

In The
Supreme Court of the United States

STOP THE BEACH RENOURISHMENT, INC.,

Petitioner,

v.

FLORIDA DEPARTMENT OF ENVIRONMENTAL
PROTECTION, THE BOARD OF TRUSTEES OF
THE INTERNAL IMPROVEMENT TRUST FUND,
WALTON COUNTY, and CITY OF DESTIN,

Respondents.

**On Writ Of Certiorari To
The Florida Supreme Court**

**BRIEF OF COASTAL STATES ORGANIZATION AS
AMICUS CURIAE IN SUPPORT OF RESPONDENTS**

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INTEREST OF *AMICUS CURIAE*

Amicus curiae Coastal States Organization (CSO)¹ was established in 1970 to represent the Governors of the nation's 35 coastal states, commonwealths and territories regarding legislative and policy issues relating to the sound management of coastal, Great Lakes and ocean resources.² CSO supports the shared vision of the coastal states, commonwealths and territories for the protection, conservation, responsible use and sustainable economic development of the nation's coastal, ocean and Great Lakes resources.

Amicus CSO has a vested interest in maintaining the vibrancy and longevity of the nation's coasts. One of the greatest threats facing the nation's coastal

¹ The parties have filed letters consenting to the filing of any *amicus curiae* brief with the Clerk of the Court. Pursuant to Rule 37.6, no counsel for a party authored this brief in whole or in part, and no counsel or party made a monetary contribution intended to fund the preparation or submission of this brief. No person other than *amicus curiae*, its members, or its counsel made a monetary contribution to its preparation or submission.

² The 35 coastal states, commonwealths and territories consist of: Alabama, Alaska, American Samoa, California, Commonwealth of the Northern Mariana Islands, Connecticut, Delaware, Florida, Georgia, Guam, Hawaii, Illinois, Indiana, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, New Hampshire, New Jersey, New York, North Carolina, Ohio, Oregon, Pennsylvania, Puerto Rico, Rhode Island, South Carolina, Texas, U.S. Virgin Islands, Virginia, Washington, and Wisconsin.

inhabitants and resources is climate change. CSO has issued two reports on the impacts of climate change on the coastal states, *The Role of Coastal Zone Management Programs in Adaptation to Climate Change* 2007, and a follow-up report, *The Role of Coastal Zone Management Programs in Adaptation to Climate Change, Second Annual Report* 2008.³ Both reports highlight the significant burden on resource managers to balance the environmental and economic well-being of coastal communities in the face of rising seas, erosion, increased intensity and frequency of storms and other climate change impacts. In the past, this Court has looked to *Amicus* CSO as a reliable source of information regarding the coastal states and their sovereign rights.⁴

Amicus CSO respectfully submits this *amicus* brief in support of respondents in this case. In this brief, CSO focuses on the need for states to determine the most appropriate management tool to address climate change threats, specifically the interrelated threats of sea level rise, coastal erosion and increased storm intensity and frequency. This brief offers scientific, engineering and policy background on the ramifications of these emerging threats to America's coasts and explains the responsibility of states to protect proactively against such threats, and their

³ Available at www.coastalstates.org (last visited Sept. 26, 2009).

⁴ *Phillips Petroleum Co. v. Miss.*, 484 U.S. 469, 476 (1988).

well-established authority to do so under long-standing federal and state law precedent.



SUMMARY OF ARGUMENT

The nation's coasts, both on the oceans and the Great Lakes, support important economic, environmental, and societal activities for the United States, its economy and its residents. Since the establishment of the nation, the coasts have been an integral part of the fabric of society, connecting the nation internally as well as with other countries, and providing transportation, food, recreation, wildlife habitat, and jobs. The coasts serve as home to more than half of the population of the United States. Residents on the coasts and inland depend on the strength of the environment and economy of the coasts to support that of the nation overall.

These extremely valuable resources, the coasts, are facing threats of epic proportion. Climate change, specifically the interrelated impacts of sea level rise, erosion, and increased storm intensity and frequency, is placing the nation's coasts and national prosperity in grave danger. Increasingly, the coasts are being ravaged by hurricanes, swept away by erosion, and disappearing as water creeps upon the beaches, dunes, roadways, and buildings. These changes in climate affect not only the environment, but also the society that has been founded on the coasts by generations of Americans. The costs of climate change

could be financially catastrophic to the nation so dependent on its coasts.

Well-established federal and state law provides that states, as sovereigns, determine a state's ownership in land and water. As climate continues to change, allowing states to best decide the tools that serve their needs for managing their coastal lands and waters will become more and more essential for the continued prosperity of the states and the nation. Florida, like all other states in the Union, has been entrusted with the management of these national resources, the coasts. Acting within its right as a sovereign, Florida correctly ensured the protection of its interest, and the interests of the nation as a whole, through its Beach and Shore Preservation Act. As such, the Court should affirm the Florida Supreme Court's ruling.



ARGUMENT

I. The Nation's Coastal Areas are Valuable Ecologic and Economic Resources

The United States is “a nation intrinsically connected to and immensely reliant on the ocean.”⁵ The nation depends on the oceans and coasts for food, recreation, jobs, wildlife habitat, transport of goods,

⁵ U.S. COMMISSION ON OCEAN POLICY, AN OCEAN BLUEPRINT FOR THE 21ST CENTURY, FINAL REPORT 1 (2004).

and climate control.⁶ Furthermore, the coasts serve as home to the majority of Americans: in 2003, it was estimated that 153 million people, fully 53% of the population of the United States, lived in coastal counties.⁷ This number grows every year; it is projected that another 26 million people will live along the coasts by 2015.⁸ This is no coincidence; since America's beginnings, the oceans and coasts have been an integral part of national identity and livelihood.⁹

The environmental and economic well-being of the nation relies on the health of coastal ecosystems. A dynamic plane, the coastal ecosystem is a complex of plant, animal and micro-organism communities, minerals, and other resources in the environment, working together as a functional unit.¹⁰ The vibrancy

⁶ PEW OCEANS COMMISSION, AMERICA'S LIVING OCEANS: CHARTING A COURSE FOR SEA CHANGE, A REPORT TO THE NATION ii (2003).

⁷ KRISTEN M. CROSSETT ET AL., NAT'L OCEANIC AND ATMOSPHERIC ADMINISTRATION, POPULATION TRENDS ALONG THE COASTAL UNITED STATES: 1980-2008 1 (2004).

⁸ DANA BEACH, PEW OCEANS COMMISSION, COASTAL SPRAWL: THE EFFECTS OF URBAN DESIGN ON AQUATIC ECOSYSTEMS IN THE UNITED STATES 1-2 (2002).

⁹ BENJAMIN LABAREE ET AL., AMERICA AND THE SEA: A MARITIME HISTORY 1-15 (1998).

