1991

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11 Miss. C. L. Rev. 95 (1990-1991)

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THERMAL EXPANSION, MELTING GLACIERS, AND RISING TIDES: THE PUBLIC TRUST IN MISSISSIPPI

*Ronald J. Rychlak**

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I. INTRODUCTION TO THE GREENHOUSE EFFECT

All living things create waste gases. The waste from plants is oxygen which animals breathe, and the waste from animals is carbon dioxide which plants "breathe." Every day the industrialized world pumps great quantities of contaminants into the air. Cars, factories, homes, and offices all create waste gases. Unfortunately, there is not a symmetrical user of the latter waste gases. They stay in the environment.

Scientists have discovered an alarming effect that some of these gases may be having on the environment. Carbon dioxide and nitrous oxide, mainly from fossil fuel combustion and the destruction of rain forests; methane, mainly from natural gas production, landfills, and farm animals, and chlorofluorocarbons, mainly from aerosol propellants, refrigeration, and automotive air conditioners, are collecting in the atmosphere. Because these gases take up only a small percentage of the air, they are known as "trace gases."¹ The collection of trace gases is resulting in the trapping of more and more of the sun's heat. If the world could stop producing all trace gases today, it would take at least a century for those now present to be absorbed to preindustrial levels.² It will not, however, be easy to abandon the ac-

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1. Miller, *Policy Responses to Global Warming*, 14 S. ILL. U.L.J. 187, 195, 200 (1990).

2. *Id.* at 193 (suggesting that stabilization would be impossible because of the long life of the trace gases).

tivities responsible for emission of trace gases. Since trace gases are emitted from several small sources—as opposed to some pollutants which are produced by a few large sources—there is no single solution that will resolve the problem.³ Moreover, because society has become dependent on the products that produce trace gases, it would take several decades before their production could be completely phased out.⁴ Unfortunately, carbon emissions are not currently declining; they are growing at the rate of about three percent per year.⁵ The likely result is a gradual warming that could lead to worldwide climatic change.⁶

The effects of a general increase in temperatures on a global scale would be dramatic. They could include changes in cloud cover, increased vegetation growth, increased biological decay, and a reduction of the polar ice pack.⁷ The “most pervasive and certain [impact of rising greenhouse temperatures, however,] is the thermal expansion of the oceans and the melting glaciers . . . , [which is] likely to raise sea levels by 0.5 to 2.0 meters by the year 2100.”⁸ Such a dramatic shift in

3. *Id.* at 204.

4. *Id.* at 197 (suggesting that it would take 20 to 50 years).

5. *Id.* at 195.

6. See generally S. ROAN, OZONE CRISIS: THE 15 YEAR EVOLUTION OF A SUDDEN GLOBAL EMERGENCY (1989); S. SCHNEIDER, GLOBAL WARMING: ARE WE ENTERING THE GREENHOUSE CENTURY? (1989). It must be noted that not all scientific evidence supports the theory. At least one theory suggests that the effect will lead to more cloud cover, reducing temperatures. Moreover, with any issue as political as the environment, political posturing may sometimes distort a true picture. Consider the following statement by Stephen Schneider of the National Center for Atmospheric Research and author of the book, GLOBAL WARMING: ARE WE ENTERING THE GREENHOUSE CENTURY?:

On the one hand, as scientists, we are ethically bound to the scientific method, in effect promising to tell the truth, the whole truth, and nothing but—which means that we must include all the doubts, the caveats, the ifs, ands, and buts. On the other hand, we are not just scientists, but human beings as well. And like most people we'd like to see the world a better place, which in this context translates into our working to reduce the risk of potentially disastrous climatic change. To do that we need to get some broad based support, to capture the public's imagination. That, of course, entails getting loads of media coverage. So we have to offer up scary scenarios, make simplified, dramatic statements, and make little mention of any doubts we might have. This “double ethical bind” we frequently find ourselves in cannot be solved by any formula. Each of us has to decide what the right balance is between being effective and being honest. I hope that means being both.

Schell, *Our Fragile Earth*, DISCOVER, Oct. 1989, at 44, 47 (emphasis added). Schneider's remarks have led one conservative commentator to charge that what is written and stated on global warming “is most always from environmental fanatics more interested in ‘dramatic statements’ than in being honest.” Harvey, *Confessions of an Alarmist*, The Oxford Eagle, Jan. 25, 1990, at 4, col. 2. Nonetheless, the weight of the evidence and expert opinion suggest that if present trends continue the earth will experience a general increase in temperatures. In fact, the Earth may already have experienced a slight increase in temperatures because of greenhouse gases. The 1980's were the warmest decade in human history. Miller, *supra* note 1, at 194; see also Solomon & Freedberg, *The Greenhouse Effect: A Legal and Policy Analysis*, 20 ENVTL. L. 83, 89 (1990) (“[S]cientists have concluded that global temperatures have increased from 0.5 to 0.7 degrees Celsius over the last century.”).

7. Shabecoff, *Global Warming: Experts Ponder Bewildering Feedback Effects*, N.Y. Times, Jan. 17, 1989, at C1, col. 1.

8. Solomon & Freedberg, *supra* note 6, at 93; see Miller, *supra* note 1, at 190 (“[M]odels currently predict a rise of 0.5 to 1.5 meters during the next fifty to one hundred years.”); Titus, *Greenhouse Effect, Sea Level Rise, and Barrier Islands: Case Study of Long Beach Island, New Jersey*, 18 COASTAL MGMT. 65, 65 (1990) (“the greenhouse effect is likely to raise sea level a few feet in the next 100 years”). The level of the increase, however, is subject to dispute. *Id.* at 66.

water levels would threaten major cities, destroy wetlands,⁹ and completely reshape the world's coastal areas. Estuaries, coastal aquifers, and other water reserves will likely become more salty,¹⁰ and rivers will also suffer as salt concentrations migrate upstream.¹¹ This, in turn, will make these areas less attractive breeding grounds for aquatic life and less fit for many human purposes.

In Mississippi, as well as in most other states, a major change in coastal geography would have an important legal effect. Under the public trust doctrine, Mississippi coastal property that is subject to the ebb and flow of tidal influences is not owned by the record property owners;¹² it is held by the state as trustee for the people of the state.¹³ As a result, a property owner whose land is encroached upon by rising tides can lose title to that property. Moreover, there are severe restrictions on the state's ability to alienate trust property. Thus, a property owner could lose title to the state, without receiving compensation, and the state might be prohibited from making a "sweetheart deal" to return the property to the record owner.¹⁴ This paper explores the public trust doctrine and the impact of rising tides in Mississippi and suggests strategies to help the state and coastal property owners deal with climatic changes in the next century.

II. THE LEGAL EFFECT OF RISING TIDAL WATER

The most likely (and most widely assessed) effects of a future sea level rise are inundation, erosion, increased flooding, and saltwater intrusion.¹⁵ Even a small increase in sea water levels could have dramatic effects worldwide. A one meter increase in water levels could destroy from twenty-five to eighty percent of the

9. The importance of wetlands has been recognized only in fairly recent times. In the mid-1800's, the federal government viewed wetlands mainly as a health menace and a hindrance to land development. See President's Council on Environmental Quality, *Fifteenth Annual Report of the Council on Environmental Policy* 274 (1984). That perception continued more or less unchanged until a 1956 publication entitled *Wetlands of the United States* was issued to set forth the value of wetlands to wildlife. *Id.* at 275. Since 1956, a number of environmental studies have been published that document the ecological value of these unique land-water environments. *Id.*

Mississippi's Yazoo Basin contains numerous wetlands which serve as nurseries and breeding grounds for fish and wildlife. These animals depend on the swampy ecosystems for food and shelter. These extremely valuable natural resources are also among the prime wintering areas for migratory waterfowl in Mississippi. Loss of these wetlands could seriously impact on wildlife populations.

10. Solomon & Freedberg, *supra* note 6, at 96.

11. *Id.* at 98.

12. But see Miss. CODE ANN. §§ 29-15-1 to -23 (Supp. 1989) (1989 Public Trust Tidelands Legislation) and *infra* notes 152-82 and accompanying text.

13. The public trust doctrine applies to coastal lands affected by the tide and to navigable fresh waters, like rivers and lakes. However, the rules for fresh waters differ significantly from the rules for tidal water. The scope of this paper is limited to the coastal shoreline, which is the area most likely to be affected by greenhouse-induced climatic changes. For a general discussion of the public trust doctrine in Mississippi as it relates to navigable fresh waters as well as coastal property, see *Cinque Bambini Partnership v. State*, 491 So. 2d 508 (Miss. 1986), *aff'd sub nom. Phillips Petroleum Co. v. Mississippi*, 484 U.S. 469 (1988); Jarman, *Of Time, Tidelands, and Public Trust*, 57 Miss. L.J. 131 (1987).

14. But see *infra* notes 152-82 and accompanying text.

15. Titus, *supra* note 8, at 66.

world's coastal wetlands.¹⁶ A two to seven foot rise could cost the United States fifty to ninety percent of its wetlands.¹⁷ Because of their geography, a simple one foot rise in sea level in New Jersey and Maryland could erode the shore from fifty to one hundred feet.¹⁸ This, in turn, would expose more areas to possible flooding.¹⁹ Moreover, the post-greenhouse environment may be more susceptible to violent storms and severe weather;²⁰ thus, loss of a coastal buffer zone could endanger many properties in or near that area.

The primary concern of coastal property owners is the loss of land and improvements due to flooding. Expensive beachfront homes and hotels may one day be inundated, or at least partially flooded. As the water approaches these properties, the beachfront itself will also be lost.²¹

Others have written on the enormous potential liability of the federal government, which underwrites most flood insurance for coastal communities.²² It has even been suggested that buildings might be constructed so that when the first floor becomes flooded, it would be closed off and the remaining structure used by entering on the second floor.²³ However, property owners in many states face a legal problem that will prevent them from undertaking such a plan. When their property becomes subject to tidal influences, they will lose title to it. Title will revert to the state, as trustee for the people of the state, under the public trust doctrine.

Dating back at least to the sixth century and ancient Roman law, the public trust doctrine is well entrenched in the English common law.²⁴ The underlying rationale is that certain interests are so intrinsically important to every citizen that their free availability is necessary if a society is ever to develop and prosper.²⁵ Because of the importance of navigation and fishing, navigable and coastal waters have long been recognized as corridors for water-borne commerce and as areas where the public is free to fish.²⁶ Private ownership of these waters would therefore con-

16. Solomon & Freedberg, *supra* note 6, at 96. The land at risk throughout the world is estimated to be approximately five million square kilometers, roughly three percent of the total land surface of the globe. Ocean Science News, Nov. 15, 1989, at 2 (reporting on a presentation made by David D. Caron, acting Professor of Law at the University of California, Berkeley).

17. Titus, *supra* note 8, at 66; Miller, *supra* note 1, at 190.

18. Titus, *supra* note 8, at 66.

19. *Id.* at 66-67.

20. *Id.* at 67-68.

21. Some states are taking steps to assure that the beaches will not be lost by requiring removal of any building seaward of the vegetation line and by requiring new construction to be set far enough back from the waterline to offset any foreseeable water level increase. *Id.* at 70-71.

22. See, e.g., Solomon & Freedberg, *supra* note 6, at 105.

23. Titus, *supra* note 8, at 85.

24. For a thorough account of the ancient history of the public trust doctrine, see Sax, *The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention*, 68 MICH. L. REV. 471, 475-78 (1970). See also J. KALO, COASTAL AND OCEAN LAW 73 (1990) (tracing the history back to ancient Romans and noting renewed interest in the doctrine following the signing of the Magna Carta).

25. *Martin v. Lessee of Waddell*, 41 U.S. (16 Pet.) 367, 414 (1842).

26. *Packer v. Bird*, 137 U.S. 661, 667 (1891) ("It is, indeed, the susceptibility to use as highways of commerce which gives sanction to the public right of control over navigation upon [navigable waters] . . ."); see *infra* notes 50-60 and accompanying text.

flict with the needs of society.²⁷ American courts have held it "inconceivable" that any person should claim a private property interest in the navigable waters of the United States.²⁸ Thus, the people have the right to use these waterways, despite claims of private ownership.²⁹ The state holds this property in trust for the benefit of the people. As the Mississippi Supreme Court has declared, "fee simple title to all lands naturally subject to tidal influence, inland to today's mean high water mark, is held by the State of Mississippi in trust [for the public good]."³⁰

The Mississippi trust has its origins in the formation of this nation. After the American Revolution, the thirteen colonies stood as independent sovereigns, each with the same sovereign prerogatives that England possessed during its control of the colonies.³¹ When the colonies agreed to unite, they did not convey their shores; therefore, they were deemed to have retained the same boundaries that they had when they were independent sovereigns.³² This meant that the new states owned these tidelands and exercised authority over the waters and submerged lands beyond the tidelands.³³ These properties were reserved by the states to be "held in trust for the public benefit."³⁴

Prior to the ratification of the U.S. Constitution, the Continental Congress adopted the Northwest Ordinance, which, *inter alia*, established guidelines for the

27. See Rychlak, *Society's Moral Right to Punish: A Further Exploration of the Denunciation Theory of Punishment*, 65 TUL. L. REV. 299 (1990) (discussing the needs of society and the reasons for its formation).

28. *United States v. Chandler-Dunbar Water Power Co.*, 229 U.S. 53, 69 (1913).

