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GOVERNMENT SUBSIDY OF COASTAL BARRIER DEVELOPMENT

MIKE DONOVAN†

I. INTRODUCTION

Along the Atlantic and Gulf coasts of the United States, there are about 1.4 million acres of coastal barriers,¹ including about 295 islands.² Barriers also include spits, bay mouths, and tombolos (sand bars connecting islands to the mainland or to other islands).³ From Maine to Texas, only short sections of the shore are without barrier islands.⁴ Coastal barriers buffer the mainland from ocean waves, storms, and hurricanes, and help protect beaches and ecosystems.

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1. S. REP. NO. 419, 97th Cong., 2d Sess. 1, reprinted in 1982 U.S. CODE CONG. & AD. NEWS 3212 [hereinafter cited as S. REP. NO. 419].

2. 1980: *A good year for barrier islands?*, NAT. PARKS & CON. MAG., Apr. 1980, at 25 [hereinafter cited as *A good year?*].

3. 16 U.S.C. § 3502(1)(A) (1982 Supp.). A barrier is a continuous outlying ridge at some distance from the water's edge. Gilbert, *The Topographical Features of Lake Shores*, U.S. GEOLOGICAL SURVEY 5TH ANN. REPORT, 87-88 (1885), reprinted in M. SCHWARTZ, BARRIER ISLANDS, at 45 (1973).

A barrier island has been defined as an "island or chain of islands of sand, or sand and gravel or shingle, lying offshore on a gently sloping shallow bottom." Price, *Barrier Island, Not "Offshore Bar,"* 113 SCIENCE 487, at 487-88 (1951), reprinted in M. SCHWARTZ, BARRIER ISLANDS, at 63 (1973).

4. Note, *Barrier Islands: The Conflict Between Federal Programs That Promote Preservation and Those That Promote Development*, 33 S.C.L. REV. 373 (1981) [hereinafter cited as *Conflict*]. There has long been considerable disagreement among scientists as to how barrier islands are formed. For a compilation of these arguments, see M. SCHWARTZ, BARRIER ISLANDS, (1973).

One recent group theorizes that barrier islands were formerly sand dunes, shaped by wind and waves. Sea level began to rise about 19,000 years ago, flooding the area behind the dunes and forming an island. O. PILKEY, JR., W. NEAL & O. PILKEY, SR., FROM CURRITUCK TO CALABASH: LIVING WITH NORTH CAROLINA'S BARRIER ISLANDS, 17-21 (1979) [hereinafter cited as PILKEY, NEAL & PILKEY]. The composition of these islands varies. Islands in North Carolina were formed, and continue to be fed, by sand from the Continental Shelf, while those in Texas are built by silt brought downstream by rivers. *Id.* Beaches around Miami are 50% shells of dead animals, while some in the Florida Keys and Puerto Rico are 100% shells. W. KAUFMAN & O. PILKEY, THE BEACHES ARE MOVING: THE DROWNING OF AMERICA'S SHORELINE, 41 (1979) [hereinafter cited as KAUFMAN & PILKEY].

The ecological balance of coastal barriers is very delicate and easily upset. Most barrier islands are barely above water. The average height of lots on barrier islands off the southern coast of Florida, for example, is four to five feet above sea level.⁵ Because of this, barrier islands are especially vulnerable to erosion and storm damage.

Nonetheless, barrier islands are a favorite site for developers. About forty percent of barrier islands in the United States are developed or in the process of being developed.⁶ Development on coastal barriers has averaged more than 6000 acres per year, fast enough to consume the rest of the developable areas by 1995.⁷ From 1960 to 1983, the number of Americans living on Atlantic and Gulf coasts grew by thirty-four percent, and in Florida this number grew by eighty-two percent.⁸

Damage to coastal development is expensive,⁹ especially for government. Over one three-year period, the federal government spent at least \$500 million on projects which encouraged barrier island growth.¹⁰ As of 1979, flood disaster relief payments were \$2 billion annually, and flood insurance claims payments were around \$300 million annually.¹¹

Development is dependent upon infrastructure. Roads, water, access, and wastewater collection and treatment are essentials.¹² Much of the infrastructure on barrier islands has been paid for by public rather than private funds. There are now efforts to stop these subsidies, for both environmental and economic reasons. This article will examine some of the government subsidies which have promoted barrier island development, and some of the efforts

5. Rockefeller, *The Great Barrier Island Bailout*, NAT. PARKS & CON. MAG., July 1980, at 18, 20.

6. See S. REP. No. 419, *supra* note 1. About 13% are undeveloped and unprotected, and about 47% are protected by government or private groups. *Id.*

7. Miller, *The Barrier Islands*, ENVIRONMENT, Nov. 1981, at 6.

8. Alexander, *When an Ill Wind Blows*, NAT'L WILDLIFE, Dec. 1983, Jan. 1984, at 48, 50.

9. In 1967, Sen. Joseph Tydings of Maryland reported that annual damage to property on coasts from Maine to Texas caused by normal processes was about \$31 million. F. SHEPARD & H. WANLESS, *OUR CHANGING COASTLINE 2* (1971) [hereinafter cited as SHEPARD & WANLESS]. In 1979, Hurricane Frederick caused \$2.3 billion in damages, and Hurricane David caused \$390 million in damages. Rockefeller, *supra* note 5, at 18.

10. Rockefeller, *supra* note 5, at 18 (this figure does not include flood insurance or disaster relief).

11. Sharma, *Hurricane Erosion Hazard Zones on Barrier Islands and Beaches: Unique Resources, Development Problems and Innovative Solutions*, at 8 (paper presented at 1979 Annual Convention of the Florida Audubon Society, "Hurricanes and Florida," Oct. 26-28, Miami Beach, Florida).

12. Miller, *supra* note 7, at 8.

to cease such funding. It also will examine some of Florida's efforts to regulate coastal development.

II. ISLAND DEVELOPMENT: A WISE INVESTMENT?

But everyone who hears these words of mine and does not put them into practice is like a foolish man who built his house on sand. The rain came down, the streams rose, and the winds blew against that house, and it fell with a great crash.

Matthew 7:26-7

The first settlers to this country avoided beaches due to a concern for the ocean's hostility and a fear of pirates.¹³ While pirates no longer invade our shores, barrier island property still has one major problem—the land moves! Barrier islands are composed primarily of unconsolidated, unstable sand foundations which are highly prone to erosion and shifting.¹⁴ Unlike inland areas, coastal barriers are in constant motion and can change dramatically from day to day.¹⁵ Storms can wipe out entire sections of beaches and can open and close inlets. "The combination of erosion and migration, as well as the effects of flooding from hurricanes and other storms, make these areas exceptionally hazardous places for permanent man-made structures and human habitation."¹⁶

While the damage from storms is often obvious, beaches can also change in more subtle ways. When sand is taken away by wind or rain at one time and replaced at another time, the overall change is usually imperceptible. Coastal maps from the time of Vespucci are very similar to the maps of today, yet comparisons of detailed maps show that the coastline is different.¹⁷ However, while the back and forth motion of waves may cancel each other out, thus having little effect on the beaches, the longshore or littoral currents often carry sand,¹⁸ sometimes in great volumes.

In Santa Monica, California, the sand moves at a rate of one million cubic yards per year.¹⁹ At Hillsboro Inlet, Florida, the rate

13. J. LEONARD, *ATLANTIC BEACHES* 18 (Time-Life Books, 1972).

14. *A good year?*, *supra* note 2.

