

SAND RIGHTS: A LEGAL SYSTEM TO PROTECT THE “SHORES OF THE SEA”*

Katherine E. Stone**

INTRODUCTION

“By the law of nature these things are common to mankind — the air, running water, the sea and consequently the shores of the sea.”¹

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** Katherine E. Stone, a certified appellate law specialist with Myers, Widders, Gibson & Long, L.L.P., which is the City Attorney for the cities of Ojai and Fillmore, California, has been involved in coastal issues for over 25 years. As a Deputy Attorney General, she represented many coastal cities in litigation as well as planning and environmental matters. In 1985, “Sand Rights: A Legal System to Protect the ‘Shores of the Sea’” was first presented by Ms. Stone and Benjamin S. Kaufman at the Battered Coast Conference in San Diego, California. Since then, it has been presented at several conferences around the country, including the International Municipal Lawyers Association Annual Conference, November 9, 1998; Florida Shore & Beach Preservation Association conference, June 3, 1998; California Shore and Beach Preservation Association Annual Conference, October 30, 1998; Second Annual National Beach Preservation Technology Conference, Strategies and Alternatives in Erosion Control, February 22–24, 1989; the Battered Coast Conference; CZ 85: Beach Erosion Conference; World Congress on Land Use; CZ 87: Orange Coast Conference, 1987; and CZ 89: Southwestern Legal Foundation, Institute on Planning, Zoning & Eminent Domain, November 1988. The paper may have contributed to current programs to remove obsolete dams that block sand from reaching the beaches and endangered fish from spawning upstream (e.g., Matilija Dam in Ventura County and Rindge Dam on Malibu Creek in Los Angeles County). *Sand Rights: A Legal System to Protect the Shores of the Sea*, authored by Katherine E. Stone and Benjamin Kaufman was published in J. AM. SHORE & BEACH PRESERVATION ASS’N, July 1988 and was edited by Douglas L. Inman, Research Professor of Oceanography, University of California. On November 29, 1991, a feature article on “Sand Rights” appeared in the *New York Times*, authored by Cory Dean. (Ms. Dean’s new book, *AGAINST THE TIDE* (1999), discusses the concept at pp. 124–133 and 213.) “Sand Rights” was widely disseminated by the Associated Press and became the topic of at least one Ph.D. thesis. Ms. Stone authored amicus briefs in landmark United States Supreme Court cases: *Nollan v. California Coastal Commission*, 483 U.S. 825 (1987), and *Lucas v. South Carolina Coastal Council*, 505 U.S. 1003 (1992).

The technical information in this Article has been reviewed for accuracy and verified by several eminent coastal scientists and engineers: Doug Inman, Research Professor of Oceanography, Scripps Institution of Oceanography, University of California; Orville Magoon, former Coastal Engineer, U.S. Army Corps of Engineers; Lesley Ewing, Associate Civil Engineer, California Coastal Commission; and Mark Capelli, California Coastal Commission. The concept of “Sand Rights” originated with Orville Magoon, current president of the Coastal Zone Foundation.

1. *National Audubon Soc’y v. Superior Court*, 658 P.2d 709, 718 (Cal. 1983) (quoting J. INST. 2.1.1 pr.).

Since earliest times, all cultures have understood that certain natural resources are incapable of private ownership. These resources are essential for human survival. They include the running waters, the seas, and the lands underneath them. The sovereign holds these resources in trust for all people. This concept is known as the "Public Trust Doctrine." The Public Trust Doctrine has been interpreted to include natural resources within the running waters and the seas. This Article proposes that sand associated with coastal rivers and beaches be recognized as one of those resources.

THE CONCEPT

The legal system of water rights in California and many other states, such as Florida, is highly developed. So far, however, it has failed to recognize, in any comprehensive fashion, the importance of the sand that is transported to and along our beaches by streams and littoral currents. This Article suggests that a system of "Sand Rights" should be integrated into the existing legal framework. The focus is on California's ocean beaches, where an insufficient sand supply, coupled with El Niño storms, costs billions of dollars in public and private property damage and badly hurts one of the State's prime recreational resources.² The same principle should be applied to beaches all over the world, including lake and riverfront beaches.

The concept of Sand Rights integrates two natural laws. One is physical — the natural transport of sand within the littoral cell.³ The other is societal — our system of property rights that is based on legal concepts dating to early Roman times.⁴ Although the focus is on California, the theory can be applied within the legal system of any state and also to the many nations that recognize the same legal principles.

Sand Rights, like water rights and property rights, are state

2. See ROBERT G. DEAN ET AL., NATIONAL RESEARCH COUNCIL, CALIFORNIA COASTAL EROSION AND STORM DAMAGE DURING THE WINTER OF 1982-83 1-4, 32-34 (1984).

3. See Douglas L. Inman, *Nearshore Processes*, in MCGRAW-HILL ENCYCLOPEDIA OF SCIENCE AND TECHNOLOGY 671, 677-78 & fig. 5 (8th ed. 1997) [hereinafter Inman, *Nearshore Processes*]; Douglas L. Inman & Birchard M. Brush, *The Coastal Challenge*, SCIENCE, July 6, 1973, at 26-27 & fig. 10 [hereinafter Inman, *The Coastal Challenge*]. "A littoral cell is a coastal [sedimentation].compartment that contains a complete cycle of littoral sedimentation including sources, transport paths, and sediment sinks." Douglas L. Inman, *Damming of Rivers in California Leads to Beach Erosion* 25 (Nov. 12-14, 1985) (unpublished manuscript, on file with Author) [hereinafter Inman, *Damming of Rivers*].

4. See *National Audubon*, 658 P.2d at 718.

law questions that vary from state to state.⁵ A United States Supreme Court decision suggests that California and other states could extend the Public Trust Doctrine to cover Sand Rights.⁶ Sand Rights would require reevaluation of new development to mitigate interference with the watershed and littoral systems, which transport sand to and along the beach. It would also provide a legal basis for funding sand replenishment through mitigation, fees, taxes and assessments.