29. Therefore, private owners cannot exclude the public from using this water. See, e.g., *Illinois Cent. R.R. Co. v. Illinois*, 146 U.S. 387, 454-64 (1892); *Packer v. Bird*, 137 U.S. 661, 667 (1891); *Newcomb v. City of Newport Beach*, 7 Cal. 2d 393, 400-08, 60 P.2d 825, 828-32 (1936); *City of Oakland v. E.K. Wood Lumber Co.*, 211 Cal. 16, 22-29, 292 P. 1076, 1079-81 (1930); *Boone v. Kingsbury*, 206 Cal. 148, 189-94, 273 P. 797, 815-17 (1928), *cert. denied*, 280 U.S. 517 (1929); *State ex rel. Ellis v. Gerbing*, 56 Fla. 603, 612-16, 47 So. 353, 356-58 (1908).

30. *Cinque Bambini Partnership v. State*, 491 So. 2d 508, 510-11 (Miss. 1986).

31. See *Shively v. Bowlby*, 152 U.S. 1, 14 (1894); *Martin v. Lessee of Waddell*, 41 U.S. (16 Pet.) 367, 410 (1842).

32. *United States v. California*, 332 U.S. 19, 30 (1947); *Pollard v. Hagan*, 44 U.S. (3 How.) 212 (1845); *Martin v. Lessee of Waddell*, 41 U.S. (16 Pet.) at 410.

33. See, e.g., *Manchester v. Massachusetts*, 139 U.S. 240 (1891) (upholding Massachusetts' right to regulate fishing in a bay area); *Pollard v. Hagan*, 44 U.S. (3 How.) at 220 (confirming a grant by Alabama of submerged lands in Mobile Bay); *Moore, Expropriation of the Texas "Tidelands" by Judicial Fiat*, 3 BAYLOR L. REV. 130, 135 (1951) (Texas leasing 350,000 acres of submerged lands offshore).

34. *Cinque Bambini Partnership v. State* 491 So. 2d at 512 (citing *Arnold v. Mundy*, 6 N.J.L. 1 (1821)); see also *Martin v. Lessee of Waddell*, 41 U.S. (16 Pet.) at 410 (after the American Revolution, the people of each state took title to navigable waters).

admission of new states into the Union.³⁵ Specifically, the Northwest Ordinance provided that any state joining the Union would be admitted "on an equal footing with the original States."³⁶ The drafters of the Northwest Ordinance clearly intended this to include access to waterways. They wrote: "The navigable waters leading into the Mississippi and St. Lawrence, and the carrying places between the same, shall be common highways, and forever free, as well to the inhabitants of the said territory, as to the citizens of the United States . . . without any tax, impost, or duty therefor."³⁷ Later, as new states were admitted to the Union, they were given an "equal footing" with the original thirteen.³⁸ Thus, like the original thirteen colonies, each new state kept its tidelands and navigable waters in public trust.³⁹

Because of the fluctuating nature of tidelands, the exact location of the boundaries of the new states was subject to dispute. In 1947 the United States Supreme

35. After the Revolutionary War the wilderness property north of the Ohio River and west of Pennsylvania presented a problem. Seven colonies had land claims in that area. The other six refused to join the confederation until those claims were ceded to the Union under the Articles of Confederation. In 1780, New York gave its western lands to the central government, and other states followed suit. All lands ceded to the Union were "formed into distinct Republican states" with the same "rights of sovereignty, freedom and independence" as the original thirteen. The three Northwest Ordinances represented efforts at organizing these new lands.

The first ordinance, passed by Congress in 1784, divided the region into sixteen districts that were to be granted statehood when their populations reached 20,000. In 1785 Congress enacted a second ordinance "for ascertaining the mode of disposing of lands in the western territory." It provided for surveying the region into townships of 36 square miles, which would be subdivided into 36 one square mile sections. In each township a lot was reserved for public schools, and land was set aside for bounty payments to war veterans.

The third and most important ordinance was enacted in 1787, superseding the earlier Acts. For each district within the area, Congress would appoint a governor, a secretary and three judges, who would govern until the area's population reached 5000 free adult males. At that time a district legislature could be established. When the population of any of the districts reached 60,000, the district could be admitted as one of the projected three to five states to be carved out of the Northwest Territory. The ordinance also guaranteed religious freedom and fundamental civil rights and prohibited slavery within the territory. READER'S DIGEST, FAMILY ENCYCLOPEDIA OF AMERICAN HISTORY 809-10 (1975); see Ordinance for the Government of the Northwest Territory, New York City, July 13, 1787, 4 JOURNALS OF THE CONTINENTAL CONGRESS, pp. 752-54, reprinted in 1 Stat. 51 (1853) [hereinafter JOURNALS OF THE CONTINENTAL CONGRESS].

To the extent that it applies to the internal affairs of newly admitted states, the Northwest Ordinance has been superseded by the United States Constitution and the constitutions of the several states. See *Economy Light & Power Co. v. United States*, 256 U.S. 113, 119 (1921); see also Note, *Constitutional Law—Ordinance of 1787—Navigable Waters—Carrying Places Between the Same*, 1939 Wis. L. REV. 547, 550 (Except for the public trust, "the Ordinance has become obsolete."). *Id.* at 550. However, the "equal footing" doctrine, which derived from the Northwest Ordinance, still directly impacts on state lands.

36. JOURNALS OF THE CONTINENTAL CONGRESS, *supra* note 35, at 52.

37. *Id.* Thomas Jefferson was the principal author of the first two Northwest Ordinances. FAMILY ENCYCLOPEDIA OF AMERICAN HISTORY, *supra* note 35, at 809.

38. See generally *Borax Consol., Ltd. v. Los Angeles*, 296 U.S. 10 (1935); *United States v. Oregon*, 295 U.S. 1 (1935); *United States v. Utah*, 283 U.S. 64 (1931); *United States v. Mission Rock Co.*, 189 U.S. 391 (1903); *Mobile Transp. Co. v. Mobile*, 187 U.S. 479 (1903); *Shively v. Bowlby*, 152 U.S. 1 (1894); *Illinois Cent. R.R. Co. v. Illinois*, 146 U.S. 387 (1892); *Knight v. United Land Ass'n*, 142 U.S. 161 (1891); *Hardin v. Jordan*, 140 U.S. 371 (1891); *Manchester v. Massachusetts*, 139 U.S. 240 (1891); *San Francisco City & County v. Le Roy*, 138 U.S. 656 (1891); *McCready v. Virginia*, 94 U.S. 391 (1877); *Barney v. Keokuk*, 94 U.S. 324 (1877); *Pollard v. Hagan*, 44 U.S. (3 How.) 212 (1845).

39. *Phillips Petroleum Co. v. Mississippi*, 484 U.S. 469, 476 (1988) ("[W]e reaffirm our long-standing precedents which hold that the States, upon entry into the Union, received ownership of all lands under waters subject to the ebb and flow of the tide."); see also *Montana v. United States*, 450 U.S. 544, 551 (1981); *Pollard v. Hagan*, 44 U.S. (3 How.) at 228-29 (describing a 1787 ordinance which set forth the equal footing doctrine); *Shively v. Bowlby*, 152 U.S. at 26 (setting forth the equal footing doctrine).

Court held that California did not own offshore submerged lands,⁴⁰ and in 1950 the Court denied Texas and Louisiana any such ownership in the Gulf of Mexico.⁴¹ These cases settled state boundaries at the low-water mark of the seas. In 1953, however, Congress, acting pursuant to the Submerged Lands Act,⁴² quitclaimed to the states the beds of the marginal seas. The effect of this Act was to add submerged lands to the already existing state ownership of the tidelands. The United States Supreme Court has since held that the normally applicable rule puts the inland boundary line to the trust property at the line of *mean high tide*.⁴³

At the time of Mississippi's statehood, the United States conveyed a public trust to Mississippi to be held for public purposes.⁴⁴ In this trust was the fee simple title to the tidelands and navigable waters of the state, and the beds and lands underneath those waters.⁴⁵ As the Mississippi Supreme Court has explained:

Upon the admission of the state into the Union, there became invested in the state, as trustee, the title to all the land under tidewater, including the spaces between ordinary high and low water marks; this title of the state being held for public purposes, chief among which purposes is that of commerce and navigation⁴⁶

Once this public trust was created and funded, title to the land became vested in

40. *United States v. California*, 332 U.S. 19, 38 (1947).

41. *United States v. Texas*, 339 U.S. 707, 715-20 (1950); *United States v. Louisiana*, 339 U.S. 699, 705-06 (1950).

42. Act of May 22, 1953, ch. 65, 67 Stat. 29-33, (codified as amended at 43 U.S.C. §§ 1301-1315 (1982 and Supp. 1990)); see also *United States v. California*, 381 U.S. 139, 145-49 (1965) (discussing the history of such legislation).

43. *Roberts, The Luttet Case—Locating the Boundary of the Seashore*, 12 BAYLOR L. REV. 141, 153-54 (1960); *Winters, The Shoreline for Spanish and Mexican Grants in Texas*, 38 TEX. L. REV. 523, 526-30 (1960); see also *Utah v. United States*, 403 U.S. 9, 10-13 (1971) (confirming state ownership of beds to high-water mark); *Petersen v. United States*, 327 F.2d 219, 221 (9th Cir. 1964); *Skokomish Indian Tribe v. France*, 320 F.2d 205, 207 (9th Cir. 1963), *cert. denied*, 376 U.S. 943 (1964). Mississippi Law is in accord. *Cinque Bambini Partnership v. State*, 491 So. 2d at 520 (Miss. 1986) (citing *O'Neill v. State Highway Dep't*, 50 N.J. 307, 235 A.2d 1, 9-12 (1967)).

The mean high water mark "is the arithmetic mean of all the high waters occurring in a particular nineteen-year tidal epoch period." MISS. CODE ANN. § 29-15-1 (Supp. 1989); see also *Borax Consol., Ltd. v. Los Angeles*, 296 U.S. 10, 26-27 (1935) (average of all high tides over an 18.6 year cycle, as determined by the United States, Coast and Geodetic Survey). Thus, areas which are occasionally subject to flooding are not thereby made part of the trust. When dealing with non-tidal waters, the "mean high water mark" is used to determine the boundary. *J. KALO, supra* note 24, at 88; see also *supra* note 13.

44. *Cinque Bambini Partnership v. State*, 491 So. 2d 508, 511 (Miss. 1986). Those public purposes "include navigation and transportation, commerce, bathing, swimming and other recreational activities, development of mineral resources, environmental protection and preservation, the enhancement of aquatic, avian and marine life, sea agriculture and . . . other [purposes]." *Id.* at 512 (citations omitted).

45. *Id.* at 512-17. By contrast, although navigable fresh water is held in public trust, the land underneath navigable freshwater rivers, lakes and streams can be privately owned. See *Dycus v. Sillers*, 557 So. 2d 486, 498 (Miss. 1990).

46. *Rouse v. Saucier's Heirs*, 166 Miss. 704, 713, 146 So. 291, 291-92 (1933); see also *State ex rel. Rice v. Steward*, 184 Miss. 202, 230-31, 184 So. 44, 50 (1938) ("[W]e hold the State of Mississippi to be the absolute owner of the title of the soil, and of the minerals contained therein . . . wherever the tide ebbs and flows, as trustee for the people of the State."); *id.* at 230, 184 So. at 50 ("[T]he state owns the title to the land beneath tidewaters, [as trustee for the people,] subject only to the [paramount] right of the United States to control commerce and navigation").

the state, subject to the trust.⁴⁷ At that point, federal control of the trust property came to an end and state law became the basis for management of the trust.⁴⁸ Thus, "it has been long established that the individual States have the authority to define the limits of the lands held in public trust"⁴⁹

Trust lands were to be held in the public trust for various purposes. "The original purpose of the doctrine was to preserve for the use of all the public natural water resources for navigation and commerce, waterways being the principal transportation arteries of early days, and for fishing, an important source of food."⁵⁰ The purposes, however, are not fixed. Courts have long recognized that the list of uses would increase with "the growth of the community and its progress in the arts."⁵¹

[T]he public trust doctrine has developed almost exclusively as a matter of state law. Traditionally, the doctrine has functioned as a constraint on states' ability to alienate public trust lands and as a limitation on uses that interfere with trust purposes. More recently, courts and commentators have found in the doctrine a dynamic common-law principle flexible enough to meet diverse modern needs. The doctrine has been expanded to protect additional water-related uses such as swimming and similar recreation, aesthetic enjoyment of rivers and lakes, and preservation of flora and fauna indigenous to public trust lands.⁵²

Over the years, Mississippi courts have recognized public trust purposes as including: fishing;⁵³ navigation and transportation;⁵⁴ commerce;⁵⁵ bathing, swimming and other recreational activities;⁵⁶ development of mineral resources;⁵⁷ environmental protection and preservation;⁵⁸ the enhancement of aquatic, avian

47. *Oregon ex rel. State Land Bd. v. Corvallis Sand & Gravel Co.*, 429 U.S. 363, 379-80 (1977); *Illinois Cent. R.R. Co. v. Illinois*, 146 U.S. 387, 435-36 (1892); *Cinque Bambini Partnership v. State*, 491 So. 2d 508, 512 (Miss. 1986).

48. *Cinque Bambini Partnership v. State*, 491 So. 2d at 513; *Oregon ex rel. State Land Bd. v. Corvallis Sand & Gravel Co.*, 429 U.S. at 371.

49. *Phillips Petroleum Co. v. Mississippi*, 484 U.S. 469, 475 (1988).

50. *Borough of Neptune City v. Borough of Avon-by-the-Sea*, 61 N.J. 296, 304, 294 A.2d 47, 52 (1972). These three purposes have been called "the traditional triad" of public trust rights. *J. KALO*, *supra* note 24, at 119.