15. J. LEONARD, *supra* note 13, at 30.

16. See S. REP. NO. 419, *supra* note 1. For example, a "typical" rainstorm in November, 1984, caused \$8.1 million of structural damage to the east coast of Florida, and \$60 million to \$90 million worth of sand was eroded away. *Tampa Tribune*, Jan. 3, 1985, at B-3, col. 3.

17. KAUFMAN & PILKEY, *supra* note 4, at 12-13.

18. *Id.* at 81.

19. *Id.* at 82.

is 75,000 cubic yards per year.²⁰ At Virginia Beach, the beach shrinks in the winter and returns in the summer.²¹ The same is true in Carmel, California, where a 200-foot wide summer beach is almost nonexistent every winter.²²

Beaches also move due to a rise in sea level.²³ At one time, sea level was more than 100 miles seaward of New York and Boston.²⁴ It began rising about 19,000 years ago.²⁵ About 5000 years ago the rise slowed to approximately one foot per century,²⁶ but this varies by area.²⁷ A one-inch rise in sea level equals a 100- to 1000-foot horizontal shoreline retreat, depending upon the slope of the coastline.²⁸ This rising sea level may drown Galveston County, Texas, by the year 2000²⁹ and is partially responsible for Louisiana's loss of fifty square miles of land a year.³⁰

Erosion can happen very quickly. In 1978, a winter storm swept a parking lot and bathhouse facility from a major beach at Cape Cod, Massachusetts.³¹ Erosion can also be very gradual. A study analyzing the changes in the Virginia shoreline from 1852 to 1974 showed that both the islands and the mainland were moving slowly westward.³² Even slight erosion can have a large impact. In 1984, a footpath through the dunes at a Florida beach, worn down by people ignoring a crosswalk, opened enough of a path for the ocean to break through during a storm and swamp part of U.S. Highway

20. *Id.*

21. *Id.* at 88-89.

22. *Id.*

23. *Id.* at 220.

24. *Id.* at 18. Other writers say the shore was 50 miles seaward as of 15,000 years ago. PILKEY, NEAL & PILKEY, *supra* note 4, at 17-21.

25. PILKEY, NEAL & PILKEY, *supra* note 4, at 17-21.

26. *Id.*

27. Some scientists say the rise in New England has increased to three feet per century. KAUFMAN & PILKEY, *supra* note 4, at 19. Yet some parts of Maine have not changed in several thousand years. SHEPARD & WANLESS, *supra* note 9, at 543.

28. KAUFMAN & PILKEY, *supra* note 4, at 24-25.

29. *Id.* at 18.

30. Sea level rise is responsible for 10% to 20% of the coastal erosion. One report shows sea level rising at 1.2 mm per year. Louisiana land is subsiding at a rate of 10 to 11 mm per year. Houck, *Land Loss in Coastal Louisiana: Causes, Consequences and Remedies*, 58 TUL. L. REV. 3 (1983).

Two books have just been published about Florida's coastline: L. DOYLE, D. SHARMA, A. HINE, O. PILKEY, JR., W. NEAL, O. PILKEY, SR., D. MARTIN & D. BELKNAP, *LIVING WITH THE WEST FLORIDA SHORE* (1984); O. PILKEY, JR., D. SHARMA, H. WANLESS, L. DOYLE, O. PILKEY, SR., W. NEAL & B. GRUVER, *LIVING WITH THE EAST FLORIDA SHORE* (1984). The books discuss sea level rise, coastal erosion, and coastal construction in Florida.

31. *NPCA Supports the year of the Coast*, NAT. PARKS & CON. MAG., July 1980, at 28.

32. Gorman, *Building on Shifting Sands*, NATURAL HISTORY, July 1980, at 12.

A1A.³³

While almost every beach has its own erosion story, one of the worst is Cape May, New Jersey. Cape May was a sandy beach resort, popular for over 200 years. It is now a "rubble walled town."³⁴ The town was built in an area which lost three-fourths of a mile of land over a 100-year period.³⁵ This is just one of the many examples of destruction due to long-term erosion.³⁶

Barrier islands are naturally equipped to handle the pounding of wind, rain, and storms. Left alone the islands adapt, often through a process called "overwash."³⁷ In major storms, water will often crest over the dunes, moving sand to the landward side; the islands actually roll themselves over. Sand may migrate into inlets and lagoons, and sand held in the dunes may replace sand which is lost during major storms.³⁸ While the dunes protect the island from the elements, the island may shift with the onslaught of those same elements.

Movement is essential to the survival of barrier islands. But as the islands migrate, the mainland may also retreat. In some parts of North Carolina, the mainland is eroding faster than the barriers are migrating. On the other hand, in Myrtle Beach, South Carolina, former islands have become connected to the mainland.³⁹

Building on barrier islands redirects the natural movement of the islands and often makes shore erosion worse. The islands are finely tuned systems in perfect balance with the natural forces.⁴⁰ "To be healthy, beaches and sometimes whole islands have to move. Trying to 'stabilize' the beach [is] like trying to stabilize the

33. Orlando Sentinel, Dec. 3, 1984, at A8, col. 1. Part of the same highway in Palm Beach, Florida caved in during a September, 1984 storm. The section has washed out three times since January, 1984. Miami Herald, Feb. 16, 1985, at 4B, col. 2.

34. KAUFMAN & PILKEY, *supra* note 4, at 16. For further discussion, see *Id.* at 164-69.

35. McGee, *Encroachments of the Sea*, 9 THE FORUM 437 (Metcalf, ed. 1890), reprinted in M. SCHWARTZ, BARRIER ISLANDS 49, at 50 (1973).

36. To list a few: Cape Cod, Massachusetts, is losing from one to eight feet a year; a plaque at Marconi Beach is sitting near the water, about 170 feet inland from where a building stood in 1902. KAUFMAN & PILKEY, *supra* note 4, at 34-35. Archeologists have found thousands of villages from 1000 to 10,000 years old submerged in 6 to 60 feet of seawater. Alexander, *supra* note 8, at 48. On Hog Island, Virginia, a village of about 300 to 500 people was located about two miles from the beach in the early 1930's. Every year the beach moved a little closer and homes were moved further back. The original site of the village is now entirely underwater. Leonard, *supra* note 13, at 113-15.

37. Sparrow, *Barriers — The Inconstant Lands*, NAT. PARKS & CON. MAG., July 1980, at 8.

38. *Id.* See also PILKEY, NEAL & PILKEY, *supra* note 4, at 25-27.

39. Pilkey & Evans, *Rising Shores, Shifting Seas*, OCEAN, Jan. 1982, at 65.

40. Sparrow, *supra* note 37.

ocean itself."⁴¹ The slightest interference can disrupt this balance.