¹⁰ ANDREAS FISCHLIN ET AL., ECOSYSTEMS, THEIR PROPERTIES, GOODS, AND SERVICES, CLIMATE CHANGE 2007: IMPACTS, ADAPTATION AND VULNERABILITY, CONTRIBUTION OF WORKING GROUP II TO THE FOURTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE 214 (2007).

of this unit affects a broad spectrum of human health and well-being, from people living close by to those living in inland watersheds hundreds of miles away.¹¹ Aquatic ecosystems are especially important biodiversity “hotspots,”¹² contributing water quality, agriculture and fish, as well as carbon sequestration, and carbon emissions reductions.¹³ Additionally, healthy coastal and marine ecosystems have a profound impact on weather patterns and the overall productivity of the oceans.¹⁴

In addition to being crucial to the survival of the nation’s environment, America’s oceans and coasts are essential to the economic success of the nation. Coastal counties produce more than 40% of the nation’s economic output.¹⁵ In fact, if coastal counties in the United States constituted a separate country, they would have the world’s second largest economy.¹⁶

¹¹ *Id.*

¹² *Id.* at 233 (citing WALTER REID ET AL., ECOSYSTEMS AND HUMAN WELL-BEING: SYNTHESIS 155 (2005)).

¹³ FISCHLIN, *supra* note 10, at 233 (citing C. MAX FINLAYSON ET AL., ECOSYSTEMS AND HUMAN WELL-BEING: WETLANDS AND WATER SYNTHESIS 80 (2005)).

¹⁴ FISCHLIN, *supra* note 10, at 234 (citing Robert Costanza et al., *The Value of the World’s Ecosystem Services and Natural Capital*, 387 NATURE 253-60 (May 1997)).

¹⁵ JUDITH KILDOW ET AL., NATIONAL OCEAN ECONOMICS PROGRAM, STATE OF THE U.S. OCEAN AND COASTAL ECONOMIES 15 (2009).

¹⁶ LINWOOD PENDLETON, THE OCEAN FOUNDATION, THE U.S. ECONOMY NEEDS THE COASTAL ZONE MANAGEMENT ACT 1 (2009),
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America's coastal economy contributes five times more to the gross domestic product (GDP) than the financial sector,¹⁷ and estuary ports are responsible for the passage of 75% of all United States trade.¹⁸ Based on estimates in 2000, ocean-related activities contributed more than \$117 billion to the national economy and supported over two million jobs.¹⁹ In fact, coastal activities contributed over \$1 trillion, or one-tenth, of the nation's GDP in the year 2000.²⁰

The coasts also serve as a popular destination, both for American tourists and travelers from abroad.²¹ Travel and tourism represent one of the largest industries in the United States, and beaches are an integral part of this industry.²² In 1995, 40% of Americans listed beaches as their preferred vacation destination.²³ In that same year, tourism revenue in the coastal states accounted for 85% of overall tourism revenues in the nation.²⁴ Tourism and

available at <http://www.coastalvalues.org/czmaecon.pdf> (last visited Oct. 1, 2009).

¹⁷ PENDLETON, *supra* note 16, at 3.

¹⁸ *Id.*

¹⁹ U.S. COMMISSION ON OCEAN POLICY, *supra* note 5, at 2.

²⁰ *Id.*

²¹ NATURAL RESEARCH COUNCIL, BEACH NOURISHMENT AND PROTECTION 14-15 (1995).

²² *Id.*

²³ James R. Houston, *Beach Nourishment*, 63(1) SHORE AND BEACH 21-24 (1995).

²⁴ *Id.*

recreation spending on United States coasts contributes \$70 billion annually to national revenue.²⁵

A. National Economic Prosperity is Dependent on State Coastal Economies

Coastal states provide valuable jobs and generate substantial income for the nation through transportation, commerce, fishing, residential development, tourism, and other activities. In Maryland, the Coastal Bays region attracts approximately five to ten million vacationers per year and generates roughly \$700 million in employee income.²⁶ In 2006, Maryland tourism generated roughly \$11.72 billion in visitor spending, directly supported 116,000 jobs, and created \$920 million in state and local tax revenues.²⁷ Likewise, in South Carolina, visitors and local residents spend approximately \$3.5 billion annually visiting the beaches, supporting 81,000 jobs in the state.²⁸ Coastal tourism overall in South Carolina

²⁵ PENDLETON, *supra* note 16, at 3.

²⁶ THE GREELEY-POLHEMUS GROUP, INC., AN ASSESSMENT OF THE ECONOMIC VALUE OF THE COASTAL BAYS' NATURAL RESOURCES TO THE ECONOMY OF WORCESTER COUNTY, MARYLAND 12 (2001), available at <http://dnrweb.dnr.state.md.us/download/bays/cbassessment.pdf> (last visited Oct. 1, 2009).

²⁷ CENTER FOR INTEGRATIVE ENVIRONMENTAL RESEARCH, CLIMATE CHANGE IMPACTS ON MARYLAND AND THE COST OF INACTION 15 (2008), available at <http://www.cier.umd.edu/climateadaptation/Chapter3.pdf> (last visited Sept. 26, 2009).

²⁸ South Carolina Department of Natural Resources, *Quick Facts About South Carolina's Natural Resource Assets*, available (Continued on following page)

generates \$9.56 billion a year.²⁹ In 2002, the Port of Charleston was responsible for 55,000 jobs with a total economic impact of \$3.3 billion.³⁰ Similarly, in Texas, ports generate over \$9 billion in federal tax revenue.³¹ Visitors to Texas spend more than \$7.5 billion annually in coastal tourism, primarily on trips to beaches.³² In addition to tourists enjoying beach front areas, residents also take advantage of the shore; day use of Texas beaches accounts for \$2.6 billion in revenues to the Texas economy.³³

In New Jersey, tourism in coastal communities is a \$16 billion industry employing hundreds of thousands of people.³⁴ The Port of New York-New

at <http://www.dnr.sc.gov/green/green.html> (last visited Sept. 21, 2009).

²⁹ John H. Tibbetts, *The Coast's Great Leap*, 19(2) SOUTH CAROLINA SEA GRANT COASTAL HERITAGE 3-11 (2004).

³⁰ *Id.*

³¹ Texas A & M University at Galveston, Center for Texas Beaches and Shores, *The Dynamic Texas Coast* (2006), available at http://www.tamug.edu/CTBS/about_us/history-mission/doc/Texas%20Coast%20Powerpoint.pdf (last visited Sept. 28, 2009).

³² *Id.*

³³ Jesse Solis, Jr., Presentation at the 27th Annual Submerged Lands Management Conference, Traverse City, Michigan, *Water Dependent Uses and Coastal Development*, 13 (2008), available at http://www.submergedlands2008.com/presentations/Solis_session7ISLMC08.pdf (last visited Sept. 21, 2009).

³⁴ New Jersey Department of Environmental Protection, Coastal Management Program, *What Is the New Jersey Coast?* 1 (2002), available at <http://www.state.nj.us/dep/cmp/fact2.pdf> (last visited Sept. 29, 2009).

Jersey is the largest container port on the East Coast of the United States, providing 193,000 jobs and handling 18 million tons of cargo per year.³⁵ Similarly, Georgia generates \$2 billion annually in tourism.³⁶

In Massachusetts, coastal tourism, shipping, and commercial fishing contribute an estimated \$70.7 billion to the state economy annually.³⁷ Tourism alone contributes approximately \$8.7 billion to the Commonwealth.³⁸ In 2004, Massachusetts' coastal economy was approximately \$117 billion, or 37%, of that state's Gross State Product.³⁹ Additionally, the coastline of Massachusetts supports 152,000 jobs each year.⁴⁰ Furthermore, coastal economy establishments, such

³⁵ *Id.*

³⁶ SOUTHERN ENVIRONMENTAL LAW CENTER, AT THE TIPPING POINT: A COMPREHENSIVE ASSESSMENT AND CONSERVATION ACTION PLAN FOR THE GEORGIA COAST 14 (2007).