FACTUAL BACKGROUND

The State of California contains about 1000 miles of coastline, excluding the islands and major embayments, such as San Francisco Bay, which are also a part of the state.⁷ Much of this coastline is either highly developed or is consciously being preserved in a natural state for recreational purposes. The coast is one of the most valuable resources of California, as it is for most coastal states. A San Francisco State University study found that "Californians as a whole value beaches . . . at . . . \$942 million per year," and that the present value of future income from the State's beaches is about \$17.5 billion.⁸

Shoreline erosion presents a major problem in California and many other states.⁹ A rising sea level compounds the problem.¹⁰ While the shoreline has historically receded and advanced, erosion has become exacerbated by society's efforts to tame the State's rivers and divert their waters for public and private use.¹¹ Dams, highways, coastal structures, and other developments in coastal

5. See *Oregon ex rel. State Land Bd. v. Corvallis Sand & Gravel Co.*, 429 U.S. 363, 378 (1977).

6. See *Phillips Petroleum Co. v. Mississippi*, 484 U.S. 469, 479 (1988).

7. See *Miramar Co. v. City of Santa Barbara*, 143 P.2d 1, 4 (Cal. 1943).

8. Philip G. King, *The Economic Valuations of Beaches and Coastal Resources: With Applications to California and the Marshall Islands* 76-77 (June 3-5, 1998) (unpublished manuscript, on file with Author).

9. See Deirdre M. Mageean et al., *Impacts of Rising Sea Level on Coastal Populations in California and Maine* 176 (June 3-5, 1998) (unpublished manuscript, on file with Author).

10. See *id.*

11. See Douglas L. Inman, *The Silver Strand Littoral Cell and Erosion at Imperial Beach*, 119 CONG. REC. 3901, 5231 (1973) [hereinafter Inman, *The Silver Strand*] (statement of Professor Inman); Douglas L. Inman, *Budget of Sedimentation in Southern California: River Discharge Versus Cliff Erosion* 10 (Feb. 6-8, 1985) (unpublished manuscript, on file with Author) [hereinafter Inman, *Budget of Sedimentation*]; Inman, *Damming of Rivers*, *supra* note 3, at 25.

watersheds prevent or retard the transportation of sand to the coast.¹² This phenomenon becomes a recognizable problem only when valuable resources, which have been placed near the shoreline, become threatened by storms as their buffer of sand erodes.¹³ For example, the scenic road along Carmel Beach is threatened by coastal erosion, and State Highway 1, which washed out during the El Niño winter of 1982–83, was reopened only at great expense.¹⁴ Without the establishment of roads and structures near beaches, the natural accretion and erosion of the shoreline and movement of sand would incur little damage or notice.

Sand is transported within the watershed, which drains into each littoral cell.¹⁵ This "Greater Littoral Cell" extends from the coastal mountains to submarine canyons, or other offshore terminus, and is composed of rivers and their tributaries, streams, lakes, and coastal waters, which then transport sand to and along the beaches within the littoral cell.¹⁶ Much of people's activities within the "Greater Littoral Cell" have a profound effect on the transport of sand to the coast.

Numerous causes of shoreline erosion exist. The effect of the interaction of these complex causes is not completely understood. While not an exhaustive list, some of the most important impacts on the shoreline are described below.

Major Storms

Severe winter storms, and the high waves that accompany them, are a major threat to beaches. This was demonstrated by the El Niño storms beginning in the early 1980s¹⁷ and continuing through 1998.¹⁸ High tides greatly magnify the eroding potential of

12. See Inman, Budget of Sedimentation, *supra* note 11, at 10; Inman, Damming of Rivers, *supra* note 3, at 25; Inman, *The Silver Strand*, *supra* note 11, at 5231.

13. See generally DEAN, *supra* note 2, at 31–63 (demonstrating the effects of beach erosion on highways, homes, sewer systems, and other man-made fixtures in the landscape).

14. See generally Joe Gandelman, *Coast Is Called Ill-Prepared for Another Harsh Winter*, SAN DIEGO UNION-TRIB., at B1 (1983) (discussing storm damage and resulting costs).

15. See Inman, Damming of Rivers, *supra* note 3, at 24–25.

16. See *id.* at 23–24.

17. See Douglas L. Inman & Scott A. Jenkins, Changing Wave Climate and Littoral Drift Along the California Coast 538 (Mar. 24–27, 1997) (unpublished manuscript, on file with Author); Douglas L. Inman et al., Wave Climate Cycles and Coastal Engineering Practice 325 (Sept. 2–6, 1996) (unpublished manuscript, on file with Author).

18. See *Climate*, TIMES (London), Oct. 9, 1999.

storm waves. The worst erosion generally occurs during high tide ranges. When the high winter wave season coincides with the year's peak of high tides, the potential for storm erosion is the most severe.

Reduction of Sand Borne by Rivers and Streams

A beach is a dynamic system. While certain phenomena, such as large winter storms, may erode a coastline beach by moving sand into offshore canyons, other phenomena, such as river borne sediment, serve to replenish the beaches with new sand.¹⁹ An insufficient supply of new sand will result in progressive narrowing of beaches, increased incidences of wave run-up during storms, and aggravated cliff retreat.²⁰

A major source of sand renewal is sediment borne downstream by rivers and streams.²¹ Generally, in Northern California, winter and spring stream flows carry sand-size particles directly to the coast every year. In Southern California, this sand does not always reach the coast but is held in flood plains or lagoons at the mouths of rivers for several years. These deposits have traditionally been mobilized by large-scale, periodic floods, which carry the sand to the beaches.²² However, the occurrence of these floods is not predictable, and their benefits to the beaches have been drastically reduced by shoreline development and flood control projects built along California's rivers and streams.²³

Many flood plains and lagoons contain large deposits of sand, which act as sand traps by reducing the stream flow to such low velocities that the sediment is precipitated. In many areas of California, commercial sand mining takes place on the beach within the river flood plains.²⁴ Although exploitation of lagoons is not as widespread since many of them are protected wetlands, commercial mining projects still reduce the amount of sand and sediment available for transport to our beaches.²⁵

19. See Inman, *Damming of Rivers*, *supra* note 3, at 22.

20. See *id.*; Douglas L. Inman, *Types of Coastal Zones: Similarities and Differences*, in ENVIRONMENTAL SCIENCE IN THE COASTAL ZONE 67, 68 (Nat'l Research Council ed. 1994).

21. See Inman, *The Coastal Challenge*, *supra* note 3, at 25.

22. See Inman, *Budget of Sedimentation*, *supra* note 11, at 11.

23. See *id.*

24. See Orville T. Magoon et al., *Coastal Sand Mining in Northern California, U.S.A. 1571* (July 10-14, 1972) (unpublished manuscript, on file with Author).