Since wild beaches tend to protect themselves, there is seldom any erosion problem until improper development occurs too close to the water.⁴² Miami, for example, was largely a healthy mangrove forest with beaches, dunes, and coastal barriers until it was discovered by developers in the early part of this century. The hotels, seawalls, and bulkheads dramatically accelerated erosion, and what beach is left was built from sand sucked off of the ocean floor.⁴³ This \$65 million replenished beach is especially vulnerable to the weather; as an official from the Jacksonville District Corps of Engineers was quoted as saying, "This project should last indefinitely, providing a major storm doesn't come by."⁴⁴

Erosion control structures, used in many parts of Florida, have not worked. At best, they protect the area only until a big storm hits.⁴⁵ Erosion control structures can actually increase erosion. One project in North Carolina, consisting of a fence and dune grass, caused erosion on both sides of the island. The new dunes reflected waves rather than moving with them, and the overwash process was blocked.⁴⁶ At Miami Harbor the jetties have been blocking the sand that normally flows to Key Biscayne, which now loses 100,000 cubic yards of sand each year.⁴⁷

Anything which is built on or near a beach reduces the beach's flexibility and increases erosion.⁴⁸ Natural replenishment of sand is the "most gentle" means of repairing a beach, and buildings prevent this replenishment.⁴⁹ Seawalls generally increase the slope of

41. KAUFMAN & PILKEY, *supra* note 4, at 9.

42. FLORIDA HOUSE OF REPRESENTATIVES SELECT COMMITTEE ON GROWTH MANAGEMENT, COASTAL PROTECTION IN FLORIDA, at 1 (March 1983) [hereinafter cited as SELECT COMMITTEE]. On what may be becoming the biggest disaster in this country, Oliver Houck describes how southern Louisiana is literally disappearing at a rate of 50 square miles a year, a rate which is increasing due to the building of levees, canals, pipelines, and oil and gas extraction. The rate of subsidence has more than tripled since 1970, and one coastal parish is expected to completely disappear in less than 50 years. Houck also provides a detailed description and comparison of the areas of subsidence and analyzes each cause. Houck, *supra* note 30.

If the same thing were to happen in southern Florida and the red mangroves disappeared, most of the land south of Naples would soon be seafloor. KAUFMAN & PILKEY, *supra* note 4, at 44-45.

43. KAUFMAN & PILKEY, *supra* note 4, at 173-183.

44. Pilkey & Evans, *supra* note 39.

45. *Id.* at 65.

46. *Id.* at 65-66.

47. KAUFMAN & PILKEY, *supra* note 4, at 196.

48. *Id.* at 191.

49. PILKEY, NEAL & PILKEY, *supra* note 4, at 40.

the shoreface, causing the waves to hit harder. As seawalls slowly fail, and they will, the only option is to build bigger ones.⁵⁰

Building on barrier islands is never safe. Conditions on barrier islands can change rapidly, and islands may disappear completely. Each additional unit increases the risk of storm damage to life and property. Furthermore, "[h]aphazard development adds to and increases the financial burden of the state and local governments to provide public services and emergency assistance to residents."⁵¹ According to the studies discussed above, many homes which are well-protected today will be underwater in several years. A large investment in ocean-front property may quickly become worthless, and the general public will pay for much of the loss. Nonetheless, barrier island development has historically been encouraged by government financing.

III. FEDERAL SUBSIDIES

A. Flood Insurance

In 1968, Congress passed the National Flood Insurance Program.⁵² The purpose of the law was to set up "a reasonable method of sharing the risk of flood losses" and to "encourage preventive and protective measures."⁵³ It was uneconomical for flood insurance to be provided by private industry alone, so public participation in conjunction with the private insurance industry was initiated.⁵⁴

Under the program, the Secretary of Housing and Urban Development estimates the flood risk involved in each area, subdivision, or other appropriate basis, and estimates the risk premium rates which are necessary, on an actuarial basis, to make insurance coverage available. The Secretary also estimates the rates which will encourage the purchase of flood insurance.⁵⁵ The government pays the difference between the premiums charged and the actual risk.⁵⁶

50. Pilkey & Evans, *supra* note 39, at 69.

51. SELECT COMMITTEE, *supra* note 42, at 9.

52. Pub. L. No. 90-448, §§ 1301-1377 (1968), codified at 42 U.S.C. §§ 4001-4128 (1977).

53. 42 U.S.C. § 4001(a)(3) (1977).

54. 42 U.S.C. § 4001(b) (1977).

55. 42 U.S.C. § 4014 (1977 and Supp. 1984) In 1978, these duties were transferred to the Director of the Federal Emergency Management Agency. Section 202 of Reorganization Plan No. 3 of 1978, 92 Stat. 9808 (1978).

56. *Beverly v. Macy*, 702 F.2d 931, 936-37 (11th Cir. 1983).

While it has been very successful from an insurance viewpoint,⁵⁷ the program has resulted in government assumption of most of the risk, and in "heavily subsidized" policies.⁵⁸ By 1977, the National Flood Insurance Program had become the second most important liability of the federal government, behind social security.⁵⁹

Any new construction in a special flood hazard area must be built so as to be higher than determined flood elevations.⁶⁰ Once a Flood Insurance Rate Map, detailing the flood risk zones, becomes effective, insurance is available for existing structures at federally subsidized rates for the life of the structure. The insurance rates to be paid for new construction were supposed to reflect the real flood risk.⁶¹ However, by April, 1981, many special flood hazard areas remained unknown, and the rates did not reflect the actual risks involved in building on barrier islands.⁶² At the same time, the program was paying out more than three times what it collected in premiums,⁶³ while no insurer had spent any promised risk capital.⁶⁴

The program originally set a maximum face amount of coverage outstanding at \$2.5 billion.⁶⁵ This was increased to \$4 billion in February 1973,⁶⁶ then to \$6 billion four months later.⁶⁷ By the end of 1973, the dollar limit was dropped completely; instead the program was scheduled to expire as of June 30, 1977.⁶⁸ This date has been extended many times,⁶⁹ the current expiration date is September 30, 1985.⁷⁰

Congress recognized the adverse impact development has on the survival of barrier islands and began to see the effect federal pro-

57. The vast majority of residents affected by Hurricane Frederic in 1979 were covered by insurance issued pursuant to the flood insurance program. Owens, *Hurricane Frederic Revisited*, FOR THE DEFENSE, Nov. 1983, at 23.

58. *Beverly*, 702 F.2d at 933.

59. Sharma, *supra* note 11, at 9.

60. 44 C.F.R. § 60.3(c) (1983).

61. *City of Trenton v. Federal Emergency Management*, 545 F. Supp. 13, 15 (E.D. Mich. 1981).

62. *See Conflict*, *supra* note 4.

63. *Id.* at 375 (citing Sharma, *Hazard Mitigation of Barrier Islands and Beaches*, 2 COASTAL ZONE 1450, 1454 (1980)).

64. *Beverly*, 702 F.2d at 937.

65. Pub. L. No. 90-448, § 1319 (1968).

66. Pub. L. No. 93-4, 87 Stat. 4 (1973).

67. Pub. L. No. 93-38, 87 Stat. 73 (1973).

68. Pub. L. No. 93-234, § 105, 87 Stat. 979 (1973).

69. Pub. L. Nos. 95-60, 95-80, 95-128, 95-406, 95-557, 96-153, 97-289, 98-35, and 98-109, § 5(a) and 98-181, Title IV, § 451(a).

70. 42 U.S.C. § 4026 (Supp. 1984).

grams have on such development.⁷¹ The flood insurance program promoted barrier island development by decreasing the potential economic loss to owners and developers from flooding.⁷² The program encourages people hit by floods or storms to rebuild in the previously washed out areas.⁷³ At the same time, the federal government discouraged barrier growth through several measures, including the National Environmental Policy Act,⁷⁴ the Coastal Zone Management Act,⁷⁵ acquisition of land, and wilderness designation.⁷⁶ Congress took the first step towards remedying these inconsistencies by instituting a flood insurance ban.