³⁷ MASSACHUSETTS INSTITUTE OF TECHNOLOGY, SEA GRANT COLLEGE PROGRAM, STRATEGIC PLAN 2008-2012 (2008), *available at* http://seagrant.mit.edu/about_us/strategicplan/part1.html (last visited Sept. 21, 2009).

³⁸ UNIVERSITY OF MASSACHUSETTS PRESIDENT'S OFFICE, DONAHUE INSTITUTE, MASSACHUSETTS OFFICE OF COASTAL ZONE MANAGEMENT, AN ASSESSMENT OF THE COASTAL AND MARINE ECONOMIES OF MASSACHUSETTS 8 (2006), *available at* <http://www.mass.gov/czm/oceanmanagement/projects/economy/report1.pdf> (last visited Oct. 1, 2009).

³⁹ *Id.* at 22.

⁴⁰ Press Release, Massachusetts Ocean Coalition, *Massachusetts Leads the Nation by Passing First Ever Comprehensive Ocean Planning Bill* (May 22, 2008), *available at* <http://www.massoceanaction.org/news3.html> (last visited Sept. 21, 2009).

as marinas, restaurants, and stores, totaling 71,160 businesses, directly employ over a million citizens, representing 37% of state employment.⁴¹ The marine economy, which is comprised of commercial seafood, transportation, tourism and recreation, science and technology, and marine-related construction and infrastructure, directly employs 152,440 persons in Massachusetts, 78% of which are employed in coastal tourism and recreation.⁴²

The coasts on the Great Lakes provide a significant contribution to the nation's economy as well. In 2007, it was estimated that 804,381 jobs in the state of Michigan were Lake-influenced, generating approximately \$54 billion in compensation.⁴³ Approximately 15% of all Michigan jobs and 23% of Michigan payroll are associated with the Great Lakes.⁴⁴

Strong coastal economies are one of the reasons so many Americans call the coasts home. The coasts of Maryland serve as home to 68% of its population.⁴⁵ In New Jersey, fully 70% of the population lives in the

⁴¹ UNIVERSITY OF MASSACHUSETTS PRESIDENT'S OFFICE, *supra* note 38, at 22 (citing 2004 statistics).

⁴² *Id.* at 25.

⁴³ MICHIGAN SEA GRANT COLLEGE PROGRAM, MICHIGAN'S GREAT LAKES JOBS 7 (2009), *available at* <http://www.miseagrant.umich.edu/downloads/coastal/economy/09-101-Jobs-Report.pdf> (last visited Oct. 1, 2009).

⁴⁴ *Id.*

⁴⁵ MARYLAND'S COASTAL PROGRAM, COASTAL FACTS (2002), *available at* http://www.dnr.state.md.us/bay/czm/coastal_facts.html (last visited Sept. 21, 2009).

state's coastal counties.⁴⁶ a remarkable 67% of Massachusetts' population lives in coastal counties,⁴⁷ and nearly five million residents, or three-quarters of the population, reside within ten miles of the ocean.⁴⁸ Thriving coasts attract more residents, account for higher property taxes within states, and generate income through various activities. These thriving economies drive a disproportionate share of the national economy, and invigorate the growth of the overall national economy. According to a 2009 report from the Bureau of Economic Analysis of the U.S. Department of Commerce, New York, Los Angeles, Chicago, Boston, San Francisco, and Miami were all in the top 15 GDP contributors to the nation.⁴⁹ All six cities are located directly on the coasts.⁵⁰

⁴⁶ SURFRIDER FOUNDATION, STATE OF THE BEACH REPORT: NEW JERSEY BEACH DESCRIPTION, *available at* <http://www.surfrider.org/stateofthebeach/05-sr/state.asp?zone=MA&state=nj&cat=bd> (last visited Sept. 29, 2009).

⁴⁷ SURFRIDER FOUNDATION, STATE OF THE BEACH REPORT: MASSACHUSETTS BEACH ACCESS, *available at* <http://www.surfrider.org/stateofthebeach/05-sr/state.asp?zone=NE&state=ma&cat=ba> (last visited Sept. 21, 2009).

⁴⁸ MASSACHUSETTS MARINE TRADES ASSOCIATION, MASSACHUSETTS BOATING ECONOMIC IMPACT STUDY (2001) *available at* http://www.boatma.com/boating_in_ma.html (last visited Sept. 21, 2009).

⁴⁹ Press Release, Bureau of Economic Analysis, *Economic Slowdown Widespread in 2008*, 4-8 (Sept. 24, 2009), *available at* http://www.bea.gov/newsreleases/regional/gdp_metro/2009/pdf/gdp_metro0909.pdf (last visited Oct. 1, 2009).

⁵⁰ *Id.*

These statistics show the significant contribution of states' coastal economies to the national economy. Without coastal states' beachfront communities and coastal ecosystems, there would be fewer jobs, less travel, and significantly fewer dollars entering the national marketplace. States must be allowed to protect, sustain and, where necessary, restore these important contributors to the nation's health and welfare.

B. Florida's Coastal Economy Exemplifies the Importance of State Coastal Economies

Surrounded by both the Atlantic and Gulf coasts, Florida is in the unique position of having abundant trade, travel, and commerce on two separate shores. A significant portion of Florida's substantial contribution to the United States economy is income derived from its coasts, especially its beaches. No point within the state is more than 75 miles from saltwater.⁵¹ The state's shoreline extends 8,426 miles, with 825 miles of sandy beaches.⁵² In 2006, Florida's coastal economy

⁵¹ Press Release, University of Miami Rosenstiel School of Marine and Atmospheric Science, *Scientists Unveil Florida Ocean and Coastal Economics Report* (June 13, 2008), available at <http://www.rsmas.miami.edu/pressreleases/20080613-focc.html> (last visited Sept. 30, 2009).

⁵² JULIE HAUSERMAN, FLORIDA'S OCEAN AND COASTAL FUTURE: A BLUEPRINT FOR ECONOMIC AND ENVIRONMENTAL LEADERSHIP 2 (2006), available at <http://www.nrdc.org/water/oceans/florida/flfuture.pdf> (last visited Oct. 1, 2009).

generated almost \$562 billion, or 86% of the state gross domestic product.⁵³ On average, Florida's shoreline contributes 75% of the state's economic productivity annually.⁵⁴ Of Florida's 20 major population centers, 15 are located in coastal counties.⁵⁵ In 2006, Florida's coastal economy contributed \$226 billion in wages and 5.8 million jobs to the state.⁵⁶ Between 2003-2006, Florida's coastal economy grew 17.5%.⁵⁷

In addition to economic growth, Florida has experienced dramatic coastal development in recent years.⁵⁸ Between the years of 1940-1996, the state population increased 700%, from 1.8 million to 14.3 million.⁵⁹ By 2010, Florida is expected to pass New York and become the nation's third most populated state, with a projected population of 26 million by 2030.⁶⁰

⁵³ JUDITH KILDOW ET AL., NATIONAL OCEAN ECONOMICS PROGRAM, FLORIDA'S OCEAN AND COASTAL ECONOMIES REPORT 9 (2008).

