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Based Area-Wide Management: What Lessons Can
We Learn From The Navigable Waters Trust?**

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THE USE OF THE PUBLIC TRUST DOCTRINE FOR RESOURCE-BASED AREA-WIDE MANAGEMENT: WHAT LESSONS CAN WE LEARN FROM THE NAVIGABLE WATERS TRUST?*

*M. Casey Jarman***

I. INTRODUCTION

Since the early 1970's, our collective national consciousness has been raised regarding the need to pay more attention to the impact of human activities on the environment. It is critical that our legal system provide effective means to curb humankind's abuses of the earth's natural resources. Prior to the explosion of federal environmental legislation in the 1970's, nuisance claims predominated as a means to redress injuries caused by befouling the air, land, and water. In addition, actions asserting waste could be brought against those who "overexploited" resources. The effectiveness of such claims, however, lies primarily in redressibility rather than in preventing the harm in the first instance. Passage by Congress of laws such as the National Environmental Policy Act (NEPA),¹ Clean Air Act,² Clean Water Act,³ and the Endangered Species Act,⁴ evidenced a recognition of the need to reduce the harm in the first instance and mitigate "unavoidable" adverse environmental effects of human actions. But these laws have their own limitations.

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¹ 42 U.S.C.A. §§ 4321-4370d (West 1977 & Supp. 1993).

² 42 U.S.C.A. §§ 7401-7671q (West 1983 & Supp. 1993).

³ 33 U.S.C.A. §§ 1251-1387 (West 1986 & Supp. 1993).

⁴ 16 U.S.C.A. §§ 1531-1544 (West 1985 & West 1993).

NEPA most clearly voices a legislatively-recognized national environmental public trust: "[I]t is the continuing responsibility of the Federal Government to use all practicable means . . . to . . . fulfill the responsibilities of each generation as trustee of the environment for succeeding generations"⁸ But as students of environmental law have learned, such a trust is illusory at best when one attempts to enforce it legally.

The common law public trust doctrine serves as the final vehicle for resource protection. In this discussion, I draw parallels, primarily from the public trust doctrine which has developed in the use of ocean and coastal space and resources, and include a proposal for prioritization of uses as developed by colleague and scholar, Jack Archer at the University of Massachusetts, Environmental Sciences Program, and myself.⁹ Ocean resource management is quintessentially area-wide management. The ocean environment is fluid, and most of the exploited living resources are mobile, defying political boundaries. Like land-based resources, ocean resources cannot be protected nor sustainably exploited if each resource is considered in isolation from others within the ecosystem. As with the oceans, our legislatively-created land-based resource management scheme was created in a piece-meal fashion rather than from a holistic perspective. Therefore, a legal tool is needed that can force consideration of ecological interactions. While not perfect, the public trust doctrine has the potential for protecting the integrity of ecosystems in a way that legislative and other common law remedies alone do not. It holds great promise to be a powerful legal ally to those wanting to pursue area-wide management to resolve conflicts between resource users and to slow the needless and wasteful resource destruction on land.

II. THE IMPORTANCE OF THE AREA-WIDE MANAGEMENT APPROACH

The environmental problems that gave rise to the plethora of environmental legislation in the 1970's are still with us today. Despite the strides made in slowing environmental degradation and species extinction, the United States continues to face a serious problem of resource degradation and a concomitant decline in species and their habitat. Resources that were formerly abundant are

⁸ 42 U.S.C.A. § 4331(b)(1).

⁹ See generally Jack H. Archer & M. Casey Jarman, *Sovereign Rights and Responsibilities: Applying Public Trust Principles to the Management of EEZ Space and Resources*, 17 OCEAN & COASTAL MANAGEMENT 253 (1992).

now scarce. This scarcity has increased competition for what remains. Area-wide management seeks to not only resolve conflicts among users of these scarce resources, but also to protect and replenish these resources.

Proponents of area-wide management have available to them a body of knowledge that was in its infancy when policymakers were initiating the federal government's "green revolution." Rise of the science of ecology has provided us with "objectively credible" evidence of the complex interrelationships among the various components of an ecosystem and between and among ecosystems themselves. Decisions made regarding one resource can have far-reaching impact on other resources. Had we placed more value on the experiences of generations of indigenous peoples of the United States, we might have learned this collective lesson sooner. Nonetheless, this knowledge is a basis for sound area-wide management and a knowledge that is recognized and valued under the public trust doctrine.