In August, 1981, Congress decided it was necessary to ban flood insurance coverage "for any new construction or substantial improvements of structures located on undeveloped coastal barriers which shall be designated by the Secretary of the Interior."⁷⁷ An undeveloped coastal barrier is one which has few manmade structures, is not otherwise protected from development, and on which the geomorphic and ecological processes are not significantly impeded.⁷⁸ The ban affected only the thirteen percent of coastal barriers which were unprotected from development by other means and which were not already developed.⁷⁹ Further, the ban affected only new insurance contracts; all contracts entered prior to October 1, 1983, remained valid.

The second step was taken in 1982. Secretary of the Interior James Watt testified before a Congressional Committee that over the next twenty years the present value of federal expenditures on undeveloped coastal barriers would range from \$5.5 billion to \$11 billion for initial construction, or a minimum of \$275 million per year.⁸⁰ Congress reacted by passing the Coastal Barriers Resources Act (the Act).⁸¹

The purpose of the Act is to restrict "future federal expenditures and financial assistance which have the effect of encouraging devel-

71. *Conflict*, *supra* note 4, at 386.

72. *Id.* at 373.

73. Alexander, *supra* note 8, at 51.

74. 42 U.S.C. §§ 4321-4364 (Supp. 1984).

75. 16 U.S.C. §§ 1451-1464 (Supp. 1984).

76. *Conflict*, *supra* note 4, at 381-85.

77. Pub. L. No. 97-35, § 341(d)(1) (1982), codified at 16 U.S.C. § 3501(b) (Supp. 1984).

78. 16 U.S.C. § 3502(1)(B) (Supp. 1984).

79. S. REP. No. 419, *supra* note 1; *see supra* note 6.

80. S. REP. No. 419, *supra* note 1, at 2-3.

81. Pub. L. No. 97-348, 96 Stat. 1653 (1982), codified at 16 U.S.C. §§ 3501-3510 (Supp. 1984).

opment of coastal barriers."⁸² The Act established the Coastal Barriers Resources System, consisting of the undeveloped coastal barriers on the Atlantic and Gulf coasts of the United States,⁸³ as identified in maps prepared by the Department of Interior as of September 30, 1982.⁸⁴

With a few exceptions,⁸⁵ no new federal expenditures or financial assistance may be made available for any purpose within the Coastal Barrier Resources System. This includes money for the construction of bridges, roads, buildings, or airports, and for erosion protection which encourages development.⁸⁶ Expenditures and assistance are considered to be new if no money had been appropriated prior to October 18, 1982, and no legally binding commitment to appropriate money had been made prior to October 15, 1982.⁸⁷

The law also amended the ban on flood insurance:

No new flood insurance coverage may be provided under this chapter on or after October 1, 1983, for any new construction or substantial improvements of structures located on any coastal barrier within the Coastal Barrier Resources System established by section 3503 of title 16. A federally insured financial institution may make loans secured by structures which are not eligible for flood insurance by reason of this section.⁸⁸

The October 1, 1983 date remained the same, but the responsibility for designation of lands as undeveloped coastal barriers was transferred from the Department of Interior to Congress.⁸⁹ Congress's designation of land as undeveloped was upheld in *Bostic v. United States*,⁹⁰ in which the plaintiffs were prevented from obtaining flood insurance because their land was on a barrier island designated as undeveloped.⁹¹

82. 16 U.S.C. § 3501(b) (Supp. 1984).

83. 16 U.S.C. § 3503(a)(1) (Supp. 1984).

84. 16 U.S.C. § 3503(b)(2) (Supp. 1984). The Secretary's designations were later rendered moot, when Congress drew and approved its own maps. *Bostic v. United States*, 581 F. Supp. 254 (E.D. N.C. 1984). Copies of these maps can be obtained from the Florida Department of Community Affairs.

85. Exceptions were made for activities such as energy resource facilities, maintenance of existing projects, and emergency actions. 16 U.S.C. § 3505 (Supp. 1984).

86. 16 U.S.C. § 3504(a) (Supp. 1984).

87. 16 U.S.C. § 3504(b) (Supp. 1984).

88. Pub. L. No. 97-348 § 11(a), 96 Stat. 1658 (1982), amending 42 U.S.C. § 4028.

89. *Id.*

90. 581 F. Supp. 254 (E.D. N.C. 1984).

91. *Id.* at 255.

One court called the Act a "zero growth approach" to land management;⁹² actually the Act merely states that private business, at least in some cases, should pay its own way. Over thirty islands in Florida are affected.⁹³ Because only those islands made of sandy materials are included, the Florida Keys are not affected.⁹⁴

B. Replenishment and Control

In 1970, the U.S. Corps of Engineers proposed spending \$2 billion on shoreline protection. Most of the areas which needed protection were located amid heavy development and near stabilization work previously done by the Corps.⁹⁵

Control and replenishment projects are expensive and generally ineffectual, and can have adverse and often unforeseen effects. After a violent 1978 storm at Cape Cod, Massachusetts, residents wanted to shore up the cliffs in front of their houses. The project would have cost \$50,000 per sixty-foot lot and would have trapped the sand which replenishes two nearby beaches.⁹⁶ Channels and levees built by the Corps throughout Louisiana are causing sediment and nutrients from the Mississippi River to flow straight out into the Gulf of Mexico, rather than replenishing the swamplands and marshes of Southern Louisiana.⁹⁷ Oceanside, California, spent over \$3 million in 1982 to build a new beach, which was washed away by storms in 1983. The city is now spending \$4.5 million to replace it. Atlantic City, New Jersey, had \$9 million worth of sand washed away in the spring of 1984.⁹⁸

The Corps has been fighting erosion at Presque Isle Peninsula, near Erie, Pennsylvania, for 160 years to protect a major tourist industry, spending more than \$21 million in the process.⁹⁹ The Corps has tried building groins, jetties, bulkheads, and sand traps, laying brush, planting trees, and anything else they thought might work. Nothing has. The peninsula currently loses 281,000 cubic yards of sand a year which costs more than \$1 million a year to

92. *Cape May Greene, Inc. v. Warren*, 698 F.2d 179, 190 n.14 (3d Cir. 1983).

93. FLORIDA HOUSE OF REPRESENTATIVES SELECT COMMITTEE ON GROWTH MANAGEMENT, BILL ANALYSIS FOR PCB 84-4, COASTAL INFRASTRUCTURE POLICY, at 2 (Jan. 10, 1984).

94. D. Christie, Florida Coastal Law & Policy: Cases and Materials, 3.163 (1984) (unpublished manuscript).

95. KAUFMAN & PILKEY, *supra* note 4, at 9.

96. *Id.* at 36.

97. Houck, *supra* note 30, at 22.

98. Begley, Carey, & Bailey, *The Vanishing Coasts*, NEWSWEEK, Sept. 24, 1984, at 74.

99. Miami Herald, Sept. 30, 1984, at 4B, Col. 1.

replace.¹⁰⁰

Despite considerable research, scientists have yet to find a protection project which works. However, the lack of knowledge and the large costs have not kept erosion "control" structures from being built, even by the federal government. The Corps plans to spend \$1.4 million near Fernandina Beach, Florida, to rebuild jet-ties and pump in new sand.¹⁰¹

IV. THE ST. GEORGE ISLAND EXAMPLE

SAINT GEORGE BY THE SEA

The Palm Beach of the West Coast, Franklin County, Fla.

The Summer Resort, for the Southerner.

The Winter Resort, for the Northerner.

