Expanding and clarifying his analysis, he proposed a four-prong test to determine whether a governmental act is inconsistent with the trust: (1) whether public property has been disposed of at less than market value where there is no obvious reason for a subsidy; (2) whether the governmental action grants a private interest the authority to make resource-use decisions that may subordinate broad public resource uses to that private interest; (3) whether an attempt has been made to reallocate diffuse public uses either to private uses or to public uses which have less breadth; and (4) whether the resource is being used for its natural purpose.[13] The last three of these criteria would fit the protection of biodiversity.

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8. *Id.* at 1072-73.

9. J. INST., 2.1.1-2.1.6 (P. Birks & G. McLeod trans. 1987) ("The things which are naturally everybody's are: air, flowing water, the sea, and seashore.").

10. *See* Martin v. Waddell, 41 U.S. (16 Pet.) 367, 410 (1842). "[T]he question must be regarded as settled in England against the right of the king since Magna Carta to make such a grant." *Id.*

11. *See, e.g.*, *infra* notes 14-17 and accompanying text.

12. Joseph L. Sax, *The Public Trust Doctrine in Natural Resource: Effective Judicial Intervention*, 68 MICH. L. REV. 471, 490 (1970).

13. *Id.* at 562-65.

II. THE PUBLIC TRUST DOCTRINE IN THE UNITED STATES: IT IS NEARLY INDESTRUCTIBLE

Early U.S. cases followed the public trust doctrine.[14] These cases established the power of the doctrine by making it difficult, if not impossible, to destroy public trust interests. This is an important quality that relates to protection of biodiversity. In *Arnold v. Mundy,* the court said the sovereign could not "make a direct and absolute grant of the waters of the state [to a private citizen], divesting all the citizens of their common right."[15] In 1892, the United States Supreme Court applied the doctrine in *Illinois Central Railroad Co. v. Illinois*[16] and held that the Illinois State legislature did not have constitutional power to convey absolute title to the bed of Chicago Harbor to a railroad. Despite duly (and probably corruptly) enacted state legislation, the title was at least voidable, if not void. The public trust doctrine creates a fiduciary duty for the state that, according to the *Illinois Central* court, "can never be lost, except as to such parcels as are used in promoting the interests of the public therein. . . ."[17] That analysis implied a scrutiny of government and private conduct akin to the most strict scrutiny reserved for matters of constitutional import. Indeed, the legislature may act in derogation of the trust only when its acts are closely tailored to a legitimate governmental purpose related to the nature of the trust, such as construction in aid of public trust interests.[18] The California Supreme Court, ruling on the trust as it applies to tidelands, described the doctrine in similar terms in *City of Berkeley v. Superior Court of Alameda County*.[19] Reasoning from the premise that the state does not have the power to abdicate its fiduciary responsibilities in favor of a private party, the court said:

> [S]tatutes purporting to authorize an abandonment of . . . public use will be carefully scanned to ascertain whether or not such was the legislative intention and that intent must be clearly expressed or necessarily implied. It will not be implied if any other inference is reasonably

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14. *See* Arnold v. Mundy, 6 N.J.L. 1 (N.J. 1821); Illinois Cent. R.R. Co. v. Illinois, 146 U.S. 387 (1982); City of Berkeley v. Superior Court of Alameda County, 606 P.2d 362 (Cal. 1980); and Orion Corp. v. State, 747 P.2d 1062 (Wash. 1987).

15. 6 N.J.L. 1, 78 (N.J. 1821).

16. 146 U.S. 387 (1892).

17. *Id.* at 453.

18. *Id*. at 435.

19. 606 P.2d 362 (Cal. 1980).

> possible. And if any interpretation of the statute is reasonably possible which would not involve a destruction of the public use or an intention to terminate it in violation of the trust, the courts will give the statute such interpretation.[20]

Like the *Illinois Central* court, the *City of Berkeley* court describes a level of scrutiny usually reserved for constitutional issues. Thus, the public trust doctrine defines the nature of property at its roots, prior even to constitutional analysis. This becomes especially important when the courts begin to apply the public trust doctrine to protect biodiversity.