A recent experience in the northwest Hawaiian Islands provides an excellent illustration of the impact a change in an ecosystem can have on many components of that system.⁷ The northwest Hawaiian Islands are habitat to millions of migratory seabirds of several different species: the endangered Hawaiian monk seal, the threatened green sea turtles (the only marine turtle to haul out and bask on land), and a magnificent array of fish, shellfish, crustaceans, and corals. Until approximately four years ago, the population stock of Hawaiian monk seals at French Frigate Shoals⁸ was growing and was the largest of the subpopulations. Marine biologists believed that monk seal population to be at the atoll's carrying capacity. Starting in 1989 and 1990, and continuing until the present, this population has declined dramatically and precipitously. Due to birth declines and high mortality of young seals, at least one third of the animals, an estimated 275 seals have been lost out of the population. Other seals show evidence of starvation. Simultaneously, ornithologists discovered an alarming reproductive failure among certain marine bird populations of these islands. Finally, fisheries biologists recorded the lowest recruitment rate for

⁷ For a detailed description of this event, see Jeffrey J. Polovino et al., *Physical and Biological Consequences of a Climate Event in the Central North Pacific*, FISHERIES OCEANOGRAPHY, Feb. 1994, at 1.

⁸ French Frigate Shoals is a multi-island, coral-sand atoll approximately 500 miles northwest of Honolulu, Hawaii. NATIONAL GEOGRAPHIC ATLAS OF THE WORLD 43 (4th ed. 1975).

lobsters in this area.

Initially, these discoveries were made separately, with no knowledge of the decline in other parts of the ecosystem. When biologists at the National Marine Fisheries Service and U.S. Fish and Wildlife Service realized that the phenomenon was ecosystem-wide, they assumed it was not coincidence. Further research led them to conclude that a decadal scale oceanographic event had altered ocean temperatures in the area, causing declines in productivity at the bottom of the food chain, which inexorably worked its way up the food chain to the monk seal. For animal species with abundant populations, such an event is not critical to their existence; in a species as endangered as the monk seal, however, the potential exists for devastating consequences.

As a result of this experience, biologists were forced to readjust their perspective on the population of many of the species in the northwest Hawaiian Islands. For example, until that time, decisions regarding management of the monk seal were based on an assumption that French Frigate Shoals had a carrying capacity that was probably stable. Population levels there were abnormally high, as is now known, as the previous ten to fifteen years had been unusually productive ones for the ecosystem. It is believed that current conditions are more normal for the atoll. With the knowledge that French Frigate Shoals has a significantly lower long-term carrying capacity than once thought, biologists have had to revise their estimates of the numbers of seals that would evidence a healthy population for that site. Similar projections had to be revised for the other species as well, resulting in a change in catch allocations for commercial lobster fisheries.

This illustration becomes more significant when one realizes that human interactions with species in the northwest Hawaiian Islands ecosystem are minimal. French Frigate Shoals, like most of the northwest Hawaiian Islands, is part of the National Wildlife Refuge System; therefore, human presence on the islands is severely restricted. Area-wide resource management on the continental United States must account for the human species as a significant variable!

III. A BRIEF REVIEW OF THE PUBLIC TRUST DOCTRINE⁹

The public trust doctrine holds that certain lands, waters, and

⁹ Much has been written about the public trust doctrine. This explanation is

resources within a state are held by the state in trust for the people. The trust consists of a res (the covered resources), beneficiaries (the public), and trustees (governmental bodies). Enforcers of the trust are legislative and administrative bodies and the courts. The purpose of the trust is to preserve the resources in such a manner that they remain available to the public for certain public uses.

The government has dual ownership responsibilities as public trustee. As owner of the "jus privatum,"¹⁰ the state has the ability, albeit a quite restrictive one in many instances, to alienate trust lands or resources to private parties. As owner of the "jus publicum,"¹¹ the state has trust responsibilities that it is powerless to abrogate. In the United States, this trust originally applied to tidal waters, lands, and resources,¹² but has been expanded by the courts to large inland navigable rivers and lakes¹³ and, under certain circumstances, non-navigable waters.¹⁴ The Property Clause of the U.S. Constitution¹⁵ and some state constitutions¹⁶ establish

meant to simply give the reader a brief overview of its components. For more detailed discussion, see, e.g., Alison Rieser, *Ecological Preservation as a Public Property Right: An Emerging Doctrine in Search of a Theory*, 15 HARV. ENVTL. L. REV. 393 (1991); Joseph L. Sax, *The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention*, 68 MICH. L. REV. 471 (1970); Jan S. Stevens, *The Public Trust: A Sovereign's Ancient Prerogative Becomes the People's Environmental Right*, 14 U.C. DAVIS L. REV. 195 (1980). Not all writers are convinced of the efficacy of the doctrine, however. See, e.g., Marc J. Hershman, *A Word of Caution: The Public Trust Doctrine and Coastal Management*, 8 J. ENVTL. L. & LITIG. 237, 244-50 (1993).