25. See Robert D. Hotten, *Sand Mining on Mission Beach San Diego, California*, J.

Public works projects, such as dams and flood control channels, have also drastically diminished the flow and sediment transport capacity of the water flowing in rivers and streams.²⁶ It has been estimated that hundreds of millions of cubic yards of sand are stored behind dams in the Los Angeles area.²⁷

Interference with Littoral Flows

Sand continues to be mobile once it reaches the shoreline. Large amounts of sand are carried up and down the coast by littoral or longshore currents.²⁸ Waves approaching the beach at an angle lead to a littoral or longshore current parallel to the beach.²⁹ This littoral current transports sediments parallel to the beach.³⁰

Human interference with the longshore transport of sand has caused increased erosion in some locations and deposits in others.³¹ Coastal structures, which have been built to solve local problems, may cause erosion on the downstream side of the structure and accretion on the upstream side.³² The effect may be compounded by the construction of an entire series of structures, a result that generally occurs because the owner of a downstream property is forced to take action to prevent the increased erosion to his or her beach.³³ "The most common types of coastal structures [built] to prevent erosion" are jetties, seawalls, and breakwaters.³⁴

Sand Mining and Interference with Bluff Erosion

Sand mining accounts for a significant loss of beach nourishment.³⁵ Besides river flood plains and stream beds, large scale commercial sand mining takes place on various beaches (e.g., Monterey) of California.³⁶ This sand is used in construction, but

AM. SHORE & BEACH PRESERVATION ASS'N, Apr. 1988, at 19.

26. See David Potter, *Sand Sluicing from Dams on the San Gabriel River — Is It Feasible?* 251-55 (Feb. 6-8, 1985) (unpublished manuscript, on file with Author).

27. See *id.* at 254.

28. See Inman, *Nearshore Processes*, *supra* note 3, at 676.

29. See DAVID A. ROSS, *OPPORTUNITIES AND USES OF THE OCEAN* 255 (1978).

30. See *id.*

31. See Inman, *The Coastal Challenge*, *supra* note 3, at 29.

32. See *id.*

33. See *id.* at 28-29 fig. 12.

34. ROSS, *supra* note 29, at 264-65.

35. See Magoon, *supra* note 24, at 1573.

36. See *id.* at 1571.

also in less familiar ways, such as for making glass and pottery.³⁷ Noncommercial sand mining also takes place in California.³⁸ Sand is removed from the state's beaches by the truckload every summer day with the kelp, sea-grass, and trash raked from city beaches.³⁹ Other sand is caught in beach towels or in sand pails bound for the cat box.

Many of the coastal bluffs in Southern California were beaches that, through geologic change, have been uplifted to form marine terraces. The marine terraces along the Southern California coast were historically a significant source of sedimentation for the beaches.⁴⁰ First the railroad, then the coastal highways, interfered with this source of beach sand.⁴¹ More recently, efforts to stabilize the bluffs and protect coastal developments have practically eliminated this source of sand in some areas.⁴² The result of man's interference with coastal processes is a net deficit in sand moving to and along the coast.

Competing Interests

Sand serves several valuable purposes.⁴³ It is a valuable commercial resource, as demonstrated by the extensive sand mining operations in many parts of California.⁴⁴ Beaches are major recreational resources and tourist attractions for most coastal states and nations.⁴⁵ California's beaches generate significant income for the State and its coastal communities.⁴⁶ Beaches also serve as habitats for sensitive species.⁴⁷ The sand on our beaches serves as a buffer to protect public and private coastline structures from storm damage.⁴⁸ El Niño storms would not have battered California's coastal structures had there been sufficient sand on the beaches.⁴⁹ The lack of sufficient sand is severe in some areas. For example, there

37. See *id.* at 1573-75.

38. See Hotten, *supra* note 25, at 18.

39. See *id.*

40. The Author confirmed this information with the California Coastal Commission.

41. See *supra* note 40.

42. See *supra* note 40.

43. See Magoon, *supra* note 24, at 1575.

44. See *generally id.*

45. See *id.* at 1573.

46. See King, *supra* note 8, at 73.

47. See Inman, *Nearshore Processes*, *supra* note 3, at 678.

48. See Inman, *Budget of Sedimentation*, *supra* note 11, at 10.

49. See *id.* at 10, 13.

is a fifty-one percent deficit in the sand budget of the beaches of the Oceanside littoral cell.⁵⁰

TOWARD A THEORY OF SAND RIGHTS

Legal History of Sand Rights

Traditionally, California courts have been hostile to any concept of Sand Rights. For example, in 1943, the California Supreme Court, in *Miramar Co. v. City of Santa Barbara*⁵¹ held in a split decision that a beachfront hotel owner had no right to the continued accretion of sand carried by the littoral current onto his property.⁵² The plaintiff, the owner of the Miramar Beach Hotel, complained that the construction of a breakwater by the City of Santa Barbara almost three miles west of his property served to block the natural flow of sand carried by the littoral current to his property.⁵³ By the time the hotel filed the lawsuit, seven years after the completion of the breakwater, the beach in front of the hotel was completely "denuded" of sand.⁵⁴

The court noted that "[a] littoral owner may have a right as against an individual [who interrupts the] flow of sand carried . . . by the ocean currents."⁵⁵ The court held, however, that the State or a city has the right to build coastal structures that aid commerce, navigation, or fishing even though the structure leads to the erosion of the plaintiff's property.⁵⁶ The court based its ruling on a finding that the diversion of sand from Miramar Beach was an incidental consequence of the State's use of navigable waters for a public trust purpose, which was superior to any private littoral right to the sand that feeds the beach.⁵⁷

Miramar, and other cases like it, rests in part on the principle that California holds the tidelands and navigable waters of the state in trust for all the people, which is the Public Trust Doctrine.⁵⁸ Plans for public improvements made in furtherance of the public trust (traditionally for commerce, navigation, or fishing) have

50. See Inman, Damming of Rivers, *supra* note 3, at 25.

51. 143 P.2d 1 (Cal. 1943).

52. See *id.* at 4.

53. See *id.* at 1.

54. See *id.* at 1-2.

55. *Id.* at 2.