⁵⁴ *Id.* at 10.

⁵⁵ *Id.* at 11-16.

⁵⁶ *Id.* at 10.

⁵⁷ *Id.*

⁵⁸ PEW OCEANS COMMISSION, *supra* note 6, at 6.

⁵⁹ *Id.*

⁶⁰ HAUSERMAN, *supra* note 52, at 3.

Tourism is vital to Florida's economy. Each year, Florida welcomes nearly 80 million visitors.⁶¹ In 2005, nearly 86 million tourists visited Florida, making it one of the most popular travel destinations in the world.⁶² Florida also ranks first in the nation for number of seasonal homes.⁶³ In fact, there has been significant growth in seasonal residential development in the last two decades; between 1990-2006 Florida added 237,977 seasonal homes, an increase of 57%, compared to an overall national seasonal home growth of 37%.⁶⁴

Coastal properties are an important financial resource for the state of Florida, in significant part due to the tax revenue generated for the state from these properties.⁶⁵ In 2006, Florida's 367,000 coastal properties were valued at \$181 billion, yielding \$2 billion in property tax revenues.⁶⁶ Although the number of coastal properties only grew by about 10% between 2002-2006, the value of coastal parcels more than doubled.⁶⁷ This increase demonstrates the value

⁶¹ FLORIDA SEA GRANT COLLEGE PROGRAM, FLORIDA'S COASTAL WEALTH, *available at* http://www.flseagrant.org/about_us/strategic/setting.htm#null (last visited Sept. 21, 2009).

⁶² *Id.*

⁶³ KILDOW, *supra* note 53, at 128.

⁶⁴ *Id.* at 128-29.

⁶⁵ *Id.* at 82-88.

⁶⁶ *Id.*

⁶⁷ *Id.* at 87.

that living on the coasts, particularly the Florida coasts, has for Floridians and Americans generally.

II. Climate Change Adversely Affects the Nation's Coasts and Threatens the Ecologic and Economic Resources of the United States

Climate change is no longer the subject of serious scientific debate. The Court recognized the significant impacts associated with climate change in its landmark 2007 decision in *Massachusetts v. EPA*.⁶⁸ As early as 1978, Congress also acknowledged climate change by enacting the National Climate Program Act of 1978⁶⁹ to “assist the Nation and the world to understand and respond to natural and man-made climate processes and their implications.”⁷⁰ In 1987, Congress enacted the Global Climate Protection Act,⁷¹ directing the Secretary of State to coordinate United States global climate change diplomacy and the Environmental Protection Agency (EPA) to develop and propose to Congress a coordinated national policy on the issue.⁷² The Global Change Research Act of 1990 established a Committee on Earth and

⁶⁸ *Mass. v. EPA*, 549 U.S. 497 (2007).

⁶⁹ Pub. L. No. 95-367, 92 Stat. 601 (1978).

⁷⁰ *Id.*

⁷¹ Title XI of Pub. L. 100-204, 101 Stat. 1407, note following 15 U.S.C. §§ 2901.

⁷² *Id.*

Environmental Sciences to coordinate a ten-year research program, directed the President to establish a U.S. Global Change Research Program, and provided for scientific assessments to analyze trends in global change every four years.⁷³ Climate change is a bi-partisan issue; Presidents George W. Bush and Barack Obama have both acknowledged it as a serious threat to the ecology and economy of the nation.⁷⁴

The impacts of climate change on the coasts are both profound and complex. In *Massachusetts, supra*, the Court acknowledged that scientific experts have reached a strong consensus that global warming will result in sea level rise and possibly increased ferocity of hurricanes.⁷⁵ In fact, sea level rise, erosion, and increased storm intensity and frequency are all ramifications of climate change on the coasts. These three phenomena are precisely what occurred over the last two decades in Florida, prompting respondent Florida Department of Environmental Protection (DEP) to address these impacts through beach

⁷³ Pub. L. No. 101-606, 104 Stat. 3096 (1990).

⁷⁴ See Remarks of President George W. Bush on Global Climate Change, 2001 WL 637709, at 1 (June 11, 2001) “Climate change, with its potential to impact every corner of the world, is an issue that must be addressed by the world”; see also Remarks of then President-elect Barack Obama, Acceptance Speech for the Presidency of the United States (Nov. 5, 2008) “we know the challenges that tomorrow will bring are the greatest of our lifetime . . . [including] a planet in peril.”

⁷⁵ *Mass. v. EPA*, *supra* note 68.

renourishment. To understand how these three factors greatly contributed to the situation the DEP faced in 1995 and 2004, it is necessary to understand each individual element and how each element impacts the nation and the state of Florida.

A. What Sea Level Rise Signifies for the Coasts

The changing climate is causing sea levels to rise in two ways: warmer ocean waters take up greater volume and melting glaciers and ice fields increase the aggregate quantity of water in the oceans.⁷⁶ It is estimated that over the past century there has been a 0.1-0.2 meter (about 4-8 inch) rise in sea level, approximately 1.0-2.0 millimeters per year.⁷⁷ While these numbers may seem small, on a comprehensive scale these increases are significant: higher sea levels interact with tides and storms to create more destructive impacts on the shoreline which causes increased erosion.⁷⁸ In addition to global sea level rise, the amount of relative sea level rise experienced along different parts of the United States coasts

⁷⁶ JOHN T. HOUGHTON ET AL., EDS, CLIMATE CHANGE 2001: THE SCIENTIFIC BASIS: CONTRIBUTION OF WORKING GROUP I TO THE THIRD ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE 641-43 (2001).

⁷⁷ *Id.*

⁷⁸ DAN CAYAN ET AL., PROJECTING FUTURE SEA LEVEL RISE: A REPORT FOR CALIFORNIA CLIMATE CHANGE CENTER 18 (March 2006).

depends on the changes in elevation of the land that occur as a result of subsidence or rising.⁷⁹ Over the past 50 years, significant portions of the Atlantic coast and Gulf of Mexico coast have experienced significantly higher rates of relative sea level rise than the global average largely due to land subsidence.⁸⁰ Furthermore, according to the 4th report of the International Panel on Climate Change (IPCC), projected sea level rise by the end of the century is expected to be 0.18-0.59 meters (7-23 inches), above the 1980-1999 average sea level.⁸¹ More recent, respected scientific studies produced since the 4th IPCC report estimate that sea level rise by the end of the century is expected to be 0.8-2.0 meters (31-79 inches), three and a half times the IPCC rate.⁸²

B. What Erosion Signifies for the Coasts

Driven by rising sea levels, flooding, and powerful ocean waves, erosion wears away beaches and

⁷⁹ U.S. GLOBAL CLIMATE CHANGE RESEARCH PROGRAM, GLOBAL CLIMATE CHANGE IMPACTS IN THE UNITED STATES 37 (2009).

⁸⁰ *Id.*

⁸¹ NATHANIEL L. BINDOFF ET AL., OBSERVATIONS: OCEANIC CLIMATE CHANGE AND SEA LEVEL, CLIMATE CHANGE 2007: THE PHYSICAL SCIENCE BASIS, CONTRIBUTION OF WORKING GROUP I TO THE FOURTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE 409-13 (2007).