¹⁰ Jus privatum is the right, title, or dominion of a private owner. BLACK'S LAW DICTIONARY 862 (6th ed. 1990).

¹¹ Jus publicum is the ownership of property by the government. *Id.*

¹² *E.g.*, *Martin v. Lessee of Waddell*, 41 U.S. (16 Pet.) 367 (1842).

¹³ *E.g.*, *Phillips Petroleum Co. v. Mississippi*, 484 U.S. 469, 476 (1988); *Illinois Cent. R.R. v. Illinois*, 146 U.S. 387, 435 (1892); *Propeller Genessee Chief v. Fitzhugh*, 53 U.S. (12 How.) 443, 455 (1851).

¹⁴ *E.g.*, *National Audubon Soc'y v. Superior Court*, 658 P.2d 709 (Cal.) (en banc), *cert. denied*, 464 U.S. 977 (1983).

¹⁵ U.S. CONST. art. 4, § 3, cl. 2.

¹⁶ *E.g.*, HAW. CONST. art. XI, § 1. Section 1 of Article XI provides:

For the benefit of present and future generations, the State and its political subdivisions shall conserve and protect Hawaii's natural beauty and all natural resources, including land, air, minerals, and energy sources, and shall promote the development and utilization of these resources in a manner consistent with their conservation and in furtherance of the self-sufficiency of the State.

All public natural resources are held in trust by the State for the benefit of the people.

Id.

public trust obligations. Legislative bodies have imposed public trust duties as well.¹⁷

Early public trust cases regarding navigable waters afforded protection to certain uses of the resource, rather than to the resource itself. During this period in the development of the doctrine, the concern was not for reducing overexploitation, but for providing access to the resources for public benefit. Therefore, the traditional uses of navigation, commerce, and fishing were given legal protection. Over time, these uses have been expanded to include recreation, public access, and mineral extraction. In addition, ecological preservation, technically not a "use," has emerged as deserving of protection.¹⁸

The contours of the public trust have been developed by the courts and governmental agencies somewhat differently, and from state to state, one finds variations.¹⁹ But the basic principle is the same: the owning governmental body is a trustee and as such, has responsibilities to protect the trust. This fundamental notion of protection of the trust makes the doctrine such an empowering legal tool for area-wide resource management.

IV. HOW TO USE THE DOCTRINE FOR AREA-WIDE RESOURCE MANAGEMENT

As discussed above, ecosystems are complex and interactive; therefore, a legal doctrine needs to be available that can take into account the effects of human activities on many, and ideally all of the components within the ecosystem. The public trust doctrine has this potential. The Mono Lake case, *National Audubon Society v. Superior Court*,²⁰ brought under the navigable waters public

¹⁷ *E.g.*, MISS. CODE ANN. § 49-27-3 (1990) ("It is declared to be the public policy of this state to favor the preservation of the natural state of the coastal wetlands and their ecosystems and to prevent the despoliation and destruction of them, except where a specific alteration of specific coastal wetlands would serve a higher public interest in compliance with the public purposes of the public trust in which coastal wetlands are held.").

¹⁸ For a discussion of uses protected under the navigable waters trust in the coastal states, see PUTTING THE PUBLIC TRUST DOCTRINE TO WORK: THE APPLICATION OF THE PUBLIC TRUST DOCTRINE TO THE MANAGEMENT OF LANDS, WATERS AND LIVING RESOURCES OF THE COASTAL STATES (David C. Slade ed., 1990).

¹⁹ As early as 1894 in *Shively v. Bowlby*, 152 U.S. 1 (1894), and as recently as 1988 in *Phillips Petroleum Co. v. Mississippi*, 484 U.S. 469 (1988), the U.S. Supreme Court has told us that each state has the authority to develop public trust law within its borders "according to its own views of justice and policy" *Shively*, 152 U.S. at 26; accord *Phillips Petroleum*, 484 U.S. at 475.

