

# *Lessons Learned from 90 Years of U.S. Beach Preservation Advocacy*

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American Shore and Beach Preservation  
Association (ASBPA)

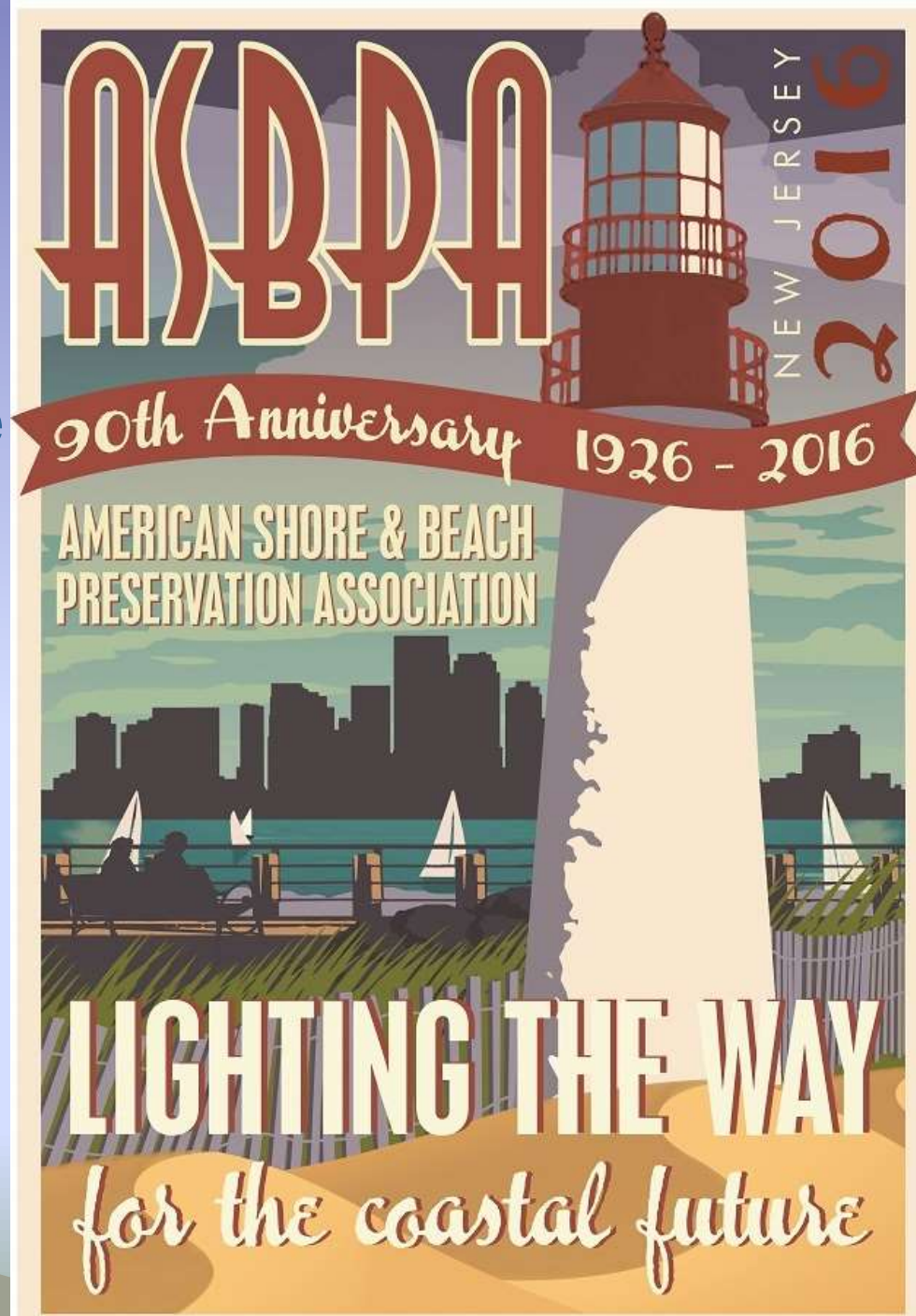
Climate Change Council Annual Meeting

San Juan, Puerto Rico

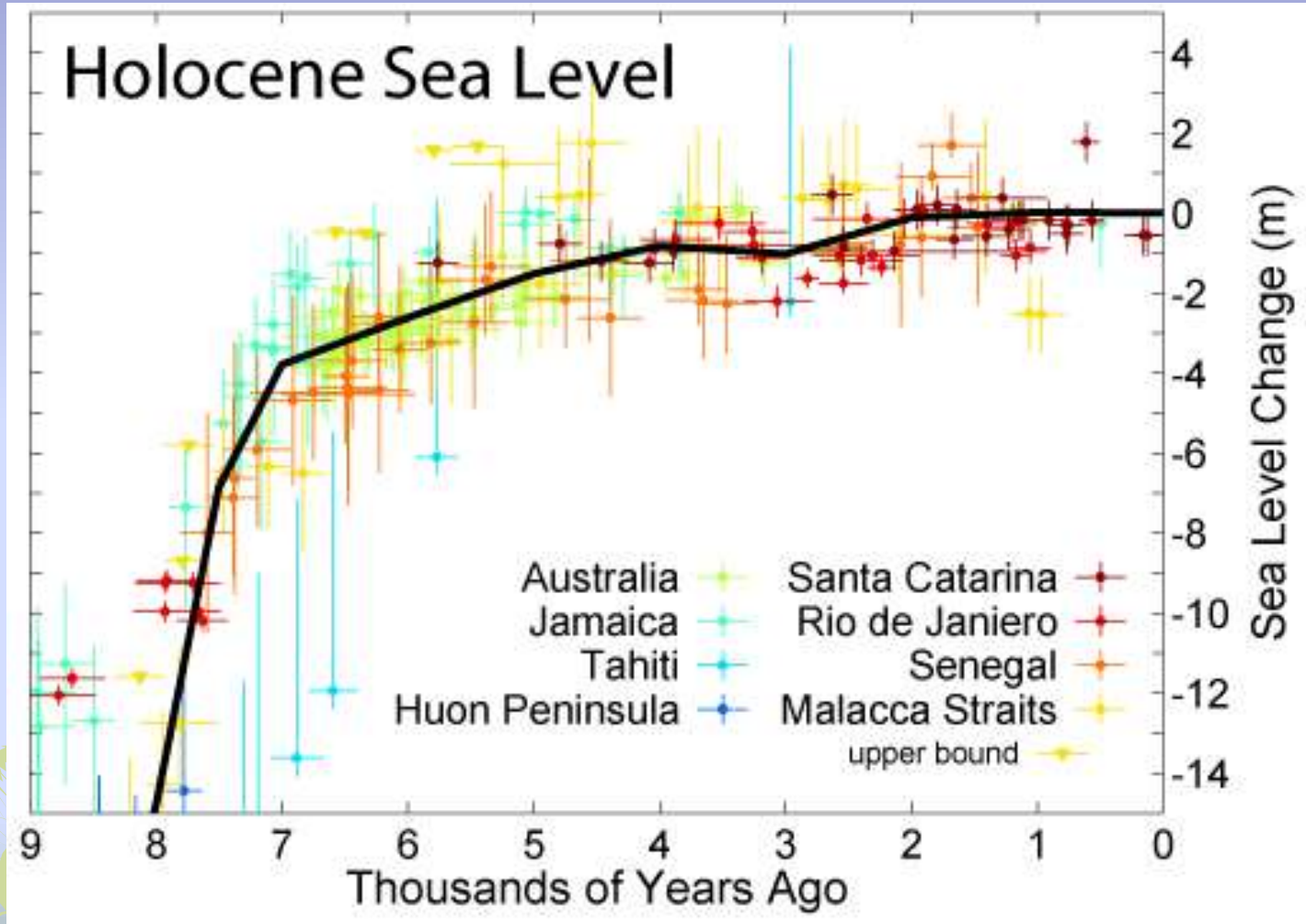
April 7, 2016

# *Outline*

- Natural and human drivers of coastal change
- Erosion Management Spectrum