Saint George by the Sea is the greatest Health Resort in the State.

If you are suffering from Rheumatism, Asthma, Kidney or Spinal troubles go to Saint George by the Sea and try the Salt Water cure.

Saint George is the Hunter's Paradise.

Game, Sea Fish, Shrimps, and the wonderful Apalachicola Oysters are inexhaustible. Sea Bathing, Boating, long walks and drives along the Ocean and among the Pines.

Daily Steamer connection between Apalachicola and Carrabelle.

Steamer Dock Seven Hundred Feet Long.

Take your Family, and spend a few weeks at Saint George by the Sea, where living is cheap. Cool in summer, warm in winter.

Large developments going on this year. Club Houses, Cottages, and Shell Roads under construction.

Saint George will soon be a City by the Sea.

Take advantage of our EXTRAORDINARY 30 day offer.

Five lots 50 by 50 each, on Ocean or Bay, Price \$150.00 for the five lots. Terms \$25.00 down, balance \$5.00 a month.

Take advantage of these ground floor prices. Each Ocean front lot in a short time will be worth double the price you are paying for one lot. Lumber at Saint George is cheap. You can build a small comfortable cottage at a very small cost, and when not occupied by yourself, we could rent it for you.

For further information, Booklets and Maps,
Address

100. *Id.* The latest proposal under consideration to protect the peninsula will cost between \$26 and \$31 million.

101. Florida-Times Union, Jan. 9, 1985, at B1, col. 1.

THE SAINT GEORGE COMPANY,

Room 7 Deen & Bryant Bldg., Lakeland, Florida.

After May 1st.

Saint George By The Sea,

Via Apalachicola, Franklin County, Florida.¹⁰²

St. George Island is located parallel to the coast of Franklin County, in the Panhandle of Florida, about ninety miles southwest of Tallahassee and 150 miles east of Pensacola. It is a "long thin sliver of white sand. . . strung for 33 miles along the northern part of the Gulf Coast of Florida, paralleling the coastline."¹⁰³ Franklin County has a total population of 7661.¹⁰⁴ The only real industry in the area has been fishing, especially oysters, blue crabs, and shrimp.¹⁰⁵

The St. George area is an oyster paradise. Franklin County produces about ninety percent of Florida's oysters.¹⁰⁶ Unfortunately, both the island and the oysters have a low tolerance for interference. Oysters will absorb and concentrate almost anything which passes by, including pollutants.¹⁰⁷

The land in the St. George area is on the move. A lighthouse was erected in 1839 on Dog Island, a barrier island just east of St. George. Every few years it leaned toward the water and had to be rebuilt. In 1873, the lighthouse and a cottage some distance behind it were washed away in a hurricane. The site is now well out into the Gulf.¹⁰⁸

In 1972, on Dog Island:

A new cottage was undercut before the owner could move in. The front wall cleaved, leaving the rooms with their still crated furnishings pathetically exposed, like a doll's house. Hurricane Agnes in one angry swipe obliterated Mr. [former Governor Leroy] Collins' steps and another thirty feet of dune, carried away the remains of the doll house and crumpled four neighboring cottages.¹⁰⁹

102. W. POPHAM, *ST. GEORGE'S ISLAND* 36 (circa 1918, republished 1980). Willie Lee Popham was later convicted of land sales fraud, because some of the property sold was underwater. B. WATTS, *THE WATERY WILDERNESS OF APALACH, FLORIDA* 119 (1975).

103. Toner, *Oysters and the Good Ol' Boys*, *PLANNING*, Aug. 1975, at 11.

104. *THE WORLD ALMANAC AND BOOK OF FACTS*, 1985, at 287.

105. B. WATTS, *supra* note 102, at 64.

106. *Id.*

107. Toner, *supra* note 103.

108. B. WATTS, *supra* note 102, at 107.

109. B. WATTS, *supra* note 102, at 110.

During an 1894 hurricane, parts of St. George Island were thirty feet underwater.¹¹⁰ The eastern end of St. George Island prograded more than a mile from 1855 to 1935, while part of the island has retreated 300 to 400 feet landward, and part has advanced toward the Gulf.¹¹¹ Eighteen feet below the present surface of St. George Island lie ancient oyster beds. St. James, a mainland area east of St. George Island, is thought to have once been a barrier island. Large sand bars, twenty miles north of the coast, may be immature barrier islands formed when salt water filled this area.¹¹²

St. George Island on the whole has not been moving very quickly; it shifts only a few centimeters a year.¹¹³ However, it is prone to hurricanes and other storms, and development will increase the already growing use of the dunes and trampling of the vegetation which helps hold the sand in place. It is thus possible that development may accelerate that movement.

The development of St. George Island has always been controversial. In the early 1950's, the St. George Island Development Corporation, a group including several Tallahassee millionaires, bought most of the island for \$200,000, or about six dollars an acre. The group lobbied the state legislature, and by 1965 succeeded in having a bridge from the mainland to the island constructed totally with state funds. The value of the island suddenly rose to \$2 million.¹¹⁴ The State then paid for and built a new road on the island, in exchange for 318 acres of land for a park. Both the bridge and the road increased the number of people coming to St. George Island.¹¹⁵

In 1971, majority control in the Corporation was sold for \$6 million to Leisure Properties Limited. At the same time, the state bought 1400 acres of the land from Leisure Properties for an additional park—for \$5.8 million, or \$4143 an acre!¹¹⁶ Seven years earlier, the same property would have cost less than \$10,000.

110. Craddock, *The Bruising Battle for Apalachicola's Bountiful Bay*, 7 FLORIDA TREND 80, 82 (Nov. 1984).

111. L. Doyle, D. Sharma, O. Pilkey, Jr., D. Belknap, A. Hine, W. Neil, O. Pilkey, Sr., & D. Martin, *A Citizen's Guide to Florida Beaches*, 105-06 (1982 Draft) (available at Florida State University Center of Beaches & Shores).

112. WATTS, *supra* note 102, at 110; see also Brenneman & Tanner, *Possible Abandoned Barrier Islands in Panhandle Florida*, 28 J. OF SEDIMENTARY PETROLOGY 342 (1958).

113. Telephone conversation with Dr. William Tanner, Florida State University Geology Department (Mar. 15, 1984).

114. Toner, *supra* note 103.

115. *Id.*

116. *Id.* at 12.

By 1974, the value of the Leisure Properties land had risen to about \$22 million. According to Bill Toner of *Planning* magazine:

They had never put a single private dollar behind their proposal. At every crucial turn, it was the state or the citizens of Franklin County who had provided the needed capital. In every way but ownership, it was a publicly sponsored development, from the bridge to the highway to the \$5.8 million.¹¹⁷

The state had spent about \$12 million and still had to build facilities for the park.¹¹⁸

The barrier island had over 400 houses by 1984 and is platted for thousands more.¹¹⁹ In 1983, St. George was being overrun with vehicles (including four-wheel drives), the sand dunes were being destroyed, there was no storm water runoff control, and there was no solid waste disposal facility. An open garbage dump drained directly into the bay, and sewage disposal was a major problem.¹²⁰ Victoria Tschinkel, Secretary of the Florida Department of Environmental Regulation, has been quoted as saying about development in the Apalachicola Bay area: "I'm not certain we can point to any productive estuary in the country that we've been able to protect as a resource in the face of heavy development pressure."¹²¹

The Leisure Properties project was conceptually approved by Franklin County in 1977, but detailed plan approval must still be obtained.¹²² In 1983, Tallahassee attorney Gene Brown purchased part of the project¹²³ and devised a new development plan in 1984.¹²⁴ This new plan may be one of the most environmentally conscious developments ever proposed in Florida.¹²⁵ Even so, two

117. *Id.*

118. *Id.*

119. Craddock, *supra* note 110, at 80.

120. Livingston, St. George Island; Biota, Ecology and Management Program for Controlled Development, *printed in* Apalachee Regional Planning Council, Developmental Benefit/Cost Impact Analysis for St. George Island, app. A (Oct. 1983).