56. See *id.* at 3.

57. See *Miramar*, 143 P.2d at 4.

58. See *id.* at 3.

been approved by courts in the face of claims by beachfront property owners that the State's action would diminish the value of their property.⁵⁹ The denial of private development that would periodically intrude on tidelands has been upheld as not violating private property rights.⁶⁰ California has developed the Public Trust Doctrine to a greater extent than almost any other state. Other states with a significant body of public trust law include New Jersey, Alaska, Florida, Massachusetts, Oregon, Wisconsin, Maryland, and Mississippi.⁶¹

In Florida, for example, the public trust has been described as follows:

The State holds the fore-shore in trust for its people for the purposes of navigation, fishing and bathing. It is difficult indeed to imagine a general and public right of fishing in the sea, and from the shore, unaccompanied by a general right to bathe there, and of access thereto over the fore-shore for that purpose. Universal and habitual practice in England and America for many years has established this right.⁶²

In 1967, the California Supreme Court ruled that a downstream landowner has no right, as against a city, to the continued flow of sand and gravel in suspension in the waters of a stream.⁶³ In *Joslin v. Marin Municipal Water District*,⁶⁴ Joslin's business depended upon sand and gravel being carried downstream by the Nicasio Creek.⁶⁵ The City constructed a dam in 1961 that reduced the flow of water and impeded the replenishment of sand and gravel upon which Joslin's business relied.⁶⁶ The court rejected Joslin's claim based on California's long-standing riparian rights doctrine.⁶⁷ That doctrine, set forth in the California Constitution, declares that:

- The use of flowing water is limited to the amount of water

59. See, e.g., *Miramar*, 143 P.2d at 4.

60. See *Lechuza Villas W. v. California Coastal Comm'n*, 70 Cal. Rptr. 2d 399, 418 (Cal. Ct. App. 1997).

61. See, e.g., *White v. Hughes*, 190 So. 446, 448 (Fla. 1939); *Mathews v. Bay Head Improvement Ass'n*, 471 A.2d 355, 360 (N.J. 1984).

62. *White*, 190 So. at 449.

63. See *Joslin v. Marin Mun. Water Dist.*, 429 P.2d 889, 895 (Cal. 1967).

64. 429 P.2d 889 (Cal. 1967).

65. See *id.* at 891.

66. See *id.*

67. See *id.* at 896.

which is "reasonably required for the beneficial use to be served";

- no waste of water;
- no *unreasonable* use, *unreasonable* method of use, *unreasonable* method of diversion of water; and
- riparian rights apply *only* to as much of the flow as is required or used consistently with the particular beneficial use.⁶⁸

In *Joslin*, the court compared the beneficial use provided by the dam to the general public (conserving the waters of the state) with Joslin's private business need for the sand and gravel.⁶⁹ The court held, as a matter of law, that the use of the creek's waters for the purpose of carrying and depositing sand and gravel on Joslin's property was an unreasonable use.⁷⁰ The mere fact that the use of the water to carry sand and gravel was beneficial to private property did not make the beneficial use a reasonable one.⁷¹

In the cases discussed above, and in other California decisions of this era, the courts refused to conclude that any right to the continued renewal of sand on a particular piece of real property existed.⁷² However, these cases all involved a private party complaining that the actions of a public agency interfered with the flow of sand to his or her property.⁷³ The courts decided these cases in favor of the public agency because the asserted public benefit of the traditional public trust project (for commerce, navigation, or fisheries) far outweighed the private economic benefit that was incidentally lost by constructing the project.⁷⁴ More recent cases, however, indicate that the courts now may be more favorably disposed to protect beaches.⁷⁵

In 1985, in *Whaler's Village Club v. California Coastal Commission*,⁷⁶ the court, upholding the Public Trust Doctrine, held that granting a conditional permit to construct a revetment to protect homeowners along the beach, on the offer to dedicate an easement for public access to the beach, was a reasonable mitigation

68. CAL. CONST. art. X, § 2 (emphasis added).

69. *Joslin*, 429 P.2d at 895.

70. *See id.*

71. *See id.* at 896.

72. *See, e.g., Joslin*, 429 P.2d at 896; *Miramar*, 143 P.2d at 4.

73. *See, e.g., Joslin*, 429 P.2d at 890; *Miramar*, 143 P.2d at 1.

74. *See, e.g., Joslin*, 429 P.2d at 895; *Miramar*, 143 P.2d at 4.

75. *See, e.g., Whaler's Village Club v. California Coastal Comm'n*, 220 Cal. Rptr. 2, 13 (Cal. Ct. App. 1985).

76. 220 Cal. Rptr. 2 (Cal. Ct. App. 1985).

measure and did not constitute an invasion of privacy or an unlawful taking of property without compensation.⁷⁷ The court reasoned that there was sufficient evidence that seawalls and revetments, such as the one proposed in this case, "tend to cause sand loss from beach areas in front of and adjacent to them even if they protect immediate structures," and that the cumulative effect of revetments along the California coast placed "a burden on public access to and along state tide and submerged lands [making the] corresponding compensation by means of public access . . . reasonable."⁷⁸

In *Whaler's Village*, the court recognized and protected the sand beach as it existed at a particular point in time, rather than addressing or protecting the naturally dynamic processes that created and sustain the beach. This case represents a small incremental step in the court's growing awareness of the special status and nature of sand beaches.

In 1998, a California court of appeal held that the denial of a permit to develop along the shoreline was justified, because the mean high tide, the legal boundary between the developer's beachfront property and the state's tidelands, was ambulatory, not fixed, and the proposed development would interfere with tidal action.⁷⁹ This case is significant in recognizing the dynamic nature of coastal beaches and implies that there are activities which affect coastal processes.

This Article addresses issues that the above cases left unresolved. Large parts of California's coastal beaches are public.⁸⁰ They are used for the public benefit.⁸¹ Erosion of beaches now threatens the fiscal well-being of entire communities by, for example, causing the loss of tourist revenue.⁸² Unlike the situation in *Miramar* or *Joslin*, where only individual interests were affected,⁸³ depriving coastline beaches of sand needed to replenish them will result in an injury to the interests of the public at large. In short, unlike the situations in most of the reported California decisions on this topic, the larger picture provides the view that the continued supply of sand to the beaches of California confers a significant

77. See *id.* at 10-12.

78. *Id.* at 13-14.

79. See *Lechuza*, 70 Cal. Rptr. 2d at 418.

80. See King, *supra* note 8, at 69-72.

81. See *id.* at 69.

82. See generally *id.*

83. See *supra* notes 51-71 and accompanying text.

public benefit.