The Washington Supreme Court, not known for its reckless disregard for property rights, has affirmed the power of the public trust doctrine in similar terms. In *Orion Corp. v. State*, the court asserted that the "public trust doctrine has always existed in Washington" and that it applies to privately as well as publicly owned land.[21] The tidelands here were privately owned. Orion had purchased the tidelands and had planned to build a major Venetian style housing development but was denied that opportunity by county zoning laws which required the tidelands to be left in their natural state. Since the privately owned tidelands were subject to a public trust easement held by the state, the court remanded the case to determine whether a taking had occurred.[22] The court also ruled that the public trust doctrine is based on public needs as they are identified: "We have had occasion to extend the doctrine beyond navigational and commercial fishing rights to include 'incidental rights of fishing, boating, swimming, water skiing, and other related recreational purposes'. . . . Resolution of this case does not require us to decide the total scope of the doctrine."[23] The court expressly declined to place any limits on the doctrine, thus leaving the door open for further expansion to cover other public interests such as biodiversity:

> [T]he public trust devolved to the states upon gaining statehood and is a trust that the state legislature '[cannot] relinquish by a transfer of the property' . . . . We have repeatedly stated that the sale of . . . tidelands, like other

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20. *Id.* at 367 (quoting People v. California Fish Co., 138 P. 79 (Cal. 1913)).

21. 747 P.2d 1062, 1072 (Wash. 1987).

22. *Id*. at 1083.

23. *Id*. at 1073 (quoting Wilbour v. Gallagher, 77 Wash. 2d 306, 316, 462 P.2d 232 (1969), *cert. denied*, 400 U.S. 878 (1970)).

trust property, is subject to the paramount public right of navigation and fishery.[24]

III. STATES ARE MANAGERS OF THE PUBLIC TRUST DOCTRINE ON PUBLIC AS WELL AS PRIVATE LAND

From 1896 to 1979, federal courts upheld regulation of wildlife as resources held in common under *Geer v. Connecticut,*[25] which affirmed the ownership of all wildlife by the state as an incident of sovereignty. However, in *Hughes v. Oklahoma*,[26] the Court overruled the "legal fiction" of state ownership of wild animals while simultaneously affirming the legitimacy of pervasive state regulation for conservation and protection of wild animals, provided that the regulation did not impermissibly restrict interstate commerce. The *Hughes* Court held that banning the export of "natural" minnows from the State was an unconstitutional burden on interstate commerce.[27] Shortly after *Hughes*, *In re Steuart Transportation Co.* applied the public trust doctrine to wildlife, declaring that "the State of Virginia and the United States have the right and duty to protect and preserve the public's interest in natural wildlife resources."[28] Likewise, the California Supreme Court recently asserted that "[w]ild fish have always been recognized as a species of property the general right and ownership of which is in the people of the state."[29]

Today, the most widespread application of the doctrine continues to be to the beds of navigable waters and the tidelands or shorelands, up to the mean high tide line. Implementation of the doctrine has increased substantially over the past 25 years and explicitly or implicitly encompasses hundreds of different factual scenarios.[30]

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24. *Id*. at 1072 (citing Long Sault Dev. Co. v. Call, 242 U.S. 272, 279 (1916)).
25. 161 U.S. 519 (1896).
26. 441 U.S. 322 (1979).
27. *Id*. at 337-38.
28. 495 F. Supp. 38, 40 (E.D. Va. 1980).
29. California Trout, Inc. v. State Water Resources Control Bd., 255 Cal. Rptr. 184, 211 (Cal. Ct. App. 1989).
30. Richard J. Lazarus, *Changing Conceptions of Property and Sovereignty in Natural Resources: Questioning the Public Trust Doctrine*, 71 IOWA L. REV. 631, 632-33 (1986).

IV. PUBLIC AND PRIVATE LAND

Publicly and privately owned land are both covered by the public trust doctrine.[31] Thus, state agencies must manage state property in a manner consistent with the doctrine. Privately owned land remains subject to the doctrine even though the deed conveying it from the state into private ownership says nothing about the public trust doctrine.[32] Most states have coastal management acts of some kind because of the incentive provided by the Federal Coastal Zone Management Act.[33] The states also own land in a proprietary capacity, such as state parks and recreation areas. These state lands must be managed consistent with the requirements of the public trust doctrine.

On private lands the public trust doctrine imposes a burden akin to an easement as to public trust interests.[34] Regulations that control this easement do not normally raise constitutional takings questions because the easement exists prior to and in derogation of the landowner's title or other vested right.[35] This easement is owned by the state in trust for all its citizens. In fact, the doctrine itself defines the scope of the private owner's title. Thus, the doctrine is a property law rule that describes and limits a private owner's right to use public trust resources. It may also limit upland uses that adversely impact public trust resources.[36]

V. INTERESTS PROTECTED BY THE DOCTRINE

The classic list of protected interests includes navigation, commerce and fisheries.[37] The doctrine has been broadened to include wildlife that depend on navigable waters or their tributaries.[38] In *Department of Environmental Protection v. Jersey Central Power & Light Co.*,[39] the court asserted the state's obligation to provide the public a viable marine environment. In *Marks v. Whitney*, the California court