51. *Inhabitants of W. Roxbury v. Stoddard*, 89 Mass. (7 Allen) 158, 167 (1863) (noting the rights of navigation, bathing, washing, watering cattle, and other agricultural uses); *see also* *Lamprey v. State*, 52 Minn. 181, 199-200, 53 N.W. 1139, 1143 (1893) (Public uses of trust waters are used "by the people . . . for . . . purposes which cannot be enumerated or anticipated.").

52. *District of Columbia v. Air Florida, Inc.*, 750 F.2d 1077, 1082-83 (D.C. Cir. 1984) (footnotes omitted). *But see* *Phillips Petroleum Co. v. Mississippi* 484 U.S. 469, 487-88 (1988) (O'Connor, J., dissenting) (arguing that navigation and transportation are the matters of importance).

53. *State ex rel. Rice v. Stewart*, 184 Miss. 202, 231, 184 So. 44, 50 (1938).

54. *Rouse v. Saucier's Heirs*, 166 Miss. 704, 713, 146 So. 291, 292 (1933); *Martin v. O'Brien*, 34 Miss. 21 (1857).

55. *Rouse v. Saucier's Heirs*, 166 Miss. at 713, 146 So. at 292.

56. *Treuting v. Bridge & Park Comm'n*, 199 So. 2d 627, 632-33 (Miss. 1967) (recreational activities recognized as included within public trust rights). *See also* Miss. CODE ANN. § 49-27-1 to -69 (1990); Miss. CODE ANN. § 15-1-4 (Supp. 1988) ("public waterways" defined and the right of free transport, fishing and water sports reserved to the public).

57. *Treuting*, 199 So. 2d at 633; *Cinque Bambini Partnership*, 491 So. 2d at 512.

58. Miss. CODE ANN. §§ 49-27-3 and -5(a) (Supp. 1985); *see also* *infra* notes 145-51 and accompanying text.

and marine life, sea agriculture and other purposes.⁵⁹ These purposes are important not only because they define the public's right, but also because they restrict the state's ability to alienate these interests.⁶⁰

Even though waters are part of the public trust and the public has a right to pass along the foreshore,⁶¹ there is not necessarily a right to cross private land to reach those waters.⁶² The public can obtain a *prescriptive easement*, entitling it to access to the water if there has been continuous use, adverse to the owner (not by permission), but with the owner's knowledge, and for a prescribed period of time.⁶³ In Mississippi, that period would be ten years.⁶⁴ The public may also obtain such a right under the theory of *dedication* if the owner has shown an express or implied intent to allow public use.⁶⁵ Under this theory, no requisite time period need be shown.⁶⁶ Finally, the old English common law doctrine of *custom* may allow access to water.⁶⁷ Obviously then, even though the trust does not necessarily carry with it the right to access, courts are willing to find such a right when there is a reasonable argument set forth on the public's behalf.⁶⁸

III. RISING WATER LEVELS AND THE PUBLIC TRUST BOUNDARY

Perhaps the biggest difference between water property boundaries and boundaries on dry land is that water boundaries are tentative. A riparian or littoral owner

59. *Dycus v. Sillers*, 557 So. 2d 486, 498 (Miss. 1990) (containing an essay on the joys of fishing); *Cinque Bambini Partnership v. State*, 491 So. 2d 508, 512 (Miss. 1986).

60. See *infra* notes 91-100 and accompanying text.

61. R. CLARK, 1 WATERS AND WATER RIGHTS § 36.4(A), at 201 (1967).

62. See *Bolsa Land Co. v. Burdick*, 151 Cal. 254, 259-60, 90 P. 532, 534 (1907); *State v. Black Bros.*, 116 Tex. 615, 626-30, 297 S.W. 213, 217-19 (1927); *Lundberg v. University of Notre Dame*, 231 Wis. 187, 199-202, 282 N.W. 70, 76-77 (1938) (containing further discussion of this issue). Cf. *Matthews v. Bayhead Improvement Ass'n*, 95 N.J. 306, 323-24, 471 A.2d 355, 364 (recognizing the public's right to use dry sand beaches), *cert. denied*, 469 U.S. 821 (1984).

63. See *City of Daytona Beach v. Tona-Rama, Inc.*, 271 So. 2d 765, 768 (Fla. Dist. Ct. App. 1972); *Gulf, M. & O. R.R. Co. v. Tallahatchie Drainage Dist.*, 218 Miss. 583, 593-95, 67 So. 2d 528, 532-33 (1953) (easements may be obtained through express grant, implied grant, or prescription); *Seaway Co. v. Attorney General*, 375 S.W.2d 923 (Tex. Civ. App. 1964). By contrast, private entities cannot normally obtain rights in the public trust property through the doctrine of adverse possession. See, e.g., *State ex rel. Coastal States Gas Producing Co. v. State Mineral Bd.*, 199 So. 2d 554, 557 (La. Ct. App. 1967); *Rohrer v. Credle*, 322 N.C. 522, 534-35, 369 S.E.2d 825, 831 (1988); *O'Neill v. State Highway Dep't*, 50 N.J. 307, 320, 235 A.2d 1, 8 (1967) (exclusive right to take oysters from lands under navigable waters cannot be acquired by prescriptive use). But see *Board of Trustees v. Rye*, 521 So. 2d 900, 908 (Miss. 1988) (upholding the transfer of school trust property to an individual and indicating that even if the transfer were invalid, 93 years of use and payment of taxes would suffice to transfer title).

64. See *Lindsey v. Shaw*, 210 Miss. 333, 337, 49 So. 2d 580, 583 (Miss. 1950) (ten year period required to acquire an easement); Rychlak, *Common Law Remedies for Environmental Wrongs: The Role of Private Nuisance*, 59 Miss. L.J. 657, 694 n.231 (1989) (discussing requisite time periods in Mississippi).

65. See *Coleman v. Shipp*, 223 Miss. 516, 530-31, 78 So. 2d 778, 784 (1955); *Seaway Co. v. Attorney General*, 375 S.W.2d 923 (Tex. Civ. App. 1964); see also *Gion v. Santa Cruz*, 2 Cal. 3d 29, 38-41, 84 Cal. Rptr. 162, 167-69, 465 P.2d 50, 55-57 (1970). After the *Gion* decision was handed down, concerned property owners put up fences, dynamited paths, and planted cactus plants to dissuade the public and to avoid any claim of dedication. *J. KALO, supra* note 24, at 139 (citing *Berger, Nice Guys Finish Last—At Least They Lose Their Property: Gion v. City of Santa Cruz*, 8 CAL. W.L. REV. 75, 84 (1971)).

66. *J. KALO, supra* note 24, at 137.

67. See *State ex rel. Thorton v. Hay*, 254 Or. 584, 595-99, 462 P.2d 671, 676-78 (1969).

68. This, of course, is reasonable, since the trust is of little value if no one can reach the trust property. For a general discussion of these theories, see *J. KALO, supra* note 24, at 134-35.

may be able to ascertain exact boundaries today, but through accretion, reliction, or erosion, those boundaries can change in the future without benefit of deed, conveyance, or any public record of the change.⁶⁹ The common law approach is that accretions to the shores of the sea belong to the riparian or littoral owner of the land bordering the sea.⁷⁰ By the same token, private landowners may lose title to lands via reliction.⁷¹ Land which was once covered by navigable water, hence subject to reasonable use by the public, may revert to private ownership if the navigable water has shifted away from the land.⁷²

One issue which will emerge in the next century is whether the state takes control of property that had been in private hands but which has become subject to the ebb and flow of the tide due to higher water levels caused by the greenhouse effect. This matter is governed by state law.⁷³ The original boundary of the trust property could probably still be determined. The Mississippi Supreme Court has stated that the Gulf's high tide mark "in theory, at least—[is] ascertainable as of 1817 Fee simple title to all areas south of it was granted to the State in trust."⁷⁴ However, because water boundaries shift, the 1817 boundaries are not the ones of import for determining what lands are held in trust by the state today.

If over decades, epochs or even centuries the tides rise—that is, the mean high water mark rises (and there is reason to believe this has happened and may continue to happen)—the inward reach of the tidal influence expands. More lands are tidally affected Sufficient unto this day is our holding that, where the forces of nature—gradually and imperceptibly—have operated to expand or enlarge the inland reach of the ebb and flow of the tide, the new tidelands so affected accrete to the trust. Put otherwise, state law decrees that the surveyable outer boundary of the trust . . . is *today's* mean high water line, regardless of the absence of a tidal influ-

69. *But see* MISS. CODE ANN. §§ 29-15-1 to -23 (Supp. 1989); Ocean Science News, Nov. 15, 1989, at 2-3 (suggesting that fixed boundaries for national boundaries would be advantageous).

70. *See, e.g.*, *Humble Oil & Ref. Co. v. Sun Oil Co.*, 190 F.2d 191, 194-97 (5th Cir. 1951), *cert. denied*, 342 U.S. 920 (1952); *Jackson v. United States*, 56 F.2d 340 (9th Cir. 1932); *Hilt v. Weber*, 252 Mich. 198, 219, 233 N.W. 159, 165-66 (1930) (noting that this is a "general, possible universal" rule). Mississippi law is in accord and holds that the owner of land bounded by water is entitled to accretions thereto. *See Paepcke v. Kirkman*, 55 F.2d 814, 815 (5th Cir. 1932); *Anderson-Tully Co. v. Franklin*, 307 F. Supp. 539, 542 (N.D. Miss. 1969); *Cinque Bambini Partnership v. State* 491 So. 2d 508, 519 (Miss. 1986); *H.K. Porter Co. v. Board of Supervisors*, 324 So. 2d 746, 751 (Miss. 1975). The common law was not adopted by the State of Louisiana. Under the Civil Code of Louisiana, lands bordering the sea take nothing by accretion or dereliction. S. WILKINSON, ACCRETION AND LAND TITLES UNDER STATE AND FEDERAL LAW, reprinted in OIL AND GAS OPERATIONS: LEGAL CONSIDERATIONS IN THE TIDELANDS AND ON LAND 158 (R. Slovenko ed. 1963).

71. *See Anderson-Tully Co. v. Tingle*, 166 F.2d 224, 227-29 (5th Cir. 1948), *cert. denied*, 335 U.S. 816 (1948); *Cinque Bambini Partnership v. State*, 491 So. 2d 508, 519 (Miss. 1986).

72. *See Dycus v. Sillers*, 557 So. 2d 486, 501 (Miss. 1990); *see also supra* note 63 (private entities cannot obtain rights in public trust property through the doctrine of adverse possession).

73. *Oregon ex rel. State Land Bd. v. Corvallis Sand & Gravel Co.*, 429 U.S. 363, 381-82 (1977); *see also Cinque Bambini Partnership*, 491 So. 2d at 519; *cf. Hughes v. Washington*, 389 U.S. 290, 291 (1967) (federal law controls ownership of land gradually deposited by the ocean on adjoining upland property conveyed by the United States prior to statehood).

74. *Cinque Bambini Partnership*, 491 So. 2d at 515. *But see* *Byrd v. State*, No. 17,879, slip op. at 7-8 (Ch. Ct. of Harrison County, Miss., April 18, 1990) (noting the difficulty of actually determining the 1817 boundary).

ence in 1817, of how far inland and remote from the sea, and regardless of how shallow or how insignificant the tidal influence⁷⁵

Thus, under traditional public trust law, current property owners will lose title to the state if their land becomes subject to tidal influence due to a gradual, imperceptible rise in water levels.⁷⁶

This accession of land to the state would not be a taking within the fifth and fourteenth amendments to the United States Constitution, nor would compensation be required under the Mississippi Constitution.⁷⁷ Moreover, the state would be able to claim not only a right of way on the beach, but mineral rights would also accrete to the state, including the right to oil and the right to grant oil exploration leases.⁷⁸ This is in keeping with the general rule which states:

All maritime nations, recognizing the vagaries of the sea, beyond human control and anticipation, have evolved systems of law, founded upon rational perceptions of common justice, to adjust and compensate its effects. The most ordinary effect of a large body of water is to change the shore line by deposits or erosion gradually and imperceptibly. In such cases it is the general, possibly universal rule . . . that the title of the riparian owner follows the shoreline under what has been graphically called "a movable freehold."⁷⁹

In short, if the addition to the shoreland, caused by accretion or reliction, or the loss of shoreland caused by erosion is the result of slow, imperceptible, natural forces, then the property line defining the trust follows.⁸⁰

A boundary which is changed by reason of avulsion, artificial construct, or dredging does not alter title to lands or minerals.⁸¹ "[L]ands brought within the ebb and flow of the tide by avulsion or by artificial or non-natural means are

75. *Cinque Bambini Partnership*, 491 So. 2d at 520 (footnotes omitted) (citing *O'Neill v. State Highway Dep't*, 50 N.J. 307, 322-24, 235 A.2d 1, 9-12 (1967)); see also Maloney & Ausness, *The Use and Legal Significance of the Mean High Water Line in Coastal Boundary Mapping*, 53 N.C.L. REV. 185, 195-222 (1974). But see *infra* notes 162-77 and accompanying text (discussing *Byrd*, *supra* note 74).

76. But see MISS. CODE ANN. § 29-15-1 (Supp. 1989) and *infra* notes 152-82 and accompanying text.

77. MISS. CONST. art. III, § 17; see *Cinque Bambini Partnership v. State*, 491 So. 2d 508, 520 (Miss. 1986) (identifying other cases where such compensation would be required); see also *infra* note 97.

78. See generally *Cinque Bambini Partnership*, 491 So. 2d at 511 (involving the right to grant oil leases); *Treuting v. Bridge & Park Comm'n*, 199 So. 2d 627, 633 (Miss. 1967).