Federal Law

One question which historically caused great confusion is whether lawsuits concerning riparian or littoral rights presented issues of exclusively state law or whether federal law is determinative. This issue was resolved by the United States Supreme Court in a 1977 case involving Sand Rights, *Oregon ex rel. State Land Board v. Corvallis Sand & Gravel Co.*,⁸⁴ which was reaffirmed in *Phillips Petroleum Co. v. Mississippi*.⁸⁵

In *Corvallis*, the State of Oregon sued the Corvallis Sand & Gravel Co. in an attempt to stop the company from dredging sand from certain lands beneath the Willamette River.⁸⁶ The dredging occurred for forty to fifty years under a federal patent, but without a lease from the State.⁸⁷ This case, like many other cases involving the continued appropriation of sand by a private party, was filed by the State, which, at the time of the lawsuit, was in a more environmentally enlightened period, and repented of its previous generosity in allowing the company to remove this sand from the Greater Littoral Cell.⁸⁸

The Court examined the venerable case of *Pollard v. Hagen*,⁸⁹ which established the principle that "[t]he shores of navigable waters, and the soils under them, were not granted by the Constitution to the United States, but were reserved to the states respectively."⁹⁰

In *Corvallis*, the Court held that, because of the doctrine in *Pollard*, states are free to choose their own legal principles to resolve property disputes relating to land under riverbeds.⁹¹ The United States Supreme Court sent the case back to the Oregon Supreme Court,⁹² which held that Oregon had "title to all portions of the bed of the Willamette River involved in this case, except . . . [a] portion of the bed . . . owned by defendant Corvallis," based

84. 429 U.S. 363 (1977).

85. 484 U.S. 469 (1988).

86. *Corvallis*, 429 U.S. at 365.

87. *See id.*

88. *See id.*

89. 44 U.S. 212 (1845).

90. *Id.* at 230.

91. *See Corvallis*, 429 U.S. at 376-78.

92. *See id.* at 382.

upon a change in the river's course in 1909.⁹³ Therefore, Corvallis Sand & Gravel had to discontinue dredging the Willamette River, except on its portion of the bed, and was required to pay damages to the State for the sand it had removed.⁹⁴

In *Phillips Petroleum*, the Court extended the ruling in *Corvallis* by holding that, under the Public Trust Doctrine, the states hold title to all lands under waters influenced by the tides, not just those below the mean high tideline.⁹⁵ Thus, states have absolute title to the beds of all waters influenced by the tides⁹⁶ as well as all navigable fresh waters within their boundaries, title to which cannot be defeated, even by an act of Congress.⁹⁷

In *Phillips Petroleum*, the Court strongly reaffirmed the Public Trust Doctrine, holding it applied to a nonnavigable bayou and small drainage streams several miles inland from the coastline.⁹⁸ The Court reasoned that there is no difference in kind between these waters, since both types of waters are connected to the sea and "share those 'geographical, chemical and environmental' qualities that make lands beneath tidal waters unique."⁹⁹ The fact that record title had been privately held since before statehood (by Spanish land grants) and that the record titleholder had paid taxes on the land, did not divest the State of its sovereign ownership because "under [state] law, the State's ownership . . . could not be lost via adverse possession, laches or any other equitable doctrine."¹⁰⁰

The Public Trust Doctrine

The Public Trust Doctrine traces its lineage to ancient Roman Law.¹⁰¹ The Institutes of Justinian established that certain types of property were *res communes*, common to all the people and incapable of private ownership.¹⁰² These included running waters in

93. *Oregon ex rel. State Land Bd. v. Corvallis Sand & Gravel Co.*, 582 P.2d 1352, 1364 (Or. 1978).

94. *See id.*

95. *See Phillips Petroleum*, 484 U.S. at 484-85.

96. *See id.* at 480.

97. *See Corvallis*, 582 P.2d at 1352.

98. *Phillips Petroleum*, 484 U.S. at 480-81.

99. *Id.* at 481.

100. *Id.* at 484.

101. *See* Jan S. Stevens, *The Public Trust: A Sovereign's Ancient Prerogative Becomes the People's Environmental Right*, 14 U.C. DAVIS L. REV. 195, 195 (1980).

102. *See id.* (citing *United States v. Gerlach Live Stock Co.*, 339 U.S. 724, 744 (1950)).

the sea and the land beneath them.¹⁰³ The shores are not understood to be property of any man, but are compared to the sea itself, and to the sand or ground that is under the sea.¹⁰⁴

According to the doctrine, the sovereign may dispose of its ownership rights in certain trust lands, called the *jus privatum*, but it always retains a continuing obligation to manage the trust lands for the public interest, the *jus publicum*.¹⁰⁵ This obligation is inalienable.¹⁰⁶ A state may convey to a private owner bare legal title to tidelands, but his or her ownership interest is subject to and restricted by the superior public interest.¹⁰⁷

The Public Trust Doctrine was apparently not used during the Middle Ages, but was reinstated during the reign of Queen Elizabeth I of England in the last half of the sixteenth century.¹⁰⁸ Under the English interpretation of the doctrine, the restraint was imposed only upon the sovereign; Parliament retained the power to enlarge, diminish, or eliminate the rights of the public over the tidelands, provided that there was some legitimate public purpose asserted.¹⁰⁹ It has been written that "[i]t is part of the prerogative and duty of the Crown to preserve the realm from the inroads of the sea and to protect the land from the inundation of the water for the benefit, not of an individual, but of the whole commonwealth."¹¹⁰

These two divergent sources of the Public Trust Doctrine — Roman and English law — have produced a degree of confusion, as both were carried over into American law. However, despite its obscure origins and confusing application, the Public Trust Doctrine is firmly established in the United States and in the State of Cali-

103. See *id.* at 195–96.

104. See J. INST. 2.1.5.

105. See *Shively v. Bowlby*, 152 U.S. 1, 11 (1894).

106. See *Stevens*, *supra* note 101, at 198 (citing H. BRACTON, ON THE LAWS AND CUSTOMS OF ENGLAND 16–17 (S. Thorne trans. 1968)).

107. See *Shively*, 152 U.S. at 26.

In this light even the shore of the sea was said, though not very strictly, to be a *res publica*: it is not the property of the particular people whose territory is adjacent to the shore, but it belongs to them to see that none of the uses of the shore are lost by the act of individuals.

J. INST. 2.1.2.

108. See James R. Rasband, *The Disregarded Common Parentage of the Equal Footing and Public Trust Doctrines*, 32 LAND & WATER L. REV. 1, 11–12 (1997).