⁸² W.T. Pfeffer et al., *Kinematic Constraints on Glacier Contributions to 21st-Century Sea-Level Rise*, 321 SCIENCE 1342 (2008).

bluffs along the shorelines, undermining waterfront homes, businesses, and public facilities, eventually rendering them uninhabitable or unusable.⁸³ While erosion and accretion do occur as part of a natural process of the dynamic sea, rising sea levels, flooding, and increased storms cause dramatically increased erosion without increased accretion.⁸⁴ Every year, erosion of United States shorelines destroys about 1,500 homes and causes approximately \$530 million in damage.⁸⁵ In fact, the Federal Emergency Management Agency (FEMA) estimates that by 2060, coastal erosion will threaten nearly 87,000 homes and other buildings in coastal areas in the nation.⁸⁶ Of those 87,000 buildings, 53,000 are on the Atlantic Coast and 13,000 are on the Gulf of Mexico.⁸⁷

Erosion is particularly severe on the Atlantic Coast, where beaches retreat two to three feet per

⁸³ THE H. JOHN HEINZ III CENTER FOR SCIENCE, ECONOMICS AND THE ENVIRONMENT, EVALUATION OF EROSION HAZARDS, REPORT BRIEF 2 (2000).

⁸⁴ *Id.* Accretion is the gradual accumulation of land by natural forces, esp. as alluvium is added to land situated on the bank of a river or on the seashore. BLACK'S LAW DICTIONARY 21 (7th ed. 1999).

⁸⁵ THE H. JOHN HEINZ III CENTER FOR SCIENCE, *supra* note 2.

⁸⁶ GARY B. GRIGGS, CALIFORNIA SEA GRANT COLLEGE PROGRAM, COASTAL CLIFF EROSION IN SAN DIEGO COUNTY (2002), available at <http://repositories.cdlib.org/cgi/viewcontent.cgi?article=1091&context=csgc> (last visited Sept. 22, 2009).

⁸⁷ THE H. JOHN HEINZ III CENTER FOR SCIENCE, ECONOMICS AND THE ENVIRONMENT, EVALUATION OF EROSION HAZARDS SUMMARY 5 (2000).

year on average, and the Gulf Coast, where the overall annual erosion rate is six feet per year.⁸⁸ In fact, 59%, or 485 miles, of Florida's beaches are eroding.⁸⁹ Erosion is costly to both the nation and the states not only because of damage, but because of costs incurred to counteract damage. Of the 485 miles of Florida's beaches that are eroding, 192 miles are renourished beaches managed by federal entities.⁹⁰ The United States spends about \$15 billion annually in federal dollars to protect beaches.⁹¹ The federal government expended \$1.1 billion in Florida alone from 1960 through 2007 on beach renourishment activities.⁹² While beach renourishment does not remove the physical forces that cause erosion, it is a relied upon tool used by federal and state governments to mitigate their effects, protecting the valuable resources of the coasts.⁹³

C. What Increased Storm Intensity and Frequency Signify For the Coasts

There is increasing evidence that sea level rise and warming seas increase hurricane intensity and

⁸⁸ *Id.*

⁸⁹ KILDOW, *supra* note 53, at 60.

⁹⁰ *Id.* at 64-65.

⁹¹ NATURAL RESEARCH COUNCIL, *supra* note 21, at 15.

⁹² KILDOW, *supra* note 53, at 64-68.

⁹³ NATURAL RESEARCH COUNCIL, *supra* note 21, at 17.

frequency.⁹⁴ Since hurricanes need a sea-surface temperature of at least 79 degrees Fahrenheit to form, an increase of sea-surface temperatures above this threshold will result in more frequent and more intense hurricanes.⁹⁵ Reputable scientific studies demonstrate that hurricanes will become increasingly stronger as the climate warms.⁹⁶ Hurricanes threaten the environment and economy of the nation and are the costliest natural events in the United States.⁹⁷ Since 1980, there have been 70 natural disasters in the United States, 58 of which occurred since 1990.⁹⁸ Of those 70, hurricanes and tropical storms were the most frequent and most destructive.⁹⁹ These natural disasters caused over \$1 billion in property damages each, with total estimated property damages

⁹⁴ Richard A. Anthes et al., *Hurricanes and Global Warming – Potential Linkages and Consequences*, 87(5) BULLETIN OF THE AMERICAN METEOROLOGICAL SOCIETY 623-28 (2006).

⁹⁵ ELIZABETH STANTON & FRANK ACKERMAN, FLORIDA AND CLIMATE CHANGE: THE COSTS OF INACTION 17 (2007) (citing Kerry Emanuel, *Increasing Destructiveness of Tropical Cyclones over The Past 30 Years*, 436 NATURE 686-88 (2005)).

⁹⁶ Kerry Emanuel, *supra* note 95, at 686-88.

⁹⁷ Kerry Emanuel, *supra* note 95, at 686-88; *see also* U.S. GLOBAL CLIMATE CHANGE RESEARCH PROGRAM, *supra* note 79, at 37.

⁹⁸ CENTER FOR INTEGRATIVE ENVIRONMENTAL RESEARCH, THE U.S. ECONOMIC IMPACTS OF CLIMATE CHANGE AND THE COSTS OF INACTION 20 (2007), *available at* <http://www.cier.umd.edu/documents/US%20Economic%20Impacts%20of%20Climate%20Change%20and%20the%20Costs%20of%20Inaction.pdf> (last visited Sept. 30, 2009).

⁹⁹ *Id.*

in excess of \$540 billion.¹⁰⁰ Hurricane property damage is greatest on the coasts where hurricanes make landfall, causing storm surge, severe beach erosion, inland flooding, and wind-related casualties for both societal and natural resources.¹⁰¹ Increased storm intensity and associated storm surge are likely to be some of the most costly climate change consequences for the Southeast United States in the future.¹⁰²

D. The Climate Change Impacts of Sea Level Rise, Erosion, and Increased Storm Intensity and Frequency Threaten the Nation

The IPCC reported that climate change will lead to changes in geophysical, biological and socio-economic systems.¹⁰³ The effects of climate change vary considerably depending on the region examined and the time scale used.¹⁰⁴ Reliable scientific reports predict a sea level rise range from a conservative 20 inches (0.5 meters) to upwards of 55 inches (1.4

¹⁰⁰ *Id.*

¹⁰¹ U.S. GLOBAL CLIMATE CHANGE RESEARCH PROGRAM, *supra* note 79, at 115.

¹⁰² *Id.* at 114.

¹⁰³ STEPHEN H. SCHNEIDER ET AL., ASSESSING KEY VULNERABILITIES AND THE RISK FROM CLIMATE CHANGE, CLIMATE CHANGE 2007: IMPACTS, ADAPTATION AND VULNERABILITY, CONTRIBUTION OF WORKING GROUP II TO THE FOURTH ASSESSMENT AND THE RISK FROM CLIMATE CHANGE 781 (2007).