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31. *See*, *e.g.*, *supra* note 21 and accompanying text.
32. *See supra* note 15 and accompanying text.
33. 16 U.S.C. §§ 1451-64 (1988 & Supp. V 1993).
34. *See* Orion Corp. v. State, 747 P.2d 1062, 1072 (Wash. 1987).
35. *Id*.
36. *See, e.g.*, National Audubon Soc'y v. Superior Court of Alpine County, 658 P.2d 709 (Cal. 1983).
37. *Orion*, 747 P.2d at 1073.
38. United States v. State Water Resources Control Bd., 227 Cal. Rptr. 161, 201 (Cal. Ct. App. 1986).
39. 336 A.2d 750, 759 (N.J. Super. Ct. App. Div. 1975), *rev'd on other grounds*, 351 A.2d 337 (N.J. 1976).

applied the doctrine in an even broader, more ecologically oriented context:

> [O]ne 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 as environments which provide food and habitat for birds and marine life, and which favorably affect the scenery and climate of the area.[40]

This widely cited case and language clearly is broad enough to include biodiversity.

The "Mono Lake" decision in California resulted in protection of the brine shrimp in the lake.[41] The lake is used by birds for nesting and feeding. One of the more interesting aspects of the case is that the court found that extraction of water by Los Angeles from tributaries of the lake would gradually lower the lake level.[42] This would reduce the assimilative capacity of the lake. The water would also become more saline, which would decimate the brine shrimp population, which would in turn harm the bird population (the California Gull especially) by reducing the food supply.[43] In effect, this is a pollution case showing that the public trust doctrine applies to protect the food supply of birds and overrides vested rights under the prior appropriation system. Another aspect of the case is important here. By lowering the lake level, islands became isthmuses. The birds' nests and eggs on these former islands became available to predators such as foxes, coyotes and raccoons who could now reach them by land bridges. The California court made it clear that even existing vested appropriative rights were subject to the call of the public trust doctrine.[44] The court said, "[i]n exercising its sovereign power to allocate water resources in the public interest, the state is not confined by past allocation decisions which may be incorrect in light of current knowledge or inconsistent with current needs."[45] The court also provided that the state, as trustee of the public trust, retains supervisory

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40. Marks v. Whitney, 491 P.2d 374, 380 (Cal. 1971).
41. *National Audubon Soc'y*, 658 P.2d at 709.
42. *Id.* at 715.
43. *Id*.
44. *Id*. at 712.
45. *Id.* at 728.

control over its waters.[46] It "prevents any party from acquiring a vested right to appropriate water in a manner harmful to the interests protected by the public trust."[47] In view of the expansive interpretation of the public trust doctrine rendered by contemporary courts, new courts addressing the public trust doctrine should find it easy to embrace the doctrine with special zest when state or private actions threaten or endanger a species or when significant damage is threatened to wildlife or habitat.

VI. THE PUBLIC TRUST DOCTRINE IS A JUDICIAL DOCTRINE

The public trust doctrine is fundamentally a judicial doctrine. Courts decide whether and to what extent it applies in a given state. This aspect of the doctrine is critically important where political groups (such as irrigated agriculture) have sufficient political power to kill legislation protecting biodiversity. Once the courts of a state have adopted or approved the public trust doctrine it becomes the "law of the state" like other aspects of property law. As a rule of property law, it binds state agencies as well as private parties. Thus, when issuing permits for state projects and other actions, state agencies should consider the impact of their action on public trust interests. They should take appropriate action to protect public trust interests, and to minimize harm either entirely or to the maximum extent practicable.

The state agencies in the state of California appear to have gone the farthest in authorizing and requiring application of the public trust doctrine in their administrative actions.[48] In *United States v. State Water Resources Control Board*, the California court found that agricultural water extractions from the Sacramento and San Joaquin rivers had damaged the fresh water delta where the two rivers joined to flow into San Francisco Bay.[49] The California Court of Appeal ruled that the Water Board could rely on the public trust doctrine to require that irrigators work out a program which would allow more water to run through the delta in order to renew its fresh water quality.[50] Such a program would almost certainly impinge on various irrigator's vested

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46. *Id*. at 727.

47. *Id.*

48. *See* United States v. State Water Resources Control Bd., 227 Cal. Rptr. 161 (Cal. Ct. App. 1986).

49. *Id*. at 172-73.