109. See *Shively*, 152 U.S. at 14.

110. A.S. WISDOM, THE LAW OF RIVERS AND WATERCOURSES 36 (1979) (indicating that the Public Trust Doctrine continues to thrive in England).

fornia.¹¹¹

Historically, California and other states have recognized the Public Trust Doctrine.¹¹² In a 1913 seminal case, *People v. California Fish Co.*,¹¹³ the Supreme Court of California held that when a statute authorizing the conveyance of tidelands for private use does not explicitly do so clear of the public trust, the grantees do not acquire absolute title.¹¹⁴ Instead, the grantees hold the land subject to the right of the state to interfere for public trust purposes.¹¹⁵

In a 1971 case, *Marks v. Whitney*,¹¹⁶ the California Supreme Court, perhaps in response to the growing environmental movement, discussed the flexibility of the Public Trust Doctrine in the context of a boundary dispute between two private property owners on a bay in Marin County.¹¹⁷ The court held that the public trust extends beyond the traditional purposes of navigation, commerce, and fisheries to the protection of environmental and recreational values.¹¹⁸

California Fish and *Marks* both involved grants of tidelands.¹¹⁹ While it has been clear since Roman times that the public trust applies to tidelands, the doctrine's application has been extended in California and elsewhere beyond waters influenced by the tides to all navigable lakes and streams and water dependent resources within those resources.¹²⁰

In Florida and other states such as Oregon and Hawaii, the customary rights doctrine has been invoked to protect public use of beaches.¹²¹ The Florida Supreme Court has observed:

111. For excellent discussions of the evolution of the Public Trust Doctrine from Roman times, see Joseph L. Sax, *The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention*, 68 MICH. L. REV. 471 (1970), and Stevens, *supra* note 101.

112. See, e.g., *People v. California Fish Co.*, 138 P. 79, 82 (Cal. 1913) (recognizing that certain lands are held in trust by the state for public use).

113. 138 P. 79 (Cal. 1913).

114. See *id.* at 88.

115. See *id.* at 94.

116. 491 P.2d 374 (Cal. 1971).

117. See *id.* at 378-81.

118. See *id.* at 380.

119. See *Marks*, 491 P.2d at 377; *California Fish*, 138 P. at 81.

120. See, e.g., *State v. Superior Court of Lake City*, 625 P.2d 239, 250 (Cal. 1981) (applying doctrine to Clear Lake); *People v. Gold Run Ditch & Mining Co.*, 4 P. 1152, 1159 (Cal. 1884) (applying doctrine to Sacramento River).

121. See *City of Daytona Beach v. Tona-Rama, Inc.*, 294 So. 2d 73, 75 (Fla. 1974); *In re Ashford*, 440 P.2d 76, 77 (Haw. 1968); *Oregon ex rel. Thornton v. Hay*, 462 P.2d

The beaches of Florida are of such a character as to use and potential development as to require separate consideration from other lands with respect to the elements and consequences of title. The sandy portion of the beaches are of no use for farming, grazing, timber production, or residency—the traditional uses of land—but has served as a thoroughfare and haven for fishermen and bathers, as well as a place of recreation for the public. The interest and rights of the public to the full use of the beaches should be protected.¹²²

Application of the Public Trust Doctrine to Protect Water Based Resources

California's system of water law is extremely complex and evolved from the State's colorful history, where water became more important than gold.¹²³ This complex water law system was overlain with the Public Trust Doctrine by the California Supreme Court in *National Audubon Society v. Superior Court*.¹²⁴ This case arose out of a long-standing dispute over the appropriation of water from streams feeding Mono Lake by the Los Angeles Department of Water and Power for the use of the citizens of Los Angeles.¹²⁵

The court traced the history of water rights in California and the evolution of the Public Trust Doctrine.¹²⁶ In particular, the court examined what has been called the most celebrated public trust case in American law, the decision of United States Supreme Court in *Illinois Central Railroad v. Illinois*.¹²⁷ This case arose when, in 1869, the Illinois Legislature granted to the Illinois Central Railroad over 1000 acres of land underlying Lake Michigan, where it meets the central business district of Chicago.¹²⁸ In 1873, the State decided it had been too generous, repealed the 1869 grant, and sued to have the grant declared invalid.¹²⁹ The Supreme Court held that the 1869 grant was invalid because a state may not divest itself of the authority to govern the whole of an area

671, 673 (Or. 1969).

122. *Tona-Rama*, 294 So. 2d at 77.

123. See *National Audubon*, 658 P.2d at 712.

124. 658 P.2d 709 (Cal. 1983).

125. See *id.* at 713.

126. See *id.* at 718-26.

127. 146 U.S. 387 (1892).

128. See *id.* at 438.

129. See *id.* at 448-49.

that the state holds in trust for the people, so "that they may enjoy the navigation of the waters, carry on commerce over them, and have liberty of fishing therein, freed from the obstruction or interference of private parties."¹³⁰ Thus, the United States Supreme Court stated a principle that requires judicial skepticism of governmental conduct that is designed to reallocate public resources into private hands.¹³¹

The 1983 California Supreme Court decision in *National Audubon* attempted to bring together the principles of *Illinois Central Railroad* and all of the competing water doctrines to make a definitive statement upon the condition of water rights in California.¹³² The court held that, despite the other water doctrines recognized in California, the Public Trust Doctrine provided an independent basis for evaluating the diversion of water from Mono Lake to "thirsty" Los Angeles.¹³³

The most important facet of the Public Trust Doctrine was the State's power and duty as the sovereign to exercise continuous supervision and control over the tidelands, the navigable waters, and the land underlying those waters.¹³⁴ The state's responsibility for supervision continues notwithstanding any previous contracts or transfer of property rights concerning the uses of the water in question or the land underlying the water.¹³⁵ The State cannot "abrogate the public trust merely by authorizing a use inconsistent with the trust."¹³⁶

The critical holding of the Supreme Court of California means that no person can ever gain a vested right in a continued, unreasonable use of waters or lands underlying the waters of California.¹³⁷ While a property owner may have a vested right in the use of his or her property subject to the trust, the owner cannot claim a vested right, despite the passage of long periods of time, "to bar recognition of the trust or state action to carry out its purposes."¹³⁸ The United States Supreme Court's decision in *Phillips Petroleum* points out that a landowner cannot have a reasonable ex-

130. *Id.* at 452.

131. *See id.* at 456-57.

132. *National Audubon*, 658 P.2d at 732.

133. *See id.*

134. *See id.* at 727.

135. *See id.* at 728.

136. *Id.* at 722, n.21.

137. *See id.* at 725, n.23.