79. *Hilt v. Weber*, 252 Mich. 198, 219, 233 N.W. 159, 165-66 (1930) (quoting 28 HALSBURY LAWS OF ENGLAND 361 (1st ed. 1914)).

80. But see MISS. CODE ANN. §§ 29-15-1 to -23 (Supp. 1989) and *infra* notes 152-82 and accompanying text.

81. *Cinque Bambini Partnership v. State*, 491 So. 2d 508, 520 (Miss. 1986) ("[B]oundaries and titles are not affected by avulsion We perceive no reason on principle for exclusion from this notion of a change of water course boundary artificially induced by the dredging process."); *Dycus v. Sillers*, 557 So. 2d at 500. But see *International Paper Co. v. Mississippi State Highway Dep't*, 271 So. 2d 395, 398-99 (Miss. 1972) ("[P]roperty owners adjacent to tidelands were entitled to the accretionary buildup thereto whether it resulted from man-made or natural accretion."), *cert. denied*, 414 U.S. 827 (1973). A New York state court ruled on this question, holding that avulsion will not defeat the public's right to the resulting shoreline between high and low water. "Although, where the shore recedes as the result of avulsion, the boundary of the littoral proprietor may not change, the public has the same right of passage over the new foreshore as it had over the old—else an avulsion might cut off the public right of passage altogether." *People v. Steeplechase Park Co.*, 82 Misc. 247, 143 N.Y.S. 503, 509 (1913), *aff'd*, 165 A.D. 231, 151 N.Y.S. 157 (1914), *modified*, 218 N.Y. 459, 113 N.E. 521 (1916).

owned by their private record titleholders.”⁸² These lands do not enter the public trust, but the public does have the right to use these waters.⁸³ This, of course, raises the question of whether a greenhouse-induced rise in the water level might be considered an avulsion or an artificial construct.

An avulsion is the loss of lands bordering on the seashore by sudden or violent action of the elements that is perceptible while in progress, such as a sudden and rapid change in the course and channel of a boundary river.

The point . . . is illustrated by the Mississippi River’s (in years past) not unfamiliar avulsive cutoffs causing a change of channel. Land on the east side of the thalweg one day may on the next day find itself on the west. Neither record title nor state sovereignty is altered. Yet no one doubts the right of the public—the bargeline, the commercial fisherman, the weekend pleasure boater or some latter day Huck Finn—to use the waters of the new channel as fully as the old, though those waters rest and flow upon bottoms still owned by the pre-avulsion record title holder.⁸⁴

The Mississippi Supreme Court has held that “[a]n avulsion is a change in a boundary body of water so rapid or sudden, or in such short time, that the change is directly perceptible or measurably visible at the time of its progress.”⁸⁵ Despite a projected comparatively fast rise in tidal waters over the next century and the greenhouse effect being a “man-made” problem, such a tidal shift would not seem to be the dramatic type of sudden movement or the intentionally-created change that would lead to this exception to the general rule. The shift would almost certainly be imperceptible when it happened. As a result, new tidelands created by the greenhouse effect would in all likelihood become part of the public trust.

Record title holders might argue that they should be entitled to keep the improvements that they placed on trust property before that property became part of the trust. In *Dycus v. Sillers*, the Mississippi Supreme Court wrote that “‘physical improvements or alterations thereto upon lands theretofore private under state law remain private’ the salt content of the waters notwithstanding.”⁸⁶ This language creates a facial argument that land affected by a greenhouse tide would not become part of the public trust if there had been improvements made by the original record holder. However, Justice Robertson, the author of *Dycus v. Sillers*, was here referring to and quoting from the *Cinque Bambini* case, which he also authored. In *Cinque Bambini* Robertson wrote:

[U]nder the laws of this state neither artificially created water courses, inlets, slips, marinas and the like, nor physical improvements or alterations made thereto, become a part of the public trust, even though they may become tidally affected . . .

82. *Cinque Bambini Partnership v. State*, 491 So. 2d 508, 511 (Miss. 1986).

83. *Dycus v. Sillers*, 557 So. 2d 486, 500, 503 (Miss. 1990).

84. *Id.* at 500.

85. *Cinque Bambini Partnership*, 491 So. 2d at 520 (citing *Sharp v. Learned*, 195 Miss. 201, 215, 14 So. 2d 218, 220 (1943)); see also *Anderson-Tully Co. v. Franklin*, 307 F. Supp. 539, 541-42 (N.D. Miss. 1969).

86. *Dycus v. Sillers*, 557 So. 2d at 502 (quoting *Cinque Bambini Partnership v. State*, 491 So. 2d at 520).

[T]itle to such artificially created "tidelands" . . . remains in the record titleholder.⁸⁷

Thus, despite the language in *Dycus*, it is not the improvements on the land that give the record holders rights in the new coastal property, but rather the way the new coast was created.

If the coast line shifts because of avulsion or a man-made construct, such as a cove or harbor built near the existing shore, then that new shoreline remains with the record title holder and does not revert to the trust.⁸⁸ However, when the shoreline is affected by a gradual imperceptible increase in water levels, the new tidal property reverts to the trust, even though there may be improvements on the property. Again, a greenhouse-induced rise in seawater levels would seem to be that type of gradual imperceptible increase which would cause the land to become part of the public trust. Assuming that a greenhouse-induced tidal shift would happen relatively slowly, the new tide would determine the boundaries of the trust.

IV. COMPENSATION FOR RECORD TITLE HOLDERS?

If land formerly held in private ownership were, over the relatively short period of a few decades, transferred to state ownership because of the greenhouse effect, particularly where the property could still be of value to the private owner, one might expect the state to accommodate the prior owner by refusing to assert authority over the property, by selling the property back to the owner, or by granting the former owner a long-term lease at a favorable price. There will certainly be political pressure for such a solution. In fact, the Mississippi Legislature has received such pressure and has responded with the 1989 Public Trust Tidelands Legislation.⁸⁹ These remedies, including the Mississippi legislation, are however, at odds with the purposes of the public trust.⁹⁰

The state holds trust lands for the benefit of all the people. Three types of restrictions on governmental authority are generally said to be imposed by the public trust. First, the property subject to the trust must be used for a public purpose and it must be held available for use by the general public; second, the property

87. *Cinque Bambini Partnership v. State*, 491 So. 2d 508, 520 (Miss. 1986).

88. In fact, the *Cinque Bambini* court faced a problem such as this. That case originally involved 140 acres of land. The Mississippi Supreme Court, however, reversed a Chancery Court decision as to 98 of those acres and held that they were not part of the trust because they were artificially-created tidelands caused by road construction. *Id.* at 520.

89. Miss. CODE ANN. §§ 29-15-1 to -23 (Supp. 1989); see discussion *infra* at notes 152-82 and accompanying text.

90. The Secretary of State has taken the position that the Mississippi legislation amounts to a donation in violation of section 95 of the Mississippi Constitution. *Byrd v. State*, No. 17,879, slip op. (Ch. Ct. of Harrison County, Miss., April 18, 1990). Section 95 of the Mississippi Constitution states as follows:

Lands belonging to, or under the control of, the state shall never be donated directly or indirectly, to private corporations or individuals, or to railroad companies. Nor shall said land be sold to corporations or associations for a less price than that for which it is subject to sale to individuals. This, however, shall not prevent the legislature from granting a right of way, not exceeding one hundred feet in width, as a mere easement, to railroads across state land, and the legislature shall never dispose of the land covered by such right of way so long as such easement exists.

Miss. CONST. art IV, § 95.

may not be sold, even for a fair market price; and third, the property must be maintained for particular types of uses.⁹¹ As one Ohio court said:

If it is once fully realized that the state is merely the custodian of the legal title, charged with the specific duty of protecting the trust estate and regulating its use, a clearer view can be had. An individual may abandon his private property, but a public trustee cannot abandon public property.⁹²

However, not all alienation of interests constitutes an abandonment. As the Supreme Court of Florida has explained:

The trust in which the title to the lands under navigable waters is held is governmental in its nature and cannot be *wholly* alienated by the States. For the purpose of enhancing the rights and interests of the whole people, the *States may by appropriate means, grant to individuals limited privileges in the lands under navigable waters*, but not so as to divert them or the waters thereon from their proper uses for the public welfare⁹³

Clearly then, while *complete* private ownership of these lands is forbidden, individuals can hold certain rights in these properties.⁹⁴

Much public trust litigation centers around privately held trust land. Obviously then, it is possible for the state to convey some interest. "*Some* interest" is the crucial language.⁹⁵ Most property owners on the coast own only a part of their property. The public at large still holds the right to use the waters and lands in keeping with the trust purposes. Typically the private trust land owner's title is the subservient *jus privatum* title whereas the state retains a dominant *jus publicum* interest.⁹⁶ The *jus privatum* interest in trust lands can be held in private ownership, but

91. Sax, *supra* note 24, at 477; see, e.g., *Hayes v. Bowman*, 91 So. 2d 795, 799 (Fla. 1957) (inability of state to convey trust property if doing so would interfere with the public's enjoyment).

[The claim that trust property must be maintained for particular uses] is expressed in two ways. Either it is urged that the resource must be held available for certain traditional uses, such as navigation, recreation, or fishery, or it is said that the uses which are made of the property must be in some sense related to the natural uses peculiar to that resource. As an example of the latter view, San Francisco Bay might be said to have a trust imposed upon it so that it may be used for only water-related commercial or amenity uses. A dock or marina might be an appropriate use, but it would be inappropriate to fill the area for trash disposal or for a housing project.

Sax, *supra* note 24, at 477.

92. *State v. Cleveland & P.R. Co.*, 94 Ohio St. 61, 80, 113 N.E. 677, 682 (1916).

93. *Brickell v. Trammell*, 77 Fla. 544, 559, 82 So. 221, 226 (1919) (emphasis added).

94. Sax, *supra* note 24, at 486.

95. A few courts have denied completely the power of the state to alienate trust property. See R. CLARK, *supra* note 61, § 36.4(A), at 197 (citing *People ex rel. Harbor Comm'rs v. Kerber*, 152 Cal. 731, 93 P. 878 (1908) (following CAL. CONST. art. XV, § 3)); *Northern Pac. R.R. Co. v. Hirzel*, 29 Idaho 438, 457-59, 161 P. 854, 860 (1916) (railroad not permitted to take title to trust property); *Milne v. Girodeau*, 12 La. 324, 325-26 (1838) (land below the high water mark cannot be privately owned); *Hodges v. Williams*, 95 N.C. 331, 339-40 (1886) (land gradually covered by water from lake is sovereign); *State ex rel. Cates v. West Tenn. Land Co.*, 127 Tenn. 575, 580-88, 158 S.W. 746, 747-50 (1913).

96. The public's rights are dominant to the private owner's rights. As a result, any conflict between the exercise of public and private rights is resolved in favor of the public. J. ANGELL, A TREATISE ON THE RIGHT OF PROPERTY IN TIDE WATERS AND IN THE SOIL AND SHORES THEREOF 33-34 (1926) ("The king, it is true, may grant the soil of any arm of the sea, . . . but the right of the grantee so derived is always subservient to the public rights . . .").

the public's *jus publicum* interest cannot be privately owned.⁹⁷ The private owner's use of trust lands may be restricted or prohibited in order to protect the public's trust purposes, but this does not entitle the private owner to compensation.⁹⁸

The power of a state to grant an interest to private owners is usually upheld as long as the interests of the public are safeguarded or promoted by the purposes of the grant. The generally recognized rule is that any conveyance by the state is subject to the public trust, or subject to the *jus publicum*, just as it was when the land was held by the state.⁹⁹ Thus, when trust lands are conveyed into private ownership, the *jus publicum* is reserved for the public.¹⁰⁰ However, courts have permitted the transfer of some elements of the public trust into private ownership and control even though that transfer may exclude or impair certain public uses. Therefore, a private entity might be granted permission to drill for oil or dredge for oysters even though that will interfere with fishing or swimming in those areas.

Since the state cannot convey the *jus publicum*, it might be thought that the state should provide the *jus privatum* to the prior record owner who has lost his or her property as the result of a general rise in water levels. However, a sale of trust property, even at fair market prices, is not easy to accomplish. The first problem is that the legislature must authorize the conveyance with clear and specific language.¹⁰¹ Moreover, a conveyance of trust land solely to further private interests would contradict the public trust doctrine.¹⁰² No state has allowed trust property to be alienated to private persons without regard to the utility and need of the property for the public, and without assurance that the property will be used to pro-

97. Although states clearly may convey a *jus privatum* interest to private ownership, the public's *jus publicum* interest may under some circumstances be terminated, but it may not be conveyed into private hands. Illinois Cent. R.R. Co. v. Illinois, 146 U.S. 387, 458 (1892); State v. Superior Ct. of Lake City, 29 Cal. 3d 210, 226-27, 172 Cal. Rptr. 696, 705-07, 625 P.2d 239 (1981), cert. denied, 454 U.S. 865 (1981); State ex rel. Land Bd. v. Corvallis Sand & Gravel Co., 283 Or. 147, 582 P.2d 1352 (1978); State Land Bd. v. Heuker, 25 Or. App. 137, 548 P.2d 1323 (1976); Corvallis & Eastern Ry. Co. v. Benson, 61 Or. 359, 121 P. 418, 422 (1912); James River & Kanawha Power Co. v. Old Dominion Iron & Steel Corp., 138 Va. 461, 472-80, 122 S.E. 344, 351-52 (1924) (bed of navigable stream could not be conveyed to private owner); Caminiti v. Boyle, 107 Wash. 2d 662, 673-77, 732 P.2d 989, 994-97 (1987), cert. denied, 484 U.S. 1008 (1988).