121. Sarasota Herald-Tribune, Sept. 10, 1984, at C1, col. 1.

122. St. George Island Development Order, O.R. 143, P 635, Franklin County, Sept. 20, 1977.

123. Tallahassee Democrat, Oct. 22, 1983, at B1, col. 1.

124. Tallahassee Democrat, Mar. 23, 1984, at B1, col. 1 This project, which includes a marina, resort hotel, two restaurants, a convention center, tennis and swimming pool complexes, and 381 housing units, has been unanimously approved by the Apalachee Regional Planning Council Tallahassee Democrat, Mar. 31, 1985, at E4, col. 1.

125. . As part of the project's review, the proposal specifies how it will minimize impacts on wetlands, water quality, water quantity, vegetation and wildlife (especially endangered species), police, fire, archaeological and historical sites, transportation, floodplains, air qual-

questions remain unanswered.

First, are the protections provided for in the plan enough? Part of the project is seaward of Franklin County's new coastal construction control line.¹²⁶ Brown has stated that the necessary permits will be requested.¹²⁷ While individual trees and shrubs will be preserved to help prevent wind and water erosion,¹²⁸ the project will destroy all of the 73.7 acres of pine and oak tree forests.¹²⁹ Three endangered species, the Bald Eagle, Snowy Plover, and Grasshopper Sparrow "use or have the potential for occurrence in the project area."¹³⁰ All drinking water will have to be transported across the bay from Eastpoint.¹³¹ Finally, several state agencies have serious environmental concerns about the effect of the proposed marina on the area.¹³²

Second, what will happen in a major storm? Twelve hurricanes have hit Franklin County in the past 100 years. The eyes of three of them passed directly over St. George Island, although only one (Hurricane Agnes) has hit in the past forty years.¹³³ A 1977 report by the Bureau of Land and Water Management stated: "Of significant importance for St. George Island residents, is the advantage of heavy tree cover during a hurricane. Although houses may be subjected to the buffeting of tree branches, the overall effect of the tree cover greatly reduces direct wind damage and provides excellent protection from flying objects."¹³⁴ The residential units will be built sixteen feet above the mean sea level, will be able to with-

ity, wastewater management, drainage, solid waste, energy, education, recreation and open space, health care, and employment and economic characteristics. Landers-Atkins Planners, St. George's Plantation, Substantial Deviation, Development of Regional Impact, Application for Development Approval, Oct. 1984, at 11 [hereinafter cited as Substantial Deviation DRI].

126. Landers-Atkins Planners, St. George's Plantation, Area of Natural Vegetation, map submitted to DCA as part of Substantial Deviation Application, Feb. 20, 1985. Coastal construction control lines are defined in FLA. STAT. § 161.053 (1983).

127. Landers-Atkins Planners, St. George's Plantation, Substantial Deviation, Development of Region [sic] Impact, Application for Development Approval, Addendum, Jan. 28, 1985, at 1.

128. *Id.* at 20.

129. *Id.* at map F, table 12B-1.

130. *Id.* at 29.

131. *Id.* at 51.

132. Letter from Ernie Padgett, Executive Director of Apalachee Regional Planning Council (ARPC) to Vickie Tschinkel, Secretary of the DER, July 31, 1984.

133. Stottler Stagg and Associates, Northwest Florida, Development of Flood Damage Reduction, 32 (Aug. 1977), from the Franklin County Hurricane Evacuation Plan, *reprinted in* Substantial Deviation DRI, *supra* note 125 at app. I (Oct. 1984).

134. St. George's Plantation, Development of Regional Impact, Evaluation, Sept. 6, 1977, at 6.

stand 140 mph winds, and will meet several other strict building standards;¹³⁵ but if St. George Island moves, the buildings will go with it.

V. EXECUTIVE ORDER No. 81-105

Most of Florida's public and private officials share a philosophy that "[n]ew growth should carry a fair share of its cost."¹³⁶ Florida has made attempts to stop state subsidy of coastal barrier growth. In 1980, the State began reviewing its coastal programs in an effort to reduce conflicting efforts. Five state agencies and the Governor's Office entered into a Memorandum of Understanding (MOU) concerning the hazards of coastal growth.¹³⁷ Recognizing that coastal resources are crucial to the economic and social stability of Florida, that these resources are extremely vulnerable to hurricanes and other natural hazards, and that implementation of many of the state's policies and goals cause frequent conflicts, the agencies and the Governor agreed to "cooperate in the development of management alternatives designed to prevent or reduce the coastal hazards posed by hurricanes."¹³⁸ All relevant programs would be reviewed to suggest and implement improvements. The agencies and the Governor also decided that state and federal funds would be expended "only in ways consistent with state policies on coastal zone management and hazard mitigation."¹³⁹

In January, 1981, the Governor, the Department of Environmental Regulation (DER), and the Department of Transportation (DOT) signed an MOU concerning highway and bridge construction on or to barrier islands.¹⁴⁰ The parties agreed that DER would be notified of all DOT activities affecting coastal areas, and that public funds for road or bridge projects "to provide new access to undeveloped barrier islands will not be approved by the Department of Transportation unless an overwhelming public interest can

135. Letter from Barbara Hoagland, ARPC, to Gene Brown, Feb. 11, 1985, at 7.

136. FLORIDA HOUSE OF REPRESENTATIVES SELECT COMMITTEE ON GROWTH MANAGEMENT, SUMMARY REPORT, THE GENERAL ASSEMBLY AT THE SADDLEBROOK CONFERENCE, at 1 (Oct. 1983).

137. Memorandum of Understanding among Department of Community Affairs, Department of Environmental Regulation, Department of Health and Rehabilitative Services, Department of Natural Resources, Department of Transportation, and the Office of the Governor (July 29, 1980).

138. *Id.* at 2.

139. *Id.* at 3.

140. Memorandum of Understanding Between the Office of the Governor, The Department of Transportation, and The Department of Environmental Regulation (Jan. 6, 1981).

be demonstrated."¹⁴¹

The greatest effort to date has been the Governor's Executive Order Number 81-105, signed on September 4, 1981 (the Order). The Order made it a state policy to protect coastal resources, especially barrier islands. It recognized that coastal barriers protect Florida from natural hazards, are vulnerable to hurricanes, are continuously altered by waves, tides, and wind, and contribute billions of dollars annually to the state's economy. It also recognized that the state has historically subsidized and encouraged development on coastal barriers, resulting in a loss of resources and increased vulnerability.¹⁴²

The Governor ordered certain state agencies (the Secretaries of the Department of Commerce, the Department of Veterans and Community Affairs, the Department of Health and Rehabilitative Services, the Department of Environmental Regulation, and the Department of Transportation, and the Director of the Governor's Office of Planning and Budgeting) to give coastal barriers "high consideration in existing state land acquisition programs."¹⁴³ The Governor also ordered that all state funds and federal grants for coastal barrier projects be directed only to those coastal areas which can accommodate growth.¹⁴⁴ No funds were to be spent in hazardous coastal barrier areas. These areas were later defined to mean undeveloped coastal islands and all other high hazard coastal barrier areas, including mainland, spit, and partially developed high hazard areas.¹⁴⁵

A. *Legal Effect*

The Governor has the power to issue executive orders pursuant to the Florida Constitution, in order to "take care that the laws be faithfully executed."¹⁴⁶ An order can be used to implement statutes passed by the legislature and is "exclusively within the orbit of authority of the Chief Executive when exercised within the bounds of the statute."¹⁴⁷ The constitution does not grant unbridled discretion to the Governor. He or she has the power of law enforcement

141. *Id.* at 2.