²⁰ 658 P.2d 709 (Cal.) (en banc), cert. denied, 464 U.S. 977 (1983).

trust, is illustrative. The Mono Lake case arose over an attempt by the City of Los Angeles to divert water from Mono Lake and four of its tributaries to help meet the city's growing demand for potable water. The National Audubon Society (NAS) sued to prevent the diversions, arguing that by allowing Los Angeles to take the water, the state was in violation of its duties under the public trust doctrine. NAS asserted that the diversions would increase the salinity of the lake, causing adverse effects on life forms throughout the food chain, including an adverse impact on the health of humans, and diminution of the lake's value as an economic, recreational, and scenic resource.²¹

The Court of Appeals for the Ninth Circuit agreed with the NAS that the state had a continuing duty under the public trust doctrine to assess the effects of the diversions from both the lake (conceded to be navigable waters) and the non-navigable tributaries. The court's willingness to extend the public trust doctrine to otherwise uncovered waters, those that are non-navigable, reflects its recognition that excluding components of an ecosystem (here, the waters that comprise the Mono Lake basin) from a public trust analysis ignores the interactions within an ecosystem to the peril of the ecosystem.

While the Mono Lake case is inspiring for its recognition of the impact of activities within the Mono Lake basin, but outside the lake itself, it also evidences the shortcomings of the doctrine at its current stage of evolution. When the court of appeals reversed the lower court's decision, it did not demand a particular outcome; rather, it dictated that "some responsible body" should reconsider the allocation of waters of the Mono basin after conducting a public trust analysis. It gave no guidance on how that analysis should be done, nor what the result should be,²² other than that actions should be taken to avoid or minimize any harm to public trust interests.²³

One would hope a public trust analysis would prevent the withdrawal of all or a significant portion of the water. But that result is not altogether clear. When public trust resources are at stake, the critical issue centers around resolving conflicting uses or activities. In the navigable waters context, the uses currently protected are those noted in the previous section.²⁴ For example, can a state gov-

²¹ *Id.* at 715-16.

²² *See id.* at 732. "We do not dictate any particular allocation of water." *Id.*

²³ *Id.* at 712.

²⁴ *Supra* part III.

ernment issue a mineral lease in public trust water bottoms in an area that is traditionally a productive recreational fishery? Must commercial fishers change their methods of fishing to prevent the incidental killing of non-target species that are food fish for certain marine mammals? A reading of the cases sheds little light on how such issues would be resolved. Similar issues would arise in area-wide land-based resource management. For example, should loggers be prohibited from clearcutting forests to protect squirrel habitats? Should the state be precluded from issuing a mineral lease on public lands where game has traditionally been hunted by the public? Should conservation zoning be implemented to restrict development in sensitive ecosystems such as deserts?

To help resolve such issues and to help ensure that trustees don't abrogate their trust responsibilities, Jack Archer and I have proposed a priority of use analysis for ocean and nearshore resource conflicts.²⁵ This priority analysis is based on a series of legal presumptions. First, non-exclusive uses should be presumptively favored over exclusive uses. A second presumption would favor activities that involve reversible versus irreversible commitments of resources. Underlying this assumption is the principle that "irrevocable resource management decisions should be avoided in the interest of ecological preservation and of future generations."²⁶ Third, water dependent uses should be favored over non-dependent uses. And fourth, a presumption in favor of decisions that preserve biodiversity should be instituted. In addition to the above presumptions, we recommend that the resource user, not the public or the trustee, should have to prove that her activity will not interfere with other legitimate uses and that the activity will be conducted in an environmentally sound manner.²⁷

Two coastal states have instituted limited presumptions in ocean resource management decision-making. Both Oregon and Washington have, by statute, established a presumption favoring renewable ocean resource uses over non-renewable ones.²⁸ A similar priority of use and presumption model could be developed that is tailored to the needs of area-wide resource management decision-making that has as its goal the protection of the integrity of earth's ecosystems.

²⁵ Archer & Jarman, *supra* note 6, at 260-66.

²⁶ *Id.* at 265.

²⁷ *Id.*

²⁸ OR. REV. STAT. § 196.420(1) (1993); WASH. REV. CODE § 43.143.010(3) (Supp. 1994).

V. CONCLUSION

In conclusion, I urge those interested in developing an effective area-wide resource management program to take a thoughtful look at the public trust doctrine. It is based in protection of the underlying res, the public trust resources themselves. The public trust doctrine has also proven to be very flexible by accommodating changing conditions of the world today. Explore and use all the possible legal bases for the doctrine. In many cases, the navigable waters doctrine might be enough. In others, constitutional and legislative trusts may need to be tapped. And even if the legal doctrine appears too elusive, use political avenues and educational efforts to ensure that public trust principles drive decision-making.