98. People ex rel. Webb v. California Fish Co., 166 Cal. 576, 599, 138 P. 79, 88 (1913) (en banc); Slater v. Gunn, 170 Mass. 509, 515, 49 N.E. 1017, 1019-20 (1898); Caminiti v. Boyle, 107 Wash. 2d 662, 674, 732 P.2d at 989, 997 (1987); State v. Bleck, 114 Wis. 2d 454, 467, 338 N.W.2d 498 (1983).

99. R. CLARK, *supra* note 61, § 36.4(A), at 197.

100. People ex rel. Webb v. California Fish Co., 166 Cal. 576, 598-99, 138 P. 79, 88 (1913) (en banc); Slater v. Gunn, 170 Mass. 509, 515, 49 N.E. 1017, 1019-20 (1898); Matthews v. Bay Head Improvement Ass'n, 95 N.J. 306, 331-33, 471 A.2d 355, 369, cert. denied, 469 U.S. 821 (1984); Corvallis & E. R.R. Co. v. Benson, 61 Or. 359, 369-74, 121 P. 418 (1912); Conneaut Lake Ice Co. v. Quigley, 225 Pa. 605, 605, 610-11, 74 A. 648 (1909); Caminiti v. Boyle, 107 Wash. 2d 662, 668-75, 732 P.2d 989, 994-97 (1987).

101. Taylor v. Underhill, 40 Cal. 471, 473 (1871) (may be done only if in the interest of commerce); Concord Mfg. Co. v. Robertson, 66 N.H. 1, 5-9, 25 A. 718, 720-21 (1890); Bell v. Gough, 23 N.J.L. 624, 680-81 (1852) (A legislature "has no power to divest [trust lands] . . . because this would . . . sacrifice public rights for the promotion of mere private interests."); see also R. CLARK, *supra* note 61, § 36.4(A), at 196. But see Byrd v. State, No. 17,879, slip op. (Ch. Ct. of Harrison County, Miss., April 18, 1990) (accepting legislature's claim of public purpose); Illinois Cent. R.R. Co. v. Illinois, 146 U.S. 387, 453-55 (1892); see also Long Sault Dev. Co. v. Call, 242 U.S. 272, 279-80 (1916); Caminiti v. Boyle, 107 Wash. 2d 662, 666, 732 P.2d 989, 992-93 (1987). See generally J. KALO, *supra* note 24, at 73.

102. Bell v. Gough, 23 N.J.L. 624, 680-81 (1852) (A legislature "has no power to divest [trust lands] . . . because this would . . . sacrifice public rights for the promotion of mere private interests.").

mote at least a quasi-public purpose.¹⁰³ Furthermore, the United States Supreme Court has held that:

The trust devolving upon the State for the public, and which can only be discharged by the management and control of property in which the public has an interest, cannot be relinquished by a transfer of the property Any grant of the kind is necessarily revocable, and the exercise of the trust by which the property was held by the State can be resumed at any time.¹⁰⁴

Corrective legislation designed to appease record property owners would contradict this rule. Hence, any property rights which are transferred under such legislation would appear to be revocable.

The most celebrated public trust case in American law is the decision of the United States Supreme Court in *Illinois Central Railroad Co. v. Illinois*.¹⁰⁵ In 1869, the Illinois legislature made an extensive grant in fee simple of submerged lands to the Illinois Central Railroad. That grant included all the land underlying Lake Michigan for one mile out from the shoreline and extending one mile in length along the central business district of Chicago—more than one thousand acres of land.¹⁰⁶ The conveyance provided that:

[T]he fee to said lands shall be held by said company in perpetuity, and . . . said company shall not have power to grant, sell or convey the fee to the same And *provided, also*, That nothing herein contained shall authorize obstructions to the Chicago harbor, or impair the public right of navigation; nor shall this act be construed to exempt the . . . Railroad . . . from any act of the General Assembly which may be hereafter passed regulating the rates of wharfage and dockage to be charged in said harbor¹⁰⁷

The railroad was required, under the terms of the conveyance, to pay money to both the city and the state.¹⁰⁸ Although the railroad was willing, and the first payment was tendered to Chicago, it was not accepted.¹⁰⁹ No payments were ever made to the state. Not only did the legislature repeal the 1869 grant, the state brought an action to have the original grant declared invalid.¹¹⁰ The railroad claimed that it had received absolute title to the submerged lands and was prohib-

103. R. CLARK, *supra* note 61, § 36.4(A), at 196. *But see* Byrd v. State, No. 17,879, slip op. (Ch. Ct. of Harrison County, Miss., April 18, 1990) (accepting legislature's claim of public purpose).

104. *Illinois Cent. R.R. Co. v. Illinois*, 146 U.S. 387, 453-55 (1892); *see also* Long Sault Dev. Co. v. Call, 242 U.S. 272, 278-79 (1916); *Caminiti v. Boyle*, 107 Wash. 2d 662, 666, 732 P.2d 989, 992-93 (1987).

105. 146 U.S. 387 (1892).

106. *See* J. KALO, *supra* note 24, at 73.

107. *Illinois Cent. R.R. Co.*, 146 U.S. at 406 n.1.

108. J. KALO, *supra* note 24, at 74.

109. *Illinois Cent. R.R. Co.*, 146 U.S. at 408.

110. *Id.* at 410-11.

ited only from transferring the technical fee title.¹¹¹ The Supreme Court affirmed the decision of the circuit court, declaring the grant invalid.¹¹²

The Court's approach to the conveyance of trust property has become central to public trust litigation. When a state holds a resource which is available for the free use of the general public, 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 will be viewed with considerable skepticism.¹¹³ The unstated rationale is that the government operates in order to provide widely available public services, such as schools, police protection, libraries, and parks. While there may be valid reasons to benefit some group smaller than the whole citizenry, there is usually some relatively obvious reason for the subsidy, such as a need to assist the poor. However, when a program benefits a certain group and there is no obvious social reason for singling out this group, suspicions should be aroused. Thus, although the Court may not actually prohibit the disposition of trust lands to private parties, grants of tidelands are to be "construed strictly."¹¹⁴

This judicial skepticism means that whenever a court is concerned with legislative efforts to convey trust lands to private individuals at the expense of some public use of those lands, the court will strictly scrutinize the conveyance, with a strong presumption against the limitation or termination of public trust uses of the land or adjacent waters.¹¹⁵ It is not clear whether this "strong presumption" is constitutionally mandated or represents merely a congressional policy,¹¹⁶ but it is well embedded in both federal and state law.¹¹⁷ Regardless of the source of this pre-

111. *Id.*

112. *Id.* at 464. The Supreme Court decision was a four to three split. Chief Justice Fuller disqualified himself because he had represented the railroad in the lower courts, and Justice Blatchford disqualified himself because he held stock in the railroad. *See id.* at 476.

113. *State ex rel. Haman v. Fox*, 100 Idaho 140, 149, 594 P.2d 1093, 1102 (1979) (quoting *Sax*, *supra* note 24, at 490); *People ex rel. Scott v. Chicago Park Dist.*, 66 Ill. 2d 65, 78-79, 360 N.E.2d 773, 780 (1976).

114. *See, e.g., Martin v. Lessee of Waddell*, 41 U.S. (16 Pet.) 367, 411 (1842).

115. For example, in *Boston Waterfront Dev. Corp. v. Commonwealth*, 378 Mass. 629, 637-38, 393 N.E.2d 356, 361 (1979), a statute granting certain submerged land to a corporation in fee simple also contained language that "nothing herein shall be understood as authorizing . . . interfere[nce] with the legal rights of any person or persons whomsoever." This language was construed to mean that the submerged lands were conveyed subject to the public trust. *See also, e.g., CWC Fisheries, Inc. v. Bunker*, 755 P.2d 1115, 1119 (Alaska 1988) (unless legislative intent to give up the public interest in any tideland grant is clearly expressed or necessarily implied, the court will interpret the statute as preserving the public interest); *Coastal States Gas Producing Co. v. State Mineral Bd.*, 199 So. 2d 554, 557-58 (La. Ct. App. 1967).

116. *See Utah Div. of State Lands v. United States*, 482 U.S. 193, 201-02 (1987) (Court inferred a congressional policy, not a constitutional obligation, to retain public trust property for future States). *But see North Dakota ex rel. Bd. of Univ. & School Lands v. Andrus*, 506 F. Supp. 619, 623 (D.N.D. 1981), *aff'd on other grounds*, 671 F.2d 271 (8th Cir. 1982), *rev'd on other grounds sub nom. Block v. North Dakota*, 461 U.S. 273 (1983) (presumption arises from the constitutional doctrine of equal footing).

117. *Martin v. Lessee of Waddell*, 41 U.S. (16 Pet.) 367, 411 (1842) ("Grants of that description [land beneath tidal waters] are therefore construed strictly—and it will not be presumed that [the State] intended to part from any portion of the public domain, unless clear and especial words are used to denote it."); *Greaux v. Hatchette*, 164 F. Supp. 102, 105-06 (D.V.I. 1958); *see also Sax*, *supra* note 24, at 490-91 ("When 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."); *see also People ex rel. Webb v. California Fish Co.*, 166 Cal. 576, 596, 138 P. 79, 88 (1913).

sumption, courts do not look kindly upon such grants,¹¹⁸ and they apply a more rigorous standard than is normally used to analyze conveyances by private parties.¹¹⁹ In some cases, courts have concluded that the particular state entity or agency that made the alleged conveyances of trust lands lacked the necessary legislative authorization.¹²⁰ Moreover, courts do not infer a conveyance of public trust lands unless in the grant itself an "intention was definitely declared or otherwise made very plain, or was rendered in clear and especial words."¹²¹

Two years after *Illinois Central* was decided, the Supreme Court handed down *Shively v. Bowlby*,¹²² which held that the issue of title to submerged lands below the high water mark was to be determined by state law.¹²³ Until recently, Mississippi law has been fairly clear on this matter.¹²⁴ Mississippi public trust law prohibits disposition or use of trust property except in furtherance of the public purpose, and then only by approval of the legislature.¹²⁵ The Mississippi Constitution provides that "[l]ands belonging to, or under the control of the state, shall never be donated directly or indirectly, to private corporations or individuals."¹²⁶ This has been held to preclude the sale of trust property at prices below the fair market value.¹²⁷

Long-term leases at less than fair market prices are also prohibited. The state, acting as trustee, has a duty to manage the trust so as to reasonably maximize the

118. See Sax, *supra* note 24, at 490; see also *State ex rel. Haman v. Fox*, 100 Idaho 140, 149, 594 P.2d 1093, 1102 (1979); *People ex rel. Scott v. Chicago Park Dist.*, 66 Ill. 2d 65, 78-79, 360 N.E.2d 773, 780 (1976).

119. E.g., *People ex rel. Webb v. California Fish Co.*, 166 Cal. 576, 596, 138 P. 79, 88 (1913).

120. E.g., *Martin v. Busch*, 93 Fla. 535, 573, 112 So. 274, 286-87 (1927).

121. *Utah Div. of State Lands v. United States*, 482 U.S. 193, 198 (1987) (quoting *Montana v. United States*, 450 U.S. 544, 552 (1981)). But see *infra* note 133 and accompanying text (legislature's declaration of purpose is not determinative).

122. 152 U.S. 1 (1894).

123. *Id.* at 51-52.

124. See MISS. CODE ANN. §§ 29-15-1 to -23 (Supp. 1990) (1989 Public Trust Tidelands Legislation); see also *infra* notes 152-82 and accompanying text.

125. MISS. CONST. art. IV, § 95; *Cinque Bambini Partnership v. State*, 491 So. 2d 508, 513 (Miss. 1986). But see MISS. CODE ANN. § 29-15-1 to -23 (Supp. 1989); *Byrd v. State*, *supra* note 74, at 7 (upholding the Mississippi legislation; case currently under appeal). Thus, the state may not convey fee simple title to trust property unless it is for a higher public purpose and the legislature has approved. *Cinque Bambini Partnership*, 491 So. 2d at 513. Moreover, such lands are not subject to claims of adverse possession. *Id.* at 521; *Board of Educ. v. Loague*, 405 So. 2d 122, 124-25 (Miss. 1981); *Gibson v. State Land Comm'r*, 374 So. 2d 212, 217 (Miss. 1979); MISS. CONST. art. IV, § 104; see also O'Dell & Howorth, *Alabama Tidelands After Phillips Petroleum v. Mississippi: Time to Reinvalidate the Public Trust*, 20 CUMB. L. REV. 365, 387 (1990) (citing *University of South Alabama v. Alabama*, No. 83-1242, slip op. at 17 (Cir. Ct. of Montgomery County, Ala. July 19, 1984)). But see *Board of Trustees v. Rye*, 521 So. 2d 900 (Miss. 1988) (upholding the tax sale of school trust property and holding that even if the sale had not been effective, possession of land by plaintiffs and their predecessors for 93 years is sufficient "to raise the presumption that at some time there was a grant by the sovereign which divested itself of title and perfected title in those from whoever the [plaintiffs] now deraign their title."). Public use can, however, cause private lands to be claimed by the state through adverse possession. *Dycus v. Sillers*, 557 So. 2d 486, 501 (Miss. 1990).