142. Executive Order No. 81-105 at 1 (1981).

143. *Id.* at 2.

144. *Id.*

145. Interagency Management Committee, Public Meeting, Meeting Summary, at 5 (Jan. 20, 1984) [hereinafter cited as IMC Summary].

146. FLA. CONST. art. IV, § 1(a).

147. *Kirk v. Baker*, 224 So. 2d 311, 317 (Fla. 1969).

and the power to marshal the resources of the state as deemed best, but not to make laws.¹⁴⁸

In July 1981, the Attorney General issued an opinion as to the authority of executive orders.¹⁴⁹ It stated that the Governor does not have any specific power or control over state agencies or the actual execution of the law. The Governor's power must derive either from a specifically enumerated constitutional duty or from a specific statute enacted pursuant to the constitution. In both cases, the power will generally derive from article IV section 1(a) of the Florida Constitution.¹⁵⁰ The Governor and Cabinet have direct supervision over only the four agencies specified in the constitution: the State Board of Education,¹⁵¹ the Game and Fresh Water Fish Commission,¹⁵² the State Board of Administration,¹⁵³ and the Parole and Probation Commission.¹⁵⁴

Authority for implementation of most laws has been given to the agency head.¹⁵⁵ The Governor is the head only of the Executive Office of the Governor.¹⁵⁶ The Governor may not give binding directions to state agencies or make rules for such agencies unless authorized.¹⁵⁷ Executive orders therefore, have no binding effect, but they may be politically effective. Basically, an executive order is an order from a boss to his or her employees and is treated as such.¹⁵⁸ It may be followed, objected to, or ignored, depending partly on the attitude of the boss and the personal pull of the

148. *Thompson v. State*, 342 So. 2d 52 (Fla. 1976). The Governor can issue executive orders to suspend collection of fines and forfeitures, grant reprieves and pardons, restore civil rights, commute punishments, and remit fines (FLA. CONST. art. IV, § 8(a)), and may suspend state and county officers, and non-active officers of the militia (FLA. CONST. art. IV, § 7(a)). Neither section applies to Executive Order No. 81-105.

149. Op. Fla. Att'y Gen. 081-48 (1981).

150. Which reads as follows:

The supreme executive power shall be vested in a governor. He shall be commander-in-chief of all military forces of the state not in active service of the United States. He shall take care that the laws be faithfully executed, commission all officers of the state and counties, and transact all necessary business with the officers of government. He may require information in writing from all executive or administrative state, county or municipal officers upon any subject relating to the duties of their respective offices.

151. FLA. CONST. art. IX, § 2.

152. FLA. CONST. art. IV, § 9.

153. FLA. CONST. art. XII, § 9.

154. FLA. CONST. art. IV, § 8(c).

155. FLA. STAT. § 20.05(1)(a)-(b) (1983).

156. FLA. STAT. §§ 14.201-.202 (1983).

157. Op. Fla. Att'y Gen. 081-48 (1981).

158. Conversation with Walt Kolb, Governor's Office of Planning and Budgeting (Mar. 20, 1984) [hereinafter cited as Walt Kolb].

employee.

B. Implementation

Implementation of Executive Order No. 81-105 has been slow. It initially began with Hutchinson Island, north of West Palm Beach,¹⁵⁹ but problems have been encountered. The Interagency Management Committee (IMC), composed of the heads of ten primary agencies involved in coastal management, has been holding public meetings and discussing the application of the Order to the agencies affected. The IMC was created by the Governor and Cabinet in August, 1980, to provide a coordinated multi-jurisdictional forum for discussion and resolution of coastal management issues.¹⁶⁰ Problems have revolved around the legal effect of the Order, the delineation of actual areas affected, and the date of effectiveness.¹⁶¹

Recommendations on implementation were issued in January, 1984, about two and one-half years after issuance of the Order.¹⁶² The recommendations were approved with modifications by the IMC on April 2, 1984.¹⁶³ Coastal barrier areas were divided into three sub-categories of development: developed coastal barriers, which were at least seventy percent developed according to maps finished in 1983; undeveloped coastal barriers, which were sparsely settled and had no publicly subsidized infrastructure, or were subject to the federal Coastal Barrier Resources Act;¹⁶⁴ and partially developed barriers, which were defined as neither developed nor undeveloped.¹⁶⁵ St. George Island, for example, is characterized as partially developed.¹⁶⁶

The Department of Community Affairs (DCA) has been designated as the lead agency for preparing an implementation memorandum which includes the geographic extent of the Order (fully delineated on maps), the Order's application (the type of development affected), implementation rules, and post-disaster considera-

159. See the Hutchinson Island Planning & Management Plan (Oct. 6, 1983).

160. SELECT COMMITTEE, *supra* note 42.

161. IMC Summary, *supra* note 145.

162. Interagency Management Committee Steering Committee Recommendations on the Implementation of Executive Order 81-105 (Jan. 20, 1984) [hereinafter cited as IMC Recommendations].

163. Status of Implementation of Executive Order 81-105, Briefing Document for the Governor (July 23, 1984) [hereinafter cited as Briefing Document].

164. 16 U.S.C. §§ 3501-3510 (Supp. 1984).

165. Briefing Document, *supra* note 163.

166. *Id.*

tions.¹⁶⁷ Proposed maps and a draft rule are available at DCA.¹⁶⁸ However, opposition to adoption of the proposals has arisen.

In September, 1984, Martin County and St. Lucie County officials objected to the plans for Hutchinson and Jupiter Islands, apparently concerned that the area would be precluded from receiving state funds.¹⁶⁹ At an October, 1984, IMC public workshop in Sandestin, Florida, Okaloosa and Walton County developers, public officials, and residents spoke against the plan for their area. Both county commissions have passed resolutions in opposition to the proposal.¹⁷⁰ As of this printing, the implementation rules have not been adopted.

Despite the problems, the Order has had some effect. Shortly following issuance of the Order, DOT issued an "Action Plan" for meeting the requirements of the Order and the earlier MOU.¹⁷¹ The Plan was to act as a guide to agencies "in the priority consideration and evaluation of projects affecting and located on coastal barriers."¹⁷² It assures that all programs contain adequate consideration of proposed coastal barrier projects.¹⁷³

In August, 1981, DOT proposed spending \$1 million to build a two-lane bridge to Connie Mack Island in Lee County. The island was home for seven families and had a short one-lane bridge, which was quite adequate for the current level of development. At the time, however, Estuary Properties was devising plans to build ninety-one homes on the island.¹⁷⁴ While it is unclear whether the ensuing publicity and public outcry over the developer's plans or

167. IMC Recommendations, *supra* note 162.

168. DCA Memorandum from James F. Murley to Executive Directors, Regional Planning Councils, Local Officials (July 30, 1984).