¹⁰⁴ U.S. GLOBAL CHANGE RESEARCH PROGRAM, GLOBAL CLIMATE CHANGE IMPACTS IN THE UNITED STATES 13 (2009).

meters).¹⁰⁵ If sea level rises only 20 inches (0.5 meters) by 2100, there will be an estimated \$23-170 billion in property damages to coastal properties throughout the United States.¹⁰⁶ If sea level rises by 35-55 inches (0.9-1.4 meters), by the year 2100 a state like Florida, whose highest point is only 345 feet above sea level, will see an annual property and revenue loss of up to \$345 billion.¹⁰⁷ Furthermore, sea level rise will cause significant and dramatic changes to coastal landforms, such as barrier islands, beaches, dunes and marshes, as well as ecosystems, estuaries, waterways, and human populations and development in the coastal zone.¹⁰⁸ In the Southeast, buildings and infrastructure that were not designed to withstand the intensity of projected storm surges will see catastrophic damage.¹⁰⁹ Major hurricanes in the Southeast will pose a severe risk to people, public infrastructure, and personal property.¹¹⁰ Ecologic harms include increased inland and coastal flooding,

¹⁰⁵ CENTER FOR INTEGRATIVE ENVIRONMENTAL RESEARCH, *supra* note 98, at 8; CALIFORNIA CLIMATE CHANGE CENTER, THE IMPACTS OF SEA LEVEL RISE ON THE CALIFORNIA COAST 3 (2009).

¹⁰⁶ CENTER FOR INTEGRATIVE ENVIRONMENTAL RESEARCH, *supra* note 98, at 8.

¹⁰⁷ STANTON & ACKERMAN, *supra* note 95, at iii.

¹⁰⁸ U.S. GLOBAL CHANGE RESEARCH PROGRAM, *supra* note 104, at 115.

¹⁰⁹ U.S. GLOBAL CLIMATE CHANGE RESEARCH PROGRAM, *supra* note 79, at 114.

¹¹⁰ *Id.* at 115.

increased erosion rates, wind damage to coastal forests, and wetland loss.¹¹¹

In California vast areas of wetlands and other natural ecosystems are vulnerable to sea level rise.¹¹² An estimated 550 square miles, or 350,000 acres, of wetlands exist along the California coast, valued at approximately \$5,000-\$200,000 per acre.¹¹³ A sea level rise of 1.4 meters (55 inches), will flood approximately 150 square miles of land immediately adjacent to current wetlands.¹¹⁴

In Florida, a 27 inch (0.7 meter) sea level rise will inundate 70% of Miami-Dade County, which houses one-tenth of Florida's current population.¹¹⁵ This sea level rise will place real estate currently valued at over \$130 billion, half of Florida's existing beaches, and 99% of its mangroves all under water.¹¹⁶ Structures related to national security will be destroyed, including 2 nuclear reactors and 3 prisons.¹¹⁷ Structures affecting the health and well-being of the citizens of Florida and the nation, including 115 solid waste disposal sites and 341 hazardous-material

¹¹¹ *Id.*

¹¹² CALIFORNIA CLIMATE CHANGE CENTER, *supra* note 105, at 3.

¹¹³ *Id.* at 3-29.

¹¹⁴ *Id.* at 3.

¹¹⁵ STANTON & ACKERMAN, *supra* note 95, at v.

¹¹⁶ *Id.* at vi.

¹¹⁷ *Id.* at vi.

cleanup sites, will be destroyed.¹¹⁸ Additionally, buildings essential for everyday living in Florida will be ruined, including 37 nursing homes, 68 hospitals, 247 gas stations, 277 shopping centers, 334 public schools, and 1,025 churches, synagogues, and mosques.¹¹⁹

In Louisiana, coastal erosion threatens 25,000 miles of interstate natural gas pipelines and 3,450 miles of pipe that carry crude oil and crude oil products.¹²⁰ In 2000, Louisiana's crude oil production accounted for approximately 27% of the total United States production, roughly 600 million barrels, and its natural gas production was also 27% of that produced in the United States.¹²¹ Erosion will cause a serious interruption in Louisiana's ability to provide oil and gas to the nation, and its ramifications will significantly impact transportation, home heating, and fueling of factories throughout the country.¹²²

Sea level rise, erosion, and increased storm intensity and frequency will negatively affect both the ecology and the economy of the coasts across the nation. From New York on the East Coast to Chicago on the Great Lakes to San Francisco on the West

¹¹⁸ *Id.* at vi.

¹¹⁹ STANTON & ACKERMAN, *supra* note 95, at vi.

¹²⁰ JAMES A. RICHARDSON ET AL., DEPARTMENT OF NATURAL RESOURCES STATE OF LOUISIANA, THE ECONOMIC IMPACT OF COASTAL EROSION IN LOUISIANA ON STATE, REGIONAL, AND NATIONAL ECONOMICS 22-26 (2004).

¹²¹ *Id.*

¹²² *Id.* at 34.

Coast, 14 of the 20 largest urban centers in the United States are located within 100 kilometers of the coast and are less than 10 meters, or 32 feet, above sea level.¹²³ In California, a 1.4 meter (55 inch), sea level rise will put 480,000 people at risk of a 100-year flood event.¹²⁴ During a 100-year flood event, critical infrastructure in California will be at risk, including nearly 140 schools, 34 police and fire stations, 55 health care facilities, more than 330 EPA-regulated hazardous waste facilities or sites, an estimated 3,500 miles of roads and highways, 280 miles of railways, 30 coastal power plants with a combined capacity of more than 10,000 megawatts, 28 wastewater treatment plants, and the San Francisco and Oakland airports.¹²⁵

On the East Coast, hurricane property damage in the Northeast has cost an estimated \$5 billion per year.¹²⁶ In Georgia, most of Interstate-95, a major north-south transportation corridor of the East Coast, lies within five miles of the coast.¹²⁷ Much of the

¹²³ U.S. GLOBAL CHANGE RESEARCH PROGRAM, *supra* note 104, at 100-03.

¹²⁴ CALIFORNIA CLIMATE CHANGE CENTER, *supra* note 105, at 40.

¹²⁵ *Id.* at 2-3.

¹²⁶ CENTER FOR INTEGRATIVE ENVIRONMENTAL RESEARCH, *supra* note 27, at 15.

¹²⁷ NATIONAL CONFERENCE OF STATE LEGISLATURES, ASSESSING THE COSTS OF CLIMATE CHANGE IN, GEORGIA 1 (2008), *available at* <http://www.ncsl.org/Portals/1/documents/enviro/ClimateChangeGA.pdf> (last visited Sept. 22, 2009).

Georgia economy depends on this interstate to transport goods, with nearly 7,000 registered interstate trucking carriers operating within the state and 12%, or \$46 billion, of the state GDP, reliant on the highway.¹²⁸ In 2007, Georgia spent \$1.7 billion on construction and maintenance of highways and local roads; if increased storm activity caused a 1% rise in the price of maintenance, there would be an additional \$17 million cost for the transportation sector.¹²⁹

Costs from climate change impacts are already felt across the nation. In Georgia, property damages have increased 300% from an estimated \$125 million in annual losses between 1900-1940, to \$500 million each year from 1960-1980.¹³⁰ Hurricane Iniki, a category 4 hurricane that hit Hawaii in 1992, caused \$2 billion in property damages and required \$295 million in FEMA disaster relief.¹³¹

In 2005, Hurricane Katrina caused upwards of \$200 billion in property damage, or 1% of the national GDP, along the Gulf coast.¹³² A total of 90,000 square miles, covering four states and 23 coastal counties were declared a federal disaster area following

¹²⁸ *Id.*

¹²⁹ *Id.*

¹³⁰ *Id.* at 3.