126. MISS. CONST. art. IV, § 95. But see *Rye*, 521 So. 2d at 908 (upholding the tax sale of school trust property).

127. *Koonce v. Board of Supervisors*, 202 Miss. 473, 477-78, 32 So. 2d 264, 265 (1947) (involving the sale of school trust land); see also *State ex rel. Coleman v. Dear*, 212 Miss. 620, 630-32, 55 So. 2d 370, 374-75 (1951) (sale of sixteenth section timber at below market prices); *State ex rel. Kyle v. Dear*, 209 Miss. 268, 278-79, 46 So. 2d 100, 104 (1950) (involving the sale of timber at below market prices).

income from it.¹²⁸ Thus, while the state can lease real estate held in trust, the state cannot lease property at less than fair market prices.¹²⁹ Although this prohibition has not always been enforced in the past,¹³⁰ the Mississippi Supreme Court has indicated a recent willingness to enforce it.¹³¹ Accordingly, it would be difficult for the state to accommodate the prior title holders with a long-term low-rent lease. Moreover, the state cannot dispose of these properties unless disposal would serve a greater public purpose and be approved by the legislature.¹³² In addition, it has been held that a transfer is not in the public interest simply because the legislature says it is: The "self-serving recitation of a public purpose within a legislative enactment is not conclusive of the existence of such purpose."¹³³ This is in keeping with the common law rule that one who holds title as a trustee is prohibited from giving away, appropriating to his own use, or otherwise disposing of the corpus of a trust in derogation of the rights of the beneficiaries.¹³⁴ Even if a transfer is approved by the legislature, it may later be voided. Years ago, many states sold fee simple title to saltwater wetlands which were influenced by the tide.¹³⁵ "This, of course, was done primarily at a time when such wetlands were viewed as swamp, serving no useful purpose other than to breed mosquitos and other noxious insects,"¹³⁶ but "[t]oday, many of these transactions are being challenged as violations of the public trust doctrine."¹³⁷

There is, in fact, a duty to review continually any appropriation from trust property. *National Audubon Society v. Superior Court*¹³⁸ concerned diversions of waters from rivers feeding into Mono Lake. These waters were carried by tunnels for use in Los Angeles. As a result of the diversions, the level of the lake dropped

128. *Hill v. Thompson*, 564 So. 2d 1, 6 (Miss. 1989) (holding a lease of school trust land void where the trustee had leased it for a period of 99 years for a price of \$7.50).

129. *Id.* See *Tally v. Board of Supervisors*, 323 So. 2d 547, 550 (Miss. 1975) ("[W]here the consideration paid for a lease is so small as to amount to a donation of the property, the lease is void.").

130. See *Hill v. Thompson*, 564 So. 2d 1, 12 (Miss. 1989) ("[T]here has been a century of disregard of this constitutional mandate and of widespread and long continued acceptance of this practice by former officials.").

131. *Id.*

132. *Cinque Bambini Partnership v. State*, 491 So. 2d 508, 513 (Miss. 1986). Thus, "the State may not convey fee simple title to properties so held in trust 'unless it is for a higher public purpose and then only by legislative enactment.'" *Id.* (quoting Brief for Appellees and Cross Appellant at 8, 16).

133. *People ex rel. City of Salem v. McMackin*, 53 Ill. 2d 347, 354, 291 N.E.2d 807, 812 (1972); see also *People ex rel. Scott v. Chicago Park Dist.*, 66 Ill. 2d 65, 80, 360 N.E.2d 773, 781 (1976). But see *Byrd v. State*, No. 17,879, slip op. (Ch. Ct. of Harrison County, Miss., April 18, 1990), at 5-6 (accepting the recitation by the Mississippi legislature).

134. See *Tally v. Board of Supervisors*, 323 So. 2d 547, 550 (Miss. 1975); *Holmes v. Jones*, 318 So. 2d 865, 868-69 (Miss. 1975). "At common law, the monarch was free to grant the soil of the tidewaters to an individual, but could not affect the public's right to navigation." O'Dell & Howorth, *supra* note 125, at 385.

135. See, e.g., Comment, *The Public Trust Doctrine and Ownership of Florida's Navigable Lakes*, 29 U. FLA. L. REV. 730, 736-37 (1977).

136. J. KALO, *supra* note 24, at 87; see *supra* note 9 (discussing wetlands). Perhaps it was because of mosquitos that more wetlands were not developed, but were preserved in their natural state. *Byrd v. State*, No. 17,879, slip op. (Ch. Ct. of Harrison County, Miss., April 18, 1990), at 3 ("Perhaps we should thank the noble mosquito for preserving for future generations of Mississippians the balance of the trust made up of tidally-affected water bottoms.").

137. J. KALO, *supra* note 24, at 87.

138. 33 Cal. 3d 419, 658 P.2d 709, 189 Cal. Rptr. 346, cert. denied, 464 U.S. 977 (1983).

significantly.¹³⁹ The Audubon Society sued to enjoin diversion of the waters. It argued that the ecological balance and scenic beauty of the lake were protected by the public trust because the lake was a navigable water.¹⁴⁰ The California Supreme Court agreed with the Audubon Society and concluded that the state has continuing supervisory control over navigable waters and land beneath those waters. The public trust "prevents any party from acquiring a vested right to appropriate water in a manner harmful to the interests protected by the public trust."¹⁴¹ Moreover, "the state has affirmative duty to take the public trust into account in the planning and allocation of water resources, and to protect public trust uses whenever feasible."¹⁴²

The court further held that the state must continually review appropriations of trust property. Not only must the initial decision to allow an appropriation be consistent with public trust objectives, but diversions and uses must be supervised to assure that those purposes are still protected. Accordingly "[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."¹⁴³ The earlier determination, which had permitted the diversion, could be reviewed. Such review was particularly appropriate where the public trust doctrine had not been considered in making the initial decision. In other words, even if a conveyance is made and approved, the title would be under a cloud since the conveyance would be subject to later review. As the Supreme Court stated in *Illinois Central*, any relinquishment of trust property to private ownership "is necessarily revocable."¹⁴⁴

V. THE PUBLIC TRUST DOCTRINE AS AN ENVIRONMENTALIST'S WEAPON

Recently it has been suggested that the public trust doctrine be used as a tool to protect the environment.¹⁴⁵ One of the earliest and most impressive cases to make use of the public trust for environmental protection arose in Mississippi. In *Parks v. Simpson*¹⁴⁶ an action was brought by a taxpayer against the Mississippi Marine Conservation Commission to void a contract the commission had made authorizing dredging in public waters for the harvest of oysters.¹⁴⁷ The plaintiff's true con-

139. *Id.* 33 Cal. 3d at 425-26, 658 P.2d at 711-12, 189 Cal. Rptr. at 348-49.

140. *Id.* at 430-32, 658 P.2d at 715-16, 189 Cal. Rptr. at 352-53.

141. *Id.* at 446, 658 P.2d at 727, 189 Cal. Rptr. at 364.

142. *Id.* at 447, 658 P.2d at 728, 189 Cal. Rptr. at 364.

143. *Id.* at 448, 658 P.2d at 728, 189 Cal. Rptr. at 365.

144. *Illinois Cent. R.R. Co. v. Illinois*, 146 U.S. 387, 453-55 (1982); *see also* *Long Sault Dev. Co. v. Call*, 242 U.S. 272, 278-79 (1916); *Caminiti v. Boyle*, 107 Wash. 2d 662, 666, 732 P.2d 989, 992 (1987). In order to increase alienability of land and to simplify title transactions, a few states have passed Marketable Title Acts. These acts are designed to remove clouds by allowing minor interests to merge back into the larger interest. In one case, it was argued that the Florida act effectively nullified the Public Trust. The Florida Supreme Court, however, held that the act was never intended to apply to state sovereignty lands. *Coastal Petroleum Co. v. American Cyanamid Co.*, 492 So. 2d 339, 343-44 (Fla. 1986), *cert. denied*, 479 U.S. 1065 (1987).

145. *See, e.g.*, *O'Dell & Howorth*, *supra* note 125; *Sax*, *supra* note 24, at 477.

146. 242 Miss. 894, 137 So. 2d 136 (1962).

147. *Parks*, 242 Miss. at 897-98, 137 So. 2d at 136.

cern, of course, was with the adverse impact that dredging would have on the ecology of the areas in question. The court ignored concerns which had led to dismissal of a similar Texas case¹⁴⁸ and looked instead at the commission's statutory authority to lease tidewater bottoms. The court construed that authority narrowly and found that oyster shells were a part of the public trust that the commission had not been authorized to alienate.¹⁴⁹

After the *Parks v. Simpson* decision, the Mississippi Legislature expressly granted authority to the State Marine Conservation Commission to permit shell dredging, but only under sharply limited circumstances.¹⁵⁰ Thus, the Mississippi Supreme Court, with help from the legislature, used the public trust doctrine to protect an important public resource which seemed originally to have been inadequately considered by the legislature.

Many aspects of the public trust doctrine were central to the *Parks v. Simpson* decision. First, was the land part of the trust? If so, was dredging for oysters a protected use under the trust? If these matters were included in the trust, did the agency have the right to alienate that portion of the trust? These issues provide fertile ground for exploration. The public trust doctrine can be used as an important tool by those concerned with protecting the environment.¹⁵¹

VI. THE MISSISSIPPI LEGISLATION

This history of the public trust doctrine clearly reveals that legislatures have often succumbed to public pressure to give up trust lands, whereas courts have jealously guarded the trust. In 1989, the Mississippi Legislature passed the Public Trust Tidelands Legislation which fixes the trust boundaries at their 1973 location.¹⁵² The primary purpose seems to have been to clear up questions as to how the trust is affected by waters which have been filled in by land owners; however, the legislation has created a serious question as to how rising water levels affect the trust. The core provision reads as follows:

The Secretary of State, in cooperation with other state agencies, shall prepare a Preliminary Map of Public Trust Tidelands. The preliminary map shall depict the boundary as the current mean high water line where shoreline is undeveloped and in developed areas or where there have been encroachments, such maps shall depict the boundary as the determinable mean high water line nearest the effective date of the Coastal Wetlands Protection Act.¹⁵³

After the map is completed and approved, it will be recorded. Once recorded, "the certified map shall be final as to those properties not subject to the trust," and

148. *Texas Oyster Growers Ass'n v. Odom*, 385 S.W.2d 899 (Tex. Civ. App. 1965) (dismissing the action because the suit was an impermissible imposition on state sovereignty; the authorization was within the agency's unreviewable discretion; and the plaintiff-fishermen had no vested interest in the litigation).

149. *Parks*, 242 Miss. at 902-07, 137 So. 2d at 138-41.

150. MISS. CODE ANN. §§ 49-15-1 to -109 (1972 & Supp. 1989).

151. See O'Dell & Howorth, *supra* note 125.

152. See MISS. CODE ANN. §§ 29-15-1 to -23 (1990).

153. *Id.* § 29-15-7(1). The effective date of the Coastal Wetlands Protection Act was July 1, 1973.

property owners will be issued certificates indicating that their property is not part of the trust.¹⁵⁴ Although the Act purports to recognize the importance of the public trust and to adhere to the common law doctrine,¹⁵⁵ it sets trust boundaries at fixed locations.¹⁵⁶ In essence, this legislation assures property owners that they will not lose title to their property, but at the same time it puts the purposes of the trust at risk.

The legislature has declared that this legislation is designed to promote the "certainty and stability" of land titles and, as such, is "essential to the economic welfare of the state and to the peace, tranquility and financial security of the many thousands of citizens who own such lands."¹⁵⁷ It also declared resolution of boundary uncertainty to be a "higher public purpose"¹⁵⁸ and preparation of accurate coastal maps defining the public trust as being in the public interest.¹⁵⁹ The many affirmations of the public interest seem to be directed at fending off any claim that the state is giving away trust property in violation of its duties as trustee. However, the "self-serving recitation of a public purpose" does not mean that a transfer is in the public interest.¹⁶⁰ Instead, the court should examine the Act with a great deal of judicial skepticism.¹⁶¹

The Secretary of State has challenged the Act, claiming that it amounts to a donation in violation of the Mississippi Constitution.¹⁶² The Secretary of State's interpretation of the Act is as follows:

Correctly interpreted this law requires the line of public trust tidelands in developed areas to be placed at the mean high water line as of July 1, 1973, on the preliminary

154. *Id.* § 29-15-7(4).

155. *Id.* § 29-15-7(2). The common law approach is that accretions to the shores of the sea belong to the riparian or littoral owner of the land bordering the sea. See, e.g., *Humble Oil & Ref. Co. v. Sun Oil Co.*, 190 F.2d 191, 194-95 (5th Cir. 1951), *cert. denied*, 342 U.S. 920 (1952); *Jackson v. United States*, 56 F.2d 340, 342 (9th Cir. 1932). Mississippi law is in accord and holds that the owner of land bounded by water is entitled to accretions thereto. *Cinque Bambini Partnership v. State*, 491 So. 2d 508, 519 (Miss. 1986); *H.K. Porter Co., v. Board of Supervisors*, 324 So. 2d 746, 751 (Miss. 1975); *Paepcke v. Kirkman*, 55 F.2d 814, 814 (5th Cir. 1932); *Anderson-Tully Co. v. Franklin*, 307 F. Supp. 539, 542 (N.D. Miss. 1969).

156. MISS. CODE ANN. § 29-15-7(2) (1990).

157. S. 2780, 104th Leg., Reg. Sess. § 1, 1989 Miss. LAWS 355, 356; see also *Ocean Science News*, *supra* note 16, at 2-3 (arguing that fixed national boundaries would serve an important purpose).

158. MISS. CODE ANN. § 29-15-3(2) (1990).

159. *Id.* § 29-15-15.

160. *People ex rel. City of Salem v. McMackin*, 53 Ill. 2d 347, 354, 291 N.E.2d 807, 812 (1972); see also *People ex rel. Scott v. Chicago Park Dist.*, 66 Ill. 2d 65, 80, 360 N.E.2d 773, 781 (1976).