138. *National Audubon*, 658 P.2d at 723.

pectation of owning such lands.¹³⁹

An advantage of applying the Public Trust Doctrine to protect beaches is that properly exercising the public trust will not violate the Takings Clause of the United States Constitution.¹⁴⁰ This is contrasted with using police power, as demonstrated in *Nollan v. California Coastal Commission*¹⁴¹ and *Lucas v. South Carolina Coastal Council*.¹⁴²

In *Nollan*, the United States Supreme Court held that conditioning the replacement of a small beach cottage with a larger home on dedication of a public access along the beach constituted a taking because there was no nexus between the burden caused by the development and the exaction.¹⁴³ In *Lucas*, the Supreme Court found that the application of a beach erosion set back line, which prevented Lucas from building any houses on his beachfront lots, constituted a taking for which the State was required to pay compensation unless state common-law property and nuisance principles would have "prevented the erection of any habitable or productive improvements" on the land.¹⁴⁴

While the State of South Carolina in *Lucas* was unable to identify such common law principles,¹⁴⁵ in *Lechuza Villas West v. California Coastal Commission*,¹⁴⁶ a California court of appeal concluded that the Public Trust Doctrine justified denial of a permit to build a residential development on beachfront property where the mean high tideline, the seaward legal boundary, was ambulatory, not fixed, and the proposed development would from time to time intrude on tidelands.¹⁴⁷ The court held that the landowner may not "vest in itself permanent legal title over land which, because it is bordered by the ocean and is subject to seasonal accretion and erosion, belongs sometimes to the state and sometimes to Lechuza."¹⁴⁸ The "ambulatory line . . . marks the point at which any public [trust] rights . . . end."¹⁴⁹ It does not extend to wave

139. See *Phillips Petroleum*, 484 U.S. at 482.

140. See *Lechuza*, 70 Cal. Rptr. at 410-11.

141. 483 U.S. 825 (1987).

142. 505 U.S. 1003 (1992).

143. *Nollan*, 483 U.S. at 837.

144. *Lucas*, 505 U.S. at 1031-32.

145. See *id.*

146. 70 Cal. Rptr. 399 (Cal. Ct. App. 1997).

147. See *id.* at 418.

148. *Id.* at 416.

149. *Id.* at 418.

uprush past the mean high tideline.¹⁵⁰

Because a property owner can never gain a vested right to unreasonable use of property subject to the public trust, the Public Trust Doctrine is part of the existing rules or understandings that are inherent in a shoreline landowner's title and for which no compensation is required under the Takings Clause.¹⁵¹

Application of the Public Trust Doctrine to Protect Sand Replenishment Along the Coast

The California Supreme Court's *National Audubon* decision indicated that the supreme court would look favorably upon an argument that its analysis should be applied to the diversion of sand from the beaches or the coast. For example, the court recognized that the public trust extends to nonnavigable tributaries where extraction of water harms public interest in navigable waters.¹⁵² It could similarly be argued that diversion of sand by action on a shoreline or a non-navigable stream is protected under the Public Trust Doctrine because it damages the public interest in the tidelands.¹⁵³ This is the essence of the holdings in *Whaler's Village* and *Lechuza*.¹⁵⁴

The California Supreme Court also recognized that the Public Trust Doctrine has traditionally been applied only to three uses — navigation, commerce, and fishing.¹⁵⁵ In language that is crucial not only to any legal argument in favor of Sand Rights, but also to any policy argument in support of the necessity of creating a system of Sand Rights, the court stated:

[T]he public uses to which tidelands are subject are sufficiently flexible to encompass changing public needs. In administering the trust the state is not burdened with an outmoded classification favoring one mode of utilization over another. There is a growing public recognition that one of the most important public uses of

150. *See id.*

151. *See* *Peterman v. Department of Natural Resources*, 521 N.W.2d 499, 510 (Mich. 1994). In *Peterman*, the Michigan Supreme Court held that an *unreasonable* exercise of the public trust (upstream jetties), which deprived a shoreline property owner of his beach, constituted a taking because "no essential nexus existed between the construction of the boat launch and the utter destruction of plaintiffs' beach." *Id.* at 512.

152. *See National Audubon*, 658 P.2d at 721.

153. *See id.* at 727.

154. *See supra* notes 76–79, 146–50 and accompanying text.

155. *See National Audubon*, 658 P.2d at 719 (citing *Marks*, 491 P.2d at 380).

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.*¹⁵⁶

In *National Audubon*, the plaintiffs sought to protect values other than those traditionally associated with the public trust.¹⁵⁷ Specifically, they sought to protect the attributes of the resource itself — the lake's recreational and ecological values, including "the scenic views of the lake and its shores, the purity of the air, and the use of the lake for nesting and feeding by birds."¹⁵⁸ The court held that it was clear that the protection of these types of environmental and recreational values were "among the purposes of the public trust."¹⁵⁹ Protection of beaches, which serve not only natural habitat and recreational purposes, but also aid commerce, navigation, and fishing, clearly falls within traditional, as well as expanded, public trust purposes. Protection from shoreline erosion would also seem to be a proper trust purpose.

It logically follows that if courts recognized Sand Rights as subject to the public trust, courts would be free to reexamine any or all uses of the waters of the state to ascertain whether these uses are consistent with the needs of the public. Therefore, sand mining along the coast and in the rivers leading to the coast might be considered an unreasonable use and be terminated; dams that block the flow of sand might be removed; and coastal structures relocated.

INTEGRATING SAND RIGHTS INTO THE LEGAL SYSTEM

The preceding discussion has focused on whether the Public Trust Doctrine, as enunciated by the California Supreme Court in *National Audubon* and by the United States Supreme Court in *Phillips Petroleum*, is sufficiently broad to encompass a doctrine of Sand Rights. The need for such a doctrine and the failure of current law to recognize Sand Rights has also been discussed. This section deals with mechanisms through which the doctrine of Sand Rights

156. *Id.* (emphasis added and citation omitted) (quoting *Marks*, 491 P.2d at 380).

157. *See id.*

158. *Id.*

159. *National Audubon*, 658 P.2d at 719.

could be integrated into the existing legal system.