¹³¹ CENTER FOR INTEGRATIVE ENVIRONMENTAL RESEARCH, *supra* note 98, at 3.

¹³² CENTER FOR INTEGRATIVE ENVIRONMENTAL RESEARCH, *supra* note 98, at 6.

Hurricane Katrina.¹³³ More than 1,700 lives were lost, 350,000 homes were destroyed and 146,000 homes were seriously damaged.¹³⁴ In addition to urban infrastructure that was damaged by the storm, 2,100 oil platforms and over 15,000 miles of pipeline were damaged.¹³⁵

As climate change impacts increase across the nation, it is essential to react to these threats using the best tools possible.

E. States Employ a Variety of Tools to Adapt to Climate Change and Florida Chose the Strategy that Best Addressed Its Situation

States are already coping with managing shoreline change. Many states have examined multiple approaches to adapting to changing shoreline to best mitigate impacts to the environment and property. In 2006, the North Carolina Estuarine Biological and Physical Processes Work Group released a report recommending the use of land use planning, such as buffers and setbacks, and vegetation control, such as wetlands and upland plantings, as erosion mitigation

¹³³ *Id.*

¹³⁴ *Id.*

¹³⁵ *Id.*

options for much of its estuarine shoreline.¹³⁶ These recommendations are currently being used to update state estuarine shoreline stabilization rules.¹³⁷ In Massachusetts, a Coastal Hazards Commission drafted recommendations related to coastal hazards information, policy, planning and regulations, shoreline protection, and infrastructure.¹³⁸ Recommendations included implementing a program of regional sand management through policies, regulations, and activities that promote nourishment as the preferred alternative for coastal hazard protection.¹³⁹ Florida has recognized beach renourishment as a tool to protect not only its developed shore, but also the natural shore, rebuilding habitat lost from erosion.¹⁴⁰ Given the challenges facing coastal communities, the use of a variety of tools is necessary to plan for and

¹³⁶ NORTH CAROLINA DIVISION OF COASTAL MANAGEMENT, THE NORTH CAROLINA ESTUARINE BIOLOGICAL AND PHYSICAL PROCESSES WORK GROUP, RECOMMENDATION FOR APPROPRIATE SHORELINE STABILIZATION METHODS FOR THE DIFFERENT NORTH CAROLINA ESTUARINE SHORELINE TYPES 1-4 (2006), *available at* <http://www.nccoastalmanagement.net/Hazards/EWG%20Final%20Report%20082106.pdf> (last visited Oct. 1, 2009).

¹³⁷ *Id.*

¹³⁸ MASSACHUSETTS COASTAL HAZARDS COMMISSION, PREPARING FOR THE STORM: RECOMMENDATIONS FOR MANAGEMENT OF RISK FROM COASTAL HAZARDS IN MASSACHUSETTS 1-40 (2007).

¹³⁹ *Id.* at 20.

¹⁴⁰ C.L. Montague, *Recovering the Sand Deficit on Florida's Atlantic Coast: A Reevaluation of Beach Nourishment as an Essential Tool for Ecological Conservation*, 24 JOURNAL OF COASTAL RESEARCH 899-916 (2008).

maintain safer shorelines. States are uniquely equipped with the knowledge of their individual shorelines to best decide the tools that work in their respective states to maintain the environmental and economic resource of the coasts.

III. States are Entrusted with Management of the Nation's Coasts and Florida Properly Acted to Protect Its Citizens and the Nation as a Whole

Florida's 825 miles of sandy beaches fronting on the Atlantic Ocean and Gulf of Mexico have been repeatedly damaged by hurricanes and tropical storms.¹⁴¹ The City of Destin and Walton County Beach, located in the western Panhandle of Florida near Pensacola, include within their borders one of the finest white sand beaches in the state.¹⁴² The beach was severely damaged in 1995 by Hurricane Opal, a category 4 hurricane, and again by Hurricane Ivan, a category 3 hurricane, in 2004.¹⁴³ Both

¹⁴¹ J.A. 73.

¹⁴² J.A. 133.

¹⁴³ MARK LEADON ET AL., BUREAU OF BEACHES AND COASTAL SYSTEMS DEPARTMENT OF ENVIRONMENTAL PROTECTION STATE OF FLORIDA, HURRICANE OPAL, BEACH AND DUNE EROSION AND STRUCTURAL DAMAGE ALONG THE PANHANDLE COAST OF FLORIDA (1998), *available at* <http://bcs.dep.state.fl.us/reports/opal-rpt.pdf> (last visited Oct. 1, 2009); BUREAU OF BEACHES AND COASTAL SYSTEMS DEPARTMENT OF ENVIRONMENTAL PROTECTION STATE OF FLORIDA, HURRICANE IVAN (2004), *available at* <http://bcs.dep.state.fl.us/reports/ivan.pdf> (last visited Oct. 1, 2009).

Hurricane Opal and Hurricane Ivan caused severe erosion to the City of Destin and Walton County beach, causing great damage to the beach, dunes, and building structures along the coast.¹⁴⁴

A. States have a Vital, Sovereign Interest in Maintaining Their Coastlines

As Justice Brandeis stated, “[t]he character of the state’s ownership in the land and in the waters is a full proprietary right.”¹⁴⁵ In most states, “not only does the State hold title to this land in *jus privatum*, it holds it in *jus publicum*, in trust for the benefit of all the citizens of this State.”¹⁴⁶ Furthermore, “[a]s sovereigns, the States hold the intertidal lands in trust for the public and ‘have the authority to define the limits of the lands held in public trust and to recognize private rights in such lands as they see fit.’”¹⁴⁷ Longstanding caselaw demonstrates that the nature of riparian rights and the effect of erosion and accretion on riparian lands are primarily issues of state law.¹⁴⁸ Specifically, states generally decide

¹⁴⁴ *Id.*

¹⁴⁵ *Port of Seattle v. Oregon & W.R. Co.*, 255 U.S. 56, 63 (1921).

¹⁴⁶ *State v. Pacific Guano Co.*, 22 S.C. 50, 84 (1884).

¹⁴⁷ *Opinion of the Justices*, 139 N.H. 82, 88 (1994) (citing *Phillips Petroleum Co. v. Miss.*, *supra* note 4, at 475; *see also Mass. v. EPA*, *supra* note 68).

¹⁴⁸ *See e.g. City of St. Louis v. Rutz*, 138 U.S. 226, 250 (1891) (rights with respect to accretion or reliction are governed by the

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whether and to what extent riparian rights exist in public water bodies if such rights exist at all.¹⁴⁹ In the 1870 case of *Steven v. Paterson & N.R. Co.*, the New Jersey Supreme Court found that as the owner of the land outshore of mean high water, the state can allow someone other than the upland landowner to use the land outshore of the mean high water without compensation to the upland owner.¹⁵⁰ In fact, in some states, such rights are considered a mere franchise or license subject to revocation.¹⁵¹ As such, the right of a sovereign to determine the extent of its common law with respect to issues such as riparian rights should be preserved.

law of the state). The term riparian applies to waterfront property owners along a river or stream, whereas the term littoral applies to waterfront owners abutting an ocean, sea, or lake. However, cases and statutes “have used ‘riparian owner’ to broadly describe all waterfront owners.” *Save our Beaches*, 31 Fla. L. Weekly at D1176 (citing *Bd. of Trs. of the Int. Imp. Trust Fund v. Sand Key Assocs., Ltd.*, 512 So.2d 934, 936 (Fla.1987)). In fact, the Florida Beach and Shore Preservation Act, FLA. STAT. 161.011-161.45 (2005)), uses the term riparian to encompass all waterfront property owners’ rights.