161. See *supra* notes 113-21 and accompanying text.

162. *Byrd v. State*, No. 17,879, slip op. (Ch. Ct. of Harrison County, Miss., April 18, 1990), at 1. Section 95 of the Mississippi Constitution states as follows:

Lands belonging to, or under the control of the state, shall never be donated directly or indirectly, to private corporations or individuals, or to railroad companies. Nor shall such land be sold to corporations or associations for a less price than that for which it is subject to sale to individuals. This, however, shall not prevent the legislature from granting a right of way, not exceeding one hundred feet in width, as a mere easement, to railroads across state land, and the legislature shall never dispose of the land covered by such right of way so long as such easement exists.

MISS. CONST. art IV, § 95.

map, to be revised only if more accurate information with respect to the line of mean high water at that date is received during the ensuing 60 days.¹⁶³

If the Secretary's interpretation is correct, this legislation, despite affirmations that it purports to adhere to the common law,¹⁶⁴ violates the centuries-old doctrine concerning trust boundaries.¹⁶⁵

The Secretary set forth this position in *Byrd v. State*,¹⁶⁶ which squarely addresses the constitutionality of the 1989 Public Trust Tidelands Legislation. The primary concern of the chancery court in that case seems to have been the confusion, difficulty, and expense that are involved with the traditional movable boundary line for trust property. The court summarized the Act as follows:

The legislature found that certainty and stability of land titles are essential to the economic welfare of the State and to the peace, tranquility, and financial security of the many thousands of citizens who own Coastal property [T]he legislature declared that disputes and uncertainty had developed with respect to *location* of the *boundary* between public and private lands in tidewater areas. The legislature found . . . that the dispute had caused extensive harm; that it was intolerable; and that immediate resolution was required and would serve a higher public purpose.

Furthermore, the legislature . . . stated that the amount of damage, harm, or loss that has occurred to the lands held in public trust since statehood is negligible compared to the benefit of resolving the problem. The legislature recognized that the cost of any other solution would far exceed the amount of public gain.¹⁶⁷

The chancery court accepted these matters as findings of fact,¹⁶⁸ and rejected the constitutional challenge, holding:

There was no attempt by the legislature, as the Court views it, to *change* the boundary for it cannot be changed. It is the same as it was in 1817. However, a procedure was enacted which will facilitate the *location* of the boundary, for it must be remembered that the 1817 boundary is elusive and there are no photographs or known physical surveys which can precisely locate it as it actually existed in 1817.¹⁶⁹

The court held the Act constitutional.¹⁷⁰ The case is now on appeal¹⁷¹ and should come before the Mississippi Supreme Court within the year.

In reaching its decision, the chancery court rejected the Mississippi Supreme Court's boundary definition in *Cinque Bambini*, placing the boundary at *today's*

163. *Byrd v. State*, No. 17,879, slip op. (Ch. Ct. of Harrison County, Miss., April 18, 1990), at 11 (quoting the Reply Brief of the Secretary of State).

164. Miss. CODE ANN. § 29-15-7(2) (1990).

165. "[T]he general, possibly universal rule . . . [is] that the title of the riparian owner follows the shore line under what has been graphically called 'a movable freehold.'" *Hilt v. Weber*, 252 Mich. 198, 219, 233 N.W. 159, 165-66 (1930) (quoting 28 HALSBRURY LAWS OF ENGLAND 361 (1st ed. 1914)).

166. *Byrd v. State*, *supra* note 73.

167. *Id.* at 5.

168. *Id.*

169. *Id.* at 6.

170. *Id.*

171. On appeal to the Mississippi Supreme Court (No. 90TS692).

mean high tide line.¹⁷² The chancery court noted that the *Cinque Bambini* property (about 2400 acres) had cost approximately one-and-one-half million dollars to survey so that the boundary could be determined.¹⁷³ Concluding that the expense for the entire state would be enormous,¹⁷⁴ the chancery court stated: "Some compromise must be effected between the purity of the *Cinque Bambini* boundary definition and the needs of the people of the State of Mississippi."¹⁷⁵ The chancery court was concerned about the difficulty in determining the exact location of the 1817 boundary,¹⁷⁶ but under the Supreme Court's definition, at least in the case of a rising tide, location of the 1817 boundary is essentially irrelevant.¹⁷⁷

If the greenhouse effect causes a general one-foot increase in water levels, the Mississippi shoreline will move in some areas by as much as 400 feet.¹⁷⁸ A larger increase in water levels will shift the shoreline even further. If these lands are held as private property and if the boundaries of the trust are not allowed to shift with the coast, the public may not only be denied access to these waters, it will effectively be denied the right to numerous interests, protected by the public trust: fishing, navigation and transportation, commerce, bathing, swimming and other recreational activities, development of mineral resources, environmental protection and preservation, the enhancement of aquatic, avian, and marine life, sea agriculture and other purposes.¹⁷⁹ It means little to someone without a boat to have the right to fish in gulf waters if they are denied the right to stand along the shore. The public trust has protected such individuals in the past, but if the chancery court's decision is allowed to stand, that right, as well as others, will be lost.

It is not surprising that the Mississippi Legislature gave in to political pressure from coastal property owners. However, the Mississippi Supreme Court should not allow the chancery court's decision or this legislation to stand without modification. The supreme court should view the legislature's action with great skepticism.¹⁸⁰ The public's right to use and enjoy tidally affected coastal waters should be recognized as paramount to concerns over boundaries. "[T]he general, possibly universal rule . . . [is] that the title of the riparian owner follows the shoreline

172. *Cinque Bambini Partnership*, 491 So. 2d at 520; see also *O'Neill v. State Highway Dep't*, 50 N.J. 307, 322-23, 235 A.2d 1, 9-10 (1967). See generally *Maloney & Ausness, The Use and Legal Significance of the Mean High Water Line in Coastal Boundary Mapping*, 53 N.C.L. REV. 185 (1974).

173. *Byrd v. State*, No. 17,879, slip op. (Ch. Ct. of Harrison County, Miss., April 18, 1990), at 6-7.

174. *Id.* That the traditional boundary measurement is expensive would not seem to impact on the constitutional question, though it might go to the question of a higher public good.

175. *Byrd v. State*, No. 17,879, slip op. (Ch. Ct. of Harrison County, Miss., April 18, 1990), at 8.

176. *Id.* at 6.

177. See *supra* notes 73-76 and accompanying text. In the case of receding tide, old boundaries may be important, because the state may claim that it retains title to property which is no longer influenced by the tide. See *Cinque Bambini*, 491 So. 2d at 513-15.

178. *Titus*, *supra* note 8, at 66.

179. See *supra* notes 50-60 and accompanying text. But see *Ocean Science News*, *supra* note 16, at 2-3 (identifying advantages of fixed national boundaries).

180. This is opposed to the chancery court, which started with the assumption that any acts of the legislature should be "clothed with a presumption of constitutionality." *Byrd v. State*, No. 17,879, slip op. (Ch. Ct. of Harrison County, Miss., April 18, 1990), at 2.

under what has been graphically called 'a movable freehold.' ”¹⁸¹ That universal rule—which is centuries old—should be adhered to, despite any minor questions over boundaries that it may create.¹⁸²

VII. COMPENSATION FOR ARTIFICIALLY-CREATED COASTS

Although record title owners are not normally entitled to compensation when a gradual imperceptible increase in water levels causes their property to revert to the public trust, efforts to protect populated areas might create a cause of action for owners of property in other areas. If, as is likely,¹⁸³ seawalls and dikes are built around developed areas like Biloxi/Gulfport, Mobile, and New Orleans, they will displace water. That displaced water will likely result in more land's in other areas being subject to tidal influence.¹⁸⁴ Will this tidal shift be considered an avulsion or an artificial or non-natural shift, or will this displaced water also result in more land being added to the public trust? There is no clear agreement between the states as to whether the public trust doctrine applies to artificially-created tideland's, shorelands, bottom lands or submerged lands,¹⁸⁵ but the general rule in Mississippi and in a few other states is that if land was exposed to tidal or navigable waters by artificial means, the land or waters are not subject to the public trust

181. *Hilt v. Weber*, 252 Mich. 198, 219, 233 N.W. 159, 165-66 (1930) (quoting 28 HALSBURY LAWS OF ENGLAND 361 (1st ed. 1914)).

182. MISS. CODE ANN. § 29-15-7(2) recognizes the common law approach to moving a coastal boundary, and declares the common law approach to be the law of this state. However, such a declaration seems in direct conflict with other sections of this legislation. See MISS. CODE ANN. § 29-15-7(4). At the very least, this inconsistency must be resolved.

183. Titus, *supra* note 8, at 81-82 (a one foot rise in the water level might not justify construction of barriers, but a two foot rise would); see *id.* at 85 (“[T]here is little doubt that such densely populated islands . . . could justify protection for almost any conceivable rate of sea level rise.”); Ocean Science News, *supra* note 16, at 2 (Japan has recently spent 240 million dollars protecting “two rocks 1,400 yards apart sticking no more than two feet out of the water at high tide” because these rocks might be used to determine Japan’s national boundary.).

184. Although there is a huge area for displaced water to disperse, some scientific evidence indicates that tidal changes take place in concentrated “cells” along the coast. See Stone, *Historic Shoreline Stability During a Period of Relative Sea Level Rise: Northwest Florida and Southeast Alabama*, Sept. 27, 1990, Biloxi, Mississippi (proceedings to be published).

185. At least one state court has come to the conclusion, that if the waters were naturally navigable, then an artificial extension of the channel brought the extended waters within the scope of the public trust doctrine. *Mentor Harbor Yachting Club v. Mentor Lagoons, Inc.*, 170 Ohio St. 193, 199, 163 N.E.2d 373, 377 (1959) (“[L]agoons, which are artificial extensions of the naturally navigable channel, became a part thereof and are public waters.”).

doctrine.¹⁸⁶ Thus, Mississippi public trust law indicates that these new tidelands would not become part of the trust.

Mississippi public trust law should be modified on this point since lands on the coast that have stayed in private ownership still share those "geographical, chemical and environmental" qualities that make lands beneath tidal waters unique" and appropriate for inclusion in the trust.¹⁸⁷ As such, it would be logical to include these properties in the trust. However, if it can be clearly established that it is the displacement from urban areas, and not naturally-occurring (or greenhouse-induced) tidal water that has affected the land in question, then compensation to the record owners might be appropriate, but the trust's boundary line should be permitted to move with the shore. In such a case, it might be reasonable to tax those areas that have benefited from the artificial constructs and use this money to pay the people who have lost title.¹⁸⁸

VIII. PRE-STATEHOOD TITLE HOLDERS

LaSalle claimed Mississippi for France in 1682. After the French and Indian War, the Treaty of Paris gave Mississippi to Britain, and it became part of British West Florida in 1763. During the Revolutionary War, the region was occupied by the Spanish, who ceded it to the United States in 1795 under the Treaty of San Lorenzo. On December 10, 1817, Mississippi became a state.¹⁸⁹ Since the United States created the public trust doctrine and made it applicable to states as

186. Some courts, including the Mississippi Supreme Court, have held that because land was exposed to tidal or navigable waters by artificial means, then as a necessary result the land or waters are not subject to the public trust doctrine. *Kaiser Aetna v. United States*, 444 U.S. 164, 179-80 (1979) (Private lagoons which are subsequently connected to navigable waters by a government-dredged channel "fall[] within this category of interests that the government cannot take without compensation." Unlike an "insubstantial devaluation" of private property, this situation amounts to the "imposition of [a] navigational servitude [which constitutes] . . . an actual physical invasion of the privately owned marina."); *Cinque Bambini Partnership v. State*, 491 So. 2d 508, 520 (Miss. 1986) ("[U]nder the laws of this state neither artificially created water courses, inlets, slips, marinas and the like, nor physical improvements or alterations made thereto, become a part of the public trust, even though they may become tidally affected."); *O'Neill v. State Highway Dept.*, 50 N.J. 307, 235 A.2d 1, 10 (1967) ("The State cannot acquire interior land by such artificial works as ditching which enables the tide to ebb and flow on lands otherwise beyond it."); *Fairchild v. Kraemer*, 11 A.D.2d 232, 236, 204 N.Y.S.2d 823, 826 (1960) ("[T]he basin, having been artificially created out of the private lands of [the] plaintiff . . . and having been made navigable by artificial means, would remain private property, and the waters thereof would not be subject to any public right or easement thereon."); *Diversion Lake Club v. Heath*, 126 Tex. 129, 139-40, 86 S.W.2d 441, 445-46 (1935) (lands beneath public waters that are artificially flooded by a dam remain private land even though bottom land and of natural navigable rivers are publicly owned); *Haase v. Kingston Co-Operative Creamery Ass'n*, 212 Wis. 585, 588-89, 250 N.W. 444, 445 (1933) (where someone creates an artificial body of water upon his or her own premises the state does not get title to the land under such water); see also *MISS. CODE ANN.* § 29-15-7(2) (1990).

187. *Phillips Petroleum Co. v. Mississippi*, 484 U.S. 469, 481 (1988).

188. One problem, however, is that the greenhouse tidal shift may continue after this compensation has been paid. Thus, it may be true that property which is covered by water in the year 2050 is covered by displaced water and not greenhouse water, but the situation might be different in 2070. If the urban dwellers have paid compensation to a landowner whose property is now covered by water from sources other than the displaced urban water, it would be unfair to require them to pay the next land owner, again and again, as water levels rise. Because of this difficulty, it might be best simply to determine that no compensation should be paid, at least until the greenhouse tidal shift has stabilized.