50. *Id*. at 201-02.

appropriative rights. But the court ruled that the reduction of excessive withdrawals could be ordered, even though they might reduce "vested" rights extractions.

As the importance of protecting biodiversity becomes better understood by the public, the courts, and state agencies, this pervasive obligation on state agencies has a great potential for protecting biodiversity.

VII. STATUTORY ANALOGUES OF THE PUBLIC TRUST DOCTRINE

Section 303 of the Clean Water Act,[51] which allows states to set water quality standards, is a statutory expression of state control over the commons that functions much like the public trust doctrine. Water quality standards consist of designated uses and pollutant criteria based on those uses.[52] National Pollution Discharge Elimination System permits, required for pollution discharge into surface waters, are written to comply with water quality standards.[53] These standards protect the public interest in water quality.

The most powerful statutory expression protecting biodiversity is found in the Endangered Species Act.[54] This Act stands as a dynamic supporter for judicial implementation of the public trust doctrine. The famous "snail darter" decision of the United States Supreme Court illustrates the power of this congressional support of biodiversity.[55] Congress had authorized and funded construction of Tellico Dam as part of the Tennessee Valley Authority program. The dam was actually completed and ready to flood when the Secretary of Interior designated the snail darter as an endangered species.[56] The Supreme Court upheld the stoppage in view of the unequivocal language of the Act, designed to protect endangered species. The Court said that "Congress intended endangered species to be afforded the highest of priorities."[57]

The Endangered Species Act is a statutory expression of national policy favoring protection of endangered or threatened species. While this Act protects only endangered or threatened species, the public trust

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51. 33 U.S.C. § 1313 (1988).
52. *Id.* § 1313(c)(2)(a).
53. *Id.* § 1312.
54. 16 U.S.C. §§ 1531-44 (1988).
55. Tennessee Valley Auth. v. Hill, 437 U.S. 153 (1978).
56. 40 Fed. Reg. 47,505 (1975).
57. *Tennessee Valley Auth.*, 437 U.S. at 174.

doctrine steps in much earlier and tends to protect species before they meet the strict and dire criteria of the Endangered Species Act. The fundamental underlying theme of the public trust doctrine is that animals and birds should be protected anytime, and all the time, from unnecessary harm or damage. Common sense urges that courts press the public trust doctrine ever more aggressively, in proportion to the degree of danger to a species.

The Marine Mammal Protection Act[58] and the Wild and Scenic Rivers Act[59] both contain elements that protect biodiversity and support the implementation of public trust doctrine jurisprudence. In addition, a district court in Florida recently characterized the Submerged Lands Act[60] as a piece of legislation intended to "further the Public Trust Doctrine."[61] While the Submerged Lands Act gave the states title to all lands beneath navigable waters, subject to the federal government's navigational servitude,[62] the court found that Congress intended to decentralize management of the coastal areas to foster management more adapted to local needs.[63]

Biodiversity should be implemented by arguing before the courts that it should be considered as part of the common property law of the state. This can be done either by the state or by private citizens. Any citizen of a state has standing to raise the question, since any injury to public property is by definition an injury to the citizen. The Attorney General has standing as the chief legal representative of the citizens of the state.

VIII. CONCLUSION

The trend has been to broaden the interests protected by the public trust doctrine. Nonetheless, most courts still restrict the doctrine to littoral ecosystems, particularly wildlife that depend on the water or beds of rivers, lakes, or the sea. No court has directly protected plant life, though one could argue convincingly that wildlife cannot be protected unless their habitat is protected also. A holistic view of the public commons necessarily includes wildlife and the plants they eat. The long-

58. 16 U.S.C. §§ 1361-1407 (1988 & Supp. V 1993).
59. 16 U.S.C. §§ 1271-87 (1988 & Supp. V 1993).
60. 43 U.S.C. §§ 1301-56 (1988 & Supp. IV 1992).
61. Murphy v. Department of Natural Resources, 837 F. Supp. 1217, 1221 (S.D. Fla. 1993).
62. 43 U.S.C. §§ 1311(a), 1314(a).
63. *Murphy*, 837 F. Supp. at 1221.

heralded biological survey promises to accumulate the information necessary for legislation protecting biodiversity. This would be the most efficient way to achieve concrete protections. In the meantime, however, recourse to the courts is necessary to stem the tide of species extinction. Strengthening current public trust caselaw through strategic litigation, focusing initially on states where the doctrine is already strong, could be a successful tactic to edge the courts towards liberating the doctrine from its aquatic chains. As the importance of protecting biodiversity becomes better understood by the public, the courts, and state agencies, this pervasive obligation has a great potential for protecting biodiversity.