¹⁴⁹ *Federal Power Comm. v. Niagara Mohawk Power Corp.*, 347 U.S. 239, 252 (1954) (“Riparian water rights, like other real property rights, are determined by state law.”).

¹⁵⁰ *Steven v. Paterson & N.R. Co.*, 34 NJL 532 (E & A 1870).

¹⁵¹ See *Port Clinton Assocs. v. Bd. of Selectmen of Town of Clinton*, 217 Conn. 588, 597; 587 A.2d 126, 132 (1991) (stating that although riparian rights are properly rights, they are so limited by superior public rights that they are often referred to as a mere “franchise”); see also *Miss. State Highway Comm’n v. Gilich*, 609 So.2d 367, 375 (1992) (stating that riparian rights are revocable).

In addition, the ability of a state to make decisions regarding the management of its coast has been widely recognized, even when state activities impact private owners. For instance, this Court has held, in a case where state-granted tideland was filled resulting in cutting off water access to the littoral owner, that as long as the state action is compatible with the purposes for which it owns the land, the state could dispose of its tidelands free from any easement of the upland proprietor.¹⁵²

State courts have found that the public interest can supersede private interests in shoreline areas when properly invoked, even where littoral owners are deprived of direct access to the water. In 1854, for example, the California Supreme Court determined the state had a right to fill in the San Francisco waterfront, separating littoral owners from the water by docks and other structures built on tidelands in front of their properties.¹⁵³ In Massachusetts in 1909, a state river basin commission constructed a dam and lock on the Charles River and filled a strip of submerged land in front of a riparian homeowner's property, creating a public park on the new land.¹⁵⁴

¹⁵² *United States v. Mission Rock Co.*, 189 U.S. 391, 405, 407 (1903) (citing *Shively v. Bowlby*, 152 U.S. 1 (1894)).

¹⁵³ *Eldridge v. Cowell*, 4 Cal. 80 (1854).

¹⁵⁴ *Home for Aged Women v. Commonwealth*, 202 Mass. 422, (1909). See also *Carpenter v. City of Santa Monica*, 63 Cal. App. 2d 772, 789 (1944) ("tide lands . . . filled rapidly and not gradually and imperceptibly, belong to the state . . . and do not belong to the upland owner"); *Bentz v. McDaniel*, 872 So.2d 978, 980 (Dist. Ct.

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When the homeowner sued, citing an infringement of riparian rights, the court denied the claim, holding that “the waters and the land under them beyond the line of private ownership are held by the state, both as the owner of the fee and as the repository of sovereign power, with a perfect right of control in the interest of the public. The right of the Legislature . . . has been treated as paramount to all private rights. . . .”¹⁵⁵

As sovereigns, states have exercised this responsibility for over a century. Finding against Florida would disturb the settled law of state authority to manage coastal lands and potentially subject millions of acres of coastal lands to uncertainty, unsafe conditions, and litigation.

App. FL 2004) (“Filling is not a gradual and imperceptible process which would qualify as a natural accretion.”).

¹⁵⁵ *Home for Aged Women*, *supra* note, at 427. The Supreme Judicial Court of Massachusetts later distinguished the *Home for Aged Women* on the ground that the park was part of a larger project for improving navigation, and that the state holds the land beneath navigable waters for the limited purpose of protecting navigation and fisheries. *Michaelson v. Silver Beach*, 173 N.E.2d 273 (1961), at 277. Definition and scope of state proprietorship varies, but this Court has interpreted state’s ownership of tidelands more broadly to include commerce. *See Mission Rock Co.*, 189 U.S. at 405.

B. Florida Justly Applied Its Beach and Shore Preservation Act to Maintain Its State Interest and the Interests of the Nation as a Whole

Nearly a half century ago, the Florida Legislature recognized the importance and volatility of Florida's beaches and enacted the Beach and Shore Preservation Act (Act).¹⁵⁶ In the Act, the Legislature determined that the erosion of Florida beaches was a "serious menace" to the economy and general welfare of Florida's inhabitants.¹⁵⁷ In fact, the Legislature declared it "a necessary governmental responsibility to properly manage and protect Florida's beaches . . . from erosion."¹⁵⁸ Furthermore, the Legislature delegated to the DEP the authority to identify critically eroded beaches and determine whether they were in need of restoration and nourishment.¹⁵⁹ A 1970 amendment to the Act allows for a Board of Trustees to survey, establish, and record a fixed boundary line, called the Erosion Control Line (ECL), between state sovereign lands and upland properties in the area where the restoration will occur. Under the Florida Administrative Code, "critically eroded shoreline" is

¹⁵⁶ Ch. 61-246, § 1, Laws of Fla. (codified at §§ 161.011-161.45, FLA. STAT. (2005)).

¹⁵⁷ Ch. 61-246, § 1, Laws of Fla. (codified at §§ 161.088, FLA. STAT. (2005)).

¹⁵⁸ *Id.*

¹⁵⁹ Ch. 61-246, § 1, Laws of Fla. (codified at §§ 161.101(1), FLA. STAT. (2005)).

defined as a segment of shoreline where natural processes or human activities have caused, or contributed to, erosion and recession of the beach and dune system to such a degree that upland development, recreational interests, wildlife habitat or important cultural resources are threatened or lost.¹⁶⁰

In 1995 and 2004, Florida was faced with a problem associated with meteorological forces related to climate change – forces that the entire nation will soon confront. Rising seas, erosion, and increased storm intensity caused a crisis in the City of Destin and Walton County. The DEP examined the threats to the state of Florida, and decided, within its statutory authority – and in light of its responsibilities to maintain its beaches for the public – that beach renourishment was the proper solution to best protecting the public interest in its shores. Carefully following the procedures set forth in the Act and in effect for decades, the DEP reasonably determined that a focused beach renourishment program was the optimum means of restoring and protecting the Florida coast. Florida, like all states in the Union, has the right as a sovereign to maintain the beauty, access, and future prosperity of its coasts. This responsibility relies upon the state’s longstanding and well-established ability to select the management tools that best respond to its environmental, economic, and societal challenges.

¹⁶⁰ FLA. ADMIN. CODE R. 62B-36.002(4).

Roman law declared millennia ago, “truly by natural right, these be common to all; the air, running water, and the sea, and hence the shores of the sea.”¹⁶¹ So, too, should this Court, preserve and uphold one of the most basic rights and responsibilities of sovereign states: to protect their citizens, public welfare, and the sovereign resources they manage.

◆

CONCLUSION

For the foregoing reasons, the decision of the Florida Supreme Court below should be affirmed.

Respectfully submitted,

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¹⁶¹ INSTITUTES OF JUSTINIAN, LIBER 2, TRACT 1, SECTION 1, reprinted in J.K. Angell, A TREATISE ON TIDE WATER 16 (1826).