There are at least three potential legal avenues for integrating Sand Rights into the decision-making process.¹⁶⁰ First, the courts could do so by recognizing Sand Rights as an interest to be protected by the common law and the California Constitution under the Public Trust Doctrine.¹⁶¹ Second, the state legislature and Congress could mandate consideration of the effect of a project on sand supply.¹⁶² Third, administrative agencies could recognize and deal with the problem.¹⁶³

Without wide recognition of the effect of projects on sand supply to beaches, policy decisions and engineering decisions will continue to be made without adequate consideration of the effect of these decisions on beaches. Recognition of Sand Rights would not automatically require the denial of projects that have an adverse effect on the supply of sand. The need for a continued supply of sand to our beaches should be considered and mitigated to the extent feasible along with all of the other factors which are currently considered before a decision is made to proceed with a project.¹⁶⁴

Legislation can further Sand Rights. For example, the impact of projects on the supply of sand to the coast could be incorporated into the existing environmental impact statement process under the National Environmental Policy Act (NEPA)¹⁶⁵ and the Environmental Impact Report (EIR) process under the California Environmental Quality Act (CEQA).¹⁶⁶ These environmental statutes are designed, for the most part, not to impose substantive duties on the decision-maker, but require that the impacts of the project upon specified interests be considered and avoided or mitigated to the extent feasible.¹⁶⁷ Specific legislation, such as § 21083.2 of the California Public Resources Code, which requires a full EIR to be prepared when a project may have a "significant effect on unique archaeological resources,"¹⁶⁸ could be expanded to require analysis of

160. *See id.* at 727.

161. *See id.*

162. *See id.*

163. *See id.* at 727, 729-30.

164. *See generally* *Save the Dunes Council v. Alexander*, 584 F.2d 158 (7th Cir. 1978).

165. 42 U.S.C. §§ 4331-4332 (1994).

166. CAL. PUB. RES. CODE § 21100 (West 1999).

167. *See* 42 U.S.C. § 4332; CAL. PUB. RES. CODE § 21100.

168. CAL. PUB. RES. CODE § 21083.2 (West 1999).

adverse impacts on the sand supply to beaches. New legislation does not appear necessary; however, state regulations could be administratively amended to address the significance of a project affecting the deposition of sand on the coastline and require the preparation of an EIR.

Public agencies could require the consideration of a project's effect on beach nourishment through regulation. Cities, counties, and special districts (to a limited extent) have the ability to do this legislatively through their reserved police power, and many state and federal agencies may do so under their broad grant of statutory authority.¹⁶⁹ For example, the United States Army Corps of Engineers has wide discretion to take measures to mitigate erosion damage caused by new or existing navigational structures¹⁷⁰ and to investigate and reverse beach erosion.¹⁷¹

Under existing statutory authority,¹⁷² the California Coastal Commission has administratively conditioned its approval of the San Juan Creek project by requiring sand to be transported to a beach.¹⁷³ However, the California Coastal Act applies only to decisions made within the coastal zone.¹⁷⁴ Many large projects that have major effects upon the delivery of sand to beaches are constructed outside of the coastal zone, and are thus beyond the jurisdiction of the Coastal Act.¹⁷⁵ However, it should also be noted that the commission does have the authority to review and, in effect, permit or deny projects that lie outside of the Coastal Zone, but have an effect within the Coastal Zone, through the unique federal consistency provisions of the Federal Coastal Zone Management Act and the California Coastal Act.¹⁷⁶

Public agencies can use their existing powers to fund erosion control projects. One method to obtain funding for beach stabilization projects, such as jetties, breakwaters, artificial fill, artificial sea-grass, and even transportation of sand trapped behind dams,

169. See, e.g., *National Audubon*, 658 P.2d at 30 (finding "a legislative intent to grant the Water Board a 'broad' . . . authority to undertake comprehensive planning and allocation of water resources").

170. See 33 U.S.C. § 426i (1994 & Supp. III 1994); *Save the Dunes*, 584 F.2d at 165.

171. See 33 U.S.C. §§ 426-426h.

172. See CAL. PUB. RES. CODE § 30233(b) (West 1999).

173. The Author confirmed this information with the California Coastal Commission.

174. See CAL. PUB. RES. CODE §§ 30103, 30604 (West 1999).

175. See *id.*

176. See CAL. PUB. RES. CODE § 30008 (West 1999).

would be to form special assessment districts.¹⁷⁷ A special assessment district could conceivably encompass the entire "Greater Littoral Cell." Each person residing in a "Greater Littoral Cell" (and there are millions of residents within some cells) would only have to pay a few dollars per year in assessments to support the issuance of bonds providing for millions of dollars which could be spent on beach protection projects.¹⁷⁸ Funding could also be obtained by imposing a "sand fee" on new development within the "Greater Littoral Cell" that affects the supply of sand to the coast.¹⁷⁹ A gas tax is a logical source of funding for beach protection inasmuch as highways block sand from reaching the beaches and contribute to pollution with surface runoff.¹⁸⁰

While there are several approaches to institutionalizing a doctrine of Sand Rights, there are distinct advantages to incorporating the concept of Sand Rights within the Public Trust Doctrine rather than regulating through police power, which is subject to political whim and constitutional limits.

ADVANTAGES OF SAND RIGHTS

Because the Public Trust Doctrine imposes a continuing duty of supervision upon the state, it would allow for a reappraisal of a permit to mine sand on beaches and in rivers that feed beaches, which might appear to be mistaken in hindsight. While the Public Trust Doctrine cannot be invoked for private purposes, any party has standing to raise the Public Trust Doctrine in a lawsuit.¹⁸¹ The doctrine, because it is derived from the Constitution in California, would have to be considered by all state and local agencies even when performing their mandated duties under state statutes. Most importantly, because there is an affirmative duty to continue to supervise any appropriation of public trust assets, the state retains the power to reconsider past decisions, even though the effect of these decisions on the public trust was already considered.¹⁸² Finally, no individual can claim a vested right against the public

177. See Kathleen M. Weinheimer, Creative Financing for Beach Protection Measures: Using the California Geologic Hazard Abatement Law in the Coastal Setting 155 (June 3-5, 1998) (unpublished manuscript, on file with the Author).

178. See *id.* at 158.

179. See *id.* at 158-59.

180. See *id.* at 158.

181. See *National Audubon*, 658 P.2d at 716 n.11.

182. See *id.* at 728.

trust;¹⁸³ therefore, claims of inverse condemnation would fail.

CONCLUSION

There is a need for adoption of a doctrine which would require all decision-makers within a "Greater Littoral Cell" to consider the effect of projects upon the supply of sand to the beach. The sand on our beaches is a valuable resource, for recreation and natural habitat purposes as well as a buffer to prevent storms from causing severe property damage. Sand Rights could be recognized as part of the existing Public Trust Doctrine; it could be created legislatively or administratively in the form of regulations that must be complied with before a project could be carried out. Sand Rights would not necessarily halt development or improvements to the state's navigable waters, but would require that careful consideration be given to those proposed or existing projects that interfere with the delivery of large amounts of sand to our beaches and, when new projects are approved, measures should be taken to mitigate the damage to one of our nation's most important resources.

183. *See id.* at 723.