169. Palm Beach Post, Sept. 7, 1984, at B1, col. 1.

170. Pensacola News-Journal, Oct. 21, 1984, at B3, col. 1. In 1983, the Florida Legislature passed a bill which would have created an agency to build a bridge/causeway across Choctawhatchee Bay in these two counties. St. Petersburg Times, July 7, 1983, at 16A, col. 1. The bill was vetoed by the Governor, possibly encouraging such a strong reaction. FLORIDA LEGISLATURE, JOINT LEGISLATIVE MANAGEMENT COMMITTEE, HISTORY OF LEGISLATION, 1983 Sess., 1983 Special Sess. A, B, C, 1982 Special Sess. H, History of House Bills 333 (1983).

Some counties, on the other hand, are limiting development on their own initiative. In September, 1984, for example, the Escambia County Commission vetoed a 101-acre hotel-condominium project proposed for Santa Rosa Island just west of Okaloosa and Walton Counties. Sarasota Herald-Tribune, Sept. 13, 1984, at B1, col. 1.

171. Report to the Governor and Cabinet From The Interagency Management Committee, at 10 (Dec. 8, 1981) [hereinafter cited as IMC Report].

172. *Id.*

173. *Id.* at app. B, attachment 3, p. 3.

174. Washington Post, Sept. 2, 1981, at A10, col. 2.

the issuance of the Order had the greater effect, the new bridge was not built.¹⁷⁵

The Environmental Regulatory Commission adopted a rule, effective October 15, 1981,¹⁷⁶ which gave low priority to wastewater grant allocations on undeveloped barrier islands.¹⁷⁷ The rule states in relevant part that:

The Department, in its preliminary decision to approve or disapprove an application, shall consider: . . . [F]unding priorities established by the Department subsequent to comments from the Interagency Management Committee and the State Coastal Advisory Committee.¹⁷⁸

A report from the Department of Commerce stated that while that Department's involvement in barrier development was extremely rare, "[i]n those instances in which coastal barrier sites are being actively considered by industrial prospects assisted by the Department of Commerce, the Department will continue to consult with IMC member agencies to resolve any conflict. . . ."¹⁷⁹

The Director of the Governor's Office of Planning and Budgeting (OPB) requested that all Policy Coordinators scrutinize state agency budget requests and amendments and review various government funded projects to determine whether they have any impact on coastal barrier areas and to assure compliance with Executive Order 81-105.¹⁸⁰ While OPB may call attention to conflicts, it does not have the authority to disapprove any budget request.¹⁸¹

C. Post-Disaster Relief

The Order also affects post-disaster relief. The state will subsidize infrastructure following a disaster only if funding of the facilities would have been allowed under the Order prior to the disaster.¹⁸² In other words, if a bridge to an island designated as undeveloped is destroyed by a hurricane, the state will not pay for

175. Telephone conversation with Pete Meyers, 1st District Office, Florida Department of Transportation (Mar. 23, 1984).

176. FLA. ADMIN. CODE ch. 17-24 (1982).

177. IMC Report, *supra* note 171.

178. FLA. ADMIN. CODE Rule 17-24.07(2) (1982).

179. IMC Report, *supra* note 171, at app. B, attachment 5.

180. Office of the Governor, Memorandum from Tom Herndon to Policy Coordinators (Nov. 23, 1981).

181. Walt Kolb, *supra* note 180.

182. IMC Recommendations, *supra* note 162, at 6.

rebuilding it. If the bridge is to a developed island, the state will pay for rebuilding. No reconstruction of public facilities on uninhabited islands will be funded.¹⁸³ Possibly of more importance, the state's twenty-five percent matching funds for disaster relief will not be available if local government or private interests develop in an area in which the use of state funds for infrastructure is prohibited.¹⁸⁴ If a privately built wastewater treatment center is damaged or destroyed by a storm, the developer, residents, or local government must pay for repairs or replacement. Since such a center is essential for residents to continue living in that area, this section of the Order may face serious challenges in the future. However, it should be noted that no other state helps local governments with reconstruction costs.¹⁸⁵

D. Land Acquisition

The Executive Order encourages state purchases of barrier islands for the purposes of environmental protection and public recreation. While these purchases often seem expensive (the state recently spent \$818,000 for 303 acres at Mashles' Sands in Wakulla County),¹⁸⁶ studies have estimated that the federal subsidies discussed in Section III, *infra*, cost about five times as much as an outright purchase.¹⁸⁷

Shaeffer & Roland, Inc. conducted a study for the Council on Environmental Quality on four coastal barrier areas, including the Pensacola Beach area. The study found that "actual direct federal dollars expended or obligated amounted to an average of \$25,570 per developed acre in three of the study areas, or more than \$96.7 million for 3,784 acres."¹⁸⁸ This study took into account only *some* of the direct federal subsidies and none of the indirect subsidies.¹⁸⁹ The study also did not account for state or local government subsidies. The cost of purchasing property for the National Seashore in the same three areas averaged up to \$4950 per acre (between 1970 and 1974).¹⁹⁰ The purchase of land for a park on St. George Island

183. *Id.*

184. *Id.* at 7.

185. Interagency Management Committee Public Workshop on Executive Order 81-105, Meeting Summary, at 7 (Oct. 10, 1983).

186. Tallahassee Democrat, Feb. 2, 1984, at B1, col. 1.

187. Miller, *supra* note 7, at 41.

188. *Id.* at 8 ("When restated as 1980 replacement costs, direct federal subsidies in the three areas averaged \$53,250 per developed acre.").

189. *Id.*

190. *Id.* at 41.

in 1971 cost about \$4143 per acre.¹⁹¹ The recent purchase of Mashles' Sands, beachfront property on the mainland, cost \$2700 an acre.¹⁹² Even if inflation has pushed island prices to over \$10,000 an acre and if the cost of the subsidies has stayed the same, the cost of acquisition would be less than half that of subsidizing development. While no similar study has been done of Florida's state subsidies, acquisition appears to be a better option for those islands which are being developed.

On some islands, stopping government subsidies will provide sufficient protection from overdevelopment, and purchase will be unnecessary. Islands without a connecting bridge, for example, are unlikely to be heavily developed. Ending the use of taxpayers' money for construction or reconstruction of bridges and facilities will usually protect these islands. Executive Order No. 81-105 seems to have accomplished this, but its legal basis is uncertain and it is not sufficient in itself.

VIII. CONCLUSION

The Governor's Executive Order is intended to reduce state subsidies which encourage construction on coastal barriers. For reasons stated in this article, it is not adequate. The federal government and the State of Florida have recognized that beaches and their adjacent barrier dunes are some of our most important natural resources. However, coastal construction continues to pose a major threat to barrier islands and their beach-dune systems.

The 1985 Florida Senate is in the process of reviewing proposals which will not only help protect our coastal areas, but will save Florida's taxpayers far more than they cost. Implementation of the state's coastal protection policies requires further legislative action to eliminate the weaknesses that have allowed detrimental and costly construction on beaches and barrier islands. Any construction on the coast is potentially dangerous and expensive. Where it is allowed, coastal construction should meet strict safety standards; owners and residents should be aware of the risks they are taking, *before* they buy or build; and the costs incurred should not be borne by other taxpayers.

191. Toner, *supra* note 103, at 12.

192. Tallahassee Democrat, Feb. 2, 1984, at B1, col. 1.