An alternative source of funding that might be used is the Public Trust Tidelands Fund, which includes rental payments received from those who rent submerged or tidal waters. *MISS. CODE ANN.* § 29-15-9 (1990).

189. *FAMILY ENCYCLOPEDIA OF AMERICAN HISTORY*, *supra* note 35, at 730.

they were admitted to the Union, conveyances of trust lands from any pre-statehood sovereign, including the United States, to a private title holder can bar the application of the public trust doctrine to those lands in the grant.¹⁹⁰

The pre-statehood grant exception was recognized by the Mississippi Supreme Court in *Cinque Bambini Partnership*.¹⁹¹ Although the argument failed in that case because of factual determinations, if a pre-statehood conveyance included the right to possession and use of the land to the exclusion of the public, the public trust doctrine would not apply to that land. For example, the last sentence of the 1649 amendment to the Massachusetts Bay Colony Ordinance, the "Body of Liberties," reads as follows:

And for great ponds lying in common though within the bounds of some town it shall be free for any man to fish and fowl there, and may pass and repass on foot through any man's propriety for that end, so they trespass not on any man's corn or meadow.¹⁹²

Thus, these "great ponds" are held in a public trust. However, those appropriated

190. Some states have been unwilling to recognize this exception to the public trust doctrine. In *City of Los Angeles v. Venice Peninsula Properties*, 31 Cal. 3d 288, 644 P.2d 792, 182 Cal. Rptr. 599 (1982), *rev'd sub. nom.*, *Summa Corp. v. California ex rel. State Lands Comm'n*, 466 U.S. 198 (1984) the California Supreme Court had to determine whether the public trust doctrine applied to tidelands that were never owned by the state or federal government. The land in question was a lagoon which had been ceded to the United States by the Mexican government after private individuals had received title from the Mexican government. *Id.* at 292, 644 P.2d at 794, 182 Cal. Rptr. at 601. The California Supreme Court concluded that the lands, when conveyed by the Mexican government, were subject to the public interest in the tidelands and that the interest was not lost by the subsequent patent of the federal government. Thus, the court concluded that the tidelands trust doctrine *did* apply to the lands in question. *Id.* at 303-14, 644 P.2d at 801, 182 Cal. Rptr. at 608. The United States Supreme Court, however, reversed this decision, holding that "California cannot at this late date assert its public trust easement over petitioners' property." 466 U.S. at 209. The pre-statehood conveyance exception has been recognized by the Mississippi Supreme Court and is set forth in at least one other state's constitution. See WASH. CONST. art. XVII, § 1 (limits state ownership of tidelands as against all parties declaring chain of title back prior to statehood); *Stockwell v. Gibbons*, 58 Wash. 2d 391, 398, 363 P.2d 111, 115 (1961) ("Under Article 17, section 1 of the Washington State Constitution, all tide lands not patented to private ownership prior to statehood vested in the State.").

191. 491 So. 2d 508, 518 (Miss. 1986).

If, at the time of acquisition by the United States in its sovereign capacity, property was *already* privately owned, it follows on reason that the title was never in the United States and therefore could not have been held by the United States in trust nor thereafter at statehood granted to the state.

Id.

192. See *Slater v. Gunn*, 170 Mass. 509, 513, 49 N.E. 1017, 1019 (1898) (quoting THE BODY OF LIBERTIES OF 1641 (Whitmore ed. 1660), reprinted in THE COLONIAL LAWS OF MASSACHUSETTS 170 (Boston 1889)). Great ponds are defined as those covering more than ten acres, and they are declared to be public waters. See generally Smith, *The Great Pond Ordinance—Collectivism in Northern New England*, 30 B.U.L. REV. 178 (1950); Locke, *Right of Access to Great Ponds by the Colonial Ordinance*, 12 ME. L. REV. 148 (1919).

to private owners prior to this enactment (or other similar ones) are subject to private ownership.¹⁹³

That the federal government held territorial submerged lands in trust for future states did not necessarily mean that the federal government could never validly convey those lands to private parties prior to statehood. In managing its territories (before they became states), the United States made many grants of land to private owners.¹⁹⁴ The Supreme Court in *Shively v. Bowlby*¹⁹⁵ declared that the property clause permitted Congress to convey territorial public trust lands and so to defeat the title of a new state "in order to perform international obligations, or to effect the improvement of such lands for the promotion and convenience of commerce with foreign nations and among the several States, or to carry out other public purposes appropriate to the objects for which the United States hold the Territory."¹⁹⁶ Not all conveyances by the federal government, however, would remove the land from the public trust.¹⁹⁷ A grant of riparian or littoral land carried with it no implication of title to tidelands or to the beds of navigable waters.¹⁹⁸ There is, in fact, a "strong presumption against conveyance by the United States" of the title to the bed of a navigable water.¹⁹⁹

In order for a pre-statehood conveyance to defeat the public trust, two conditions must exist. First, chain-of-title must clearly be shown to extend back prior to statehood. Second, the conveyance must convey exclusive rights of ownership and control in clear, unequivocal words.²⁰⁰ Because the state's public trust interest is an aspect of its sovereignty and is an interest which the Supreme Court has indicated is of "substantial magnitude,"²⁰¹ the grant or conveyance will be interpreted

193. See *Lynnfield v. Peabody*, 219 Mass. 322, 328, 106 N.E. 977, 980 (1914) (quoting *Commonwealth v. City of Roxbury*, 75 Mass. (9 Gray) 451, 528 (1858)) (prior to the 1647 ordinance, "Great ponds were not at first reserved as public property or lying in common." *Peabody*, 219 Mass. at 328, 106 N.E. at 980. Therefore, "[o]r-dinarily a grant of a pond as a piece of real estate would include the entire area within its borders." *Peabody*, 219 Mass. at 328, 106 N.E. at 979 (quoting Attorney General v. Herrick, 190 Mass. 307, 313, 76 N.E. 1045, 1048 (1906))); see also *Watuppa Reservoir Co. v. Fall River*, 154 Mass. 305, 307, 28 N.E. 257, 257-58 (1891) (Great ponds legislation not applicable to grants prior to 1647); *Inhabitants of West Roxbury v. Stoddard*, 89 Mass. (7 Allen) 158, 171 (1863) (Great ponds appropriated to private persons prior to 1647 do not "lie in common for public use.").

194. See *Hughes v. Washington*, 389 U.S. 290 (1967) (discussing ownership of accretion to property conveyed by the United States prior to statehood).

195. 152 U.S. 1 (1894).

196. *Id.* at 48; see also *Summa Corp. v. California ex rel. Land's Comm'n*, 466 U.S. 198, 204-09 (1984) (carrying out treaty provisions represents an "international duty"); *United States v. City of Anchorage*, 437 F.2d 1081, 1085 (9th Cir. 1971) (grant of public trust lands to federally owned and operated railroad deemed a public purpose); *United States v. Alaska*, 423 F.2d 764, 768 (9th Cir. 1970), *cert. denied*, 400 U.S. 967 (1970) ("public purpose" served by grant to game refuge).

197. See *supra* note 190 and accompanying text.

198. *Shively v. Bowlby*, 152 U.S. 1, 48, 51, 58 (1894); *Railroad Co. v. Schurmeier*, 74 U.S. (7 Wall.) 272, 287 (1869); *United States v. Pacheco*, 69 U.S. (2 Wall.) 587, 590 (1865); *Pollard v. Hagan*, 44 U.S. (3 How.) 212, 229 (1845). See generally *Bade, Title, Points and Lines in Lakes and Streams*, 24 MINN. L. REV. 305, 310-11 (1940) (conveyances by the United States, within its territories, are measured under federal law).

199. *Montana v. United States*, 450 U.S. 544, 552 (1981).

200. See *United States v. Holt State Bank*, 270 U.S. 49, 55 (1926); *State Dep't of Natural Resources v. Haines*, 627 P.2d 1047, 1052 (Alaska 1981); *Gulf Oil Corp. v. State Mineral Bd.*, 317 So. 2d 576, 589 (La. 1974); *Klais v. Danowski*, 373 Mich. 262, 275, 129 N.W.2d 414, 420-21 (1964).

201. *Summa Corp. v. California ex rel. Land's Comm'n*, 466 U.S. 198, 209 (1984).

against the grantee. The dual burdens of proving pre-statehood title and of the conveyance's being interpreted against the grantee pose difficult obstacles to a private landholder's making this argument. In fact, the Supreme Court has never determined that the United States actually granted sovereign lands to private parties prior to statehood.²⁰²

IX. CONCLUSION

If the greenhouse effect does cause temperatures to increase and water levels to rise, the geographical effects will be dramatic, but some practices might help to reduce their impact. For instance, if wetlands are allowed to migrate inward rather than face destruction, the impact on fish and animal life might be lessened.²⁰³ From a more preventative standpoint, any reduction in the production of trace gases will certainly be advantageous. More fuel-efficient cars would at least help slow the rate of global warming and perhaps reduce its effect.²⁰⁴ As sad as it is, one realistic answer might be that people can try to adapt to the new world they have created.

Careful land use planning now can help reduce expenses in the future for remedies of last resort—ports, levees, and seawalls.²⁰⁵ Engineers should incorporate the likelihood of sea-level rises into their current plans and decisions, but engineers should not try to construct buildings strong enough to stand up to the new water levels. Instead, buildings should be set well back from today's waterline. In order to save important ecosystems, like wetlands and beachfront estuaries, they must be allowed to migrate landward.²⁰⁶ Strong buildings will only destroy the beaches and hinder the migration of dunes and wetlands.²⁰⁷ Decision-makers should not allow developers to build in areas that will be subject to flooding, and insurance companies (especially the federal government's National Flood Insurance Program) should carefully review the geography of an area before writing coverage.²⁰⁸ Creative legislation can help achieve some of these goals.²⁰⁹

The 1989 Public Trust Tidelands Legislation should be clarified. Navigable and coastal waters have long held positions of extreme importance to the public in general. Although individuals may lose property because of a greenhouse induced

202. J. KALO, *supra* note 24, at 80. *But see*, *Choctaw Nation v. Oklahoma*, 397 U.S. 620 (1970) (United States grant to Indian Nations upheld due to the particular Indian treaties involved). Arguably, however, the Indian tribes represented a sovereign nation, not individuals. *Id.* at 653 (White, J., dissenting).

203. Titus, *supra* note 8, at 66.

204. Mardon, *The Lean, Clean Car Campaign*, *SIERRA*, July-Aug. 1990, at 21.

205. *See* Solomon & Freedberg, *supra* note 6, at 105.

206. Titus, *supra* note 8, at 73.

207. *Id.* at 71. Seawalls and dikes will also be built at the cost of ecologically valuable wetlands. Miller, *supra* note 1, at 190.

208. Titus, *supra* note 8, at 87. This may be the most efficient way to control beachfront development. The landowner who wanted to put his investment at risk could do so, but much construction would be stopped without the government's imposing a "taking." *Id.* at 71, 86.

209. *See* Solomon & Freedberg, *supra* note 6, at 105 n.121 (discussing Maine's regulations requiring the removal of man-made obstructions as the water rises and wetlands migrate inward); Titus, *supra* note 8, at 70-71 (discussing a similar rule in Texas which requires that tidal changes be considered before new construction is begun); Miller, *supra* note 1, at 228-29 (discussing legislation to reduce trace gas emissions).

tidal change, the superior right of the public should not be defeated. Those who now own property that may become subject to tidal influences have sufficient time to prepare. They should recognize that their property may gradually, imperceptibly, be encroached upon by water. They should also realize that this may cause them to lose title to their property; however, this does not mean that they need to sell their property tomorrow since their land will remain usable and enjoyable for decades to come, even though it might one day begin to decrease in value. This is true of any real estate and is but one factor which should be weighed in the calculation of whether to build on, buy, or sell coastal property. If concessions must be provided to current property owners, they should be granted at most monetary compensation or the limited *jus privatum* interest. The state should retain the *jus publicum* interest. In no way should the state allow private interests to interfere with the public's right to use and enjoy navigable and coastal waters.

After clarifying the 1989 Public Trust Tidelands Legislation, the Mississippi Legislature could enact legislation similar to that in Maine, which requires the removal of man-made obstructions as the water rises and wetlands migrate inward.²¹⁰ Additionally, the state could benefit from legislation requiring tidal changes to be considered before any new construction is begun in coastal areas.²¹¹ Furthermore, even though Mississippi, as compared to other states, has few problems in terms of air pollution, a focus on reducing the production of trace gases would certainly be beneficial.²¹² Any of these enactments would be far more advantageous than the 1989 Public Trust Tidelands Legislation.

The public trust doctrine should be of utmost concern to all who have an interest in Mississippi coastal property. If the greenhouse effect does actually lead to dramatic shifts in water levels, the public trust doctrine will emerge as a critical legal issue for the next century. Steps may be taken today to help minimize adverse greenhouse effects and to prepare for the new waterlines, but the state should not let property ownership concerns infringe on the public's right to use these properties. The public trust has protected the public's right to use and enjoy the world's waters and coastlines for centuries. It should remain a vital and useful means of protecting such rights as we enter into the next century.

210. See Solomon & Freedberg, *supra* note 6, at 105 n.121 (discussing Maine's regulations).

211. Titus, *supra* note 8, at 70-71 (discussing a similar rule in Texas which requires that tidal changes be considered before new construction is begun).

212. Miller, *supra* note 1, at 228-29 (discussing legislation to reduce trace gas emissions). See, e.g., OR. REV. STAT. § 469.060(3)(e) (1989) (setting a goal of reducing emissions by 20% by the year 2005).