- Why Preserve Beaches?
- Funding Models
- Beach Preservation Advocacy
- What's Next?



# Natural Drivers of Coastal Change



# Historic Human Modifications to the Coastal System

- Beachfront Development
- Jetties
- Dredging Disposal Methods



# Beachfront Development

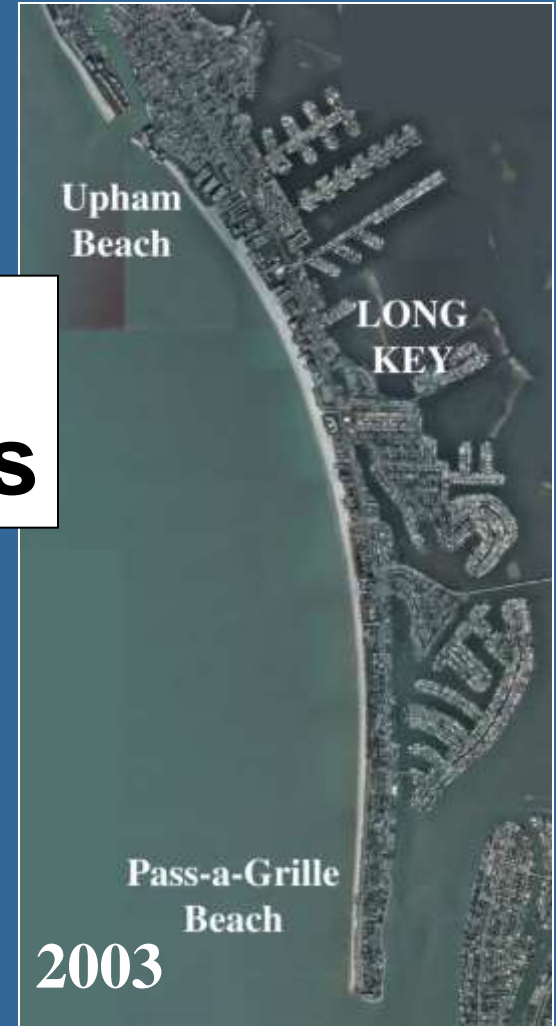
**Stabilizing  
dynamic systems**



1873



1926



2003



1951



1967





Development

Revetment

Terminal Groin

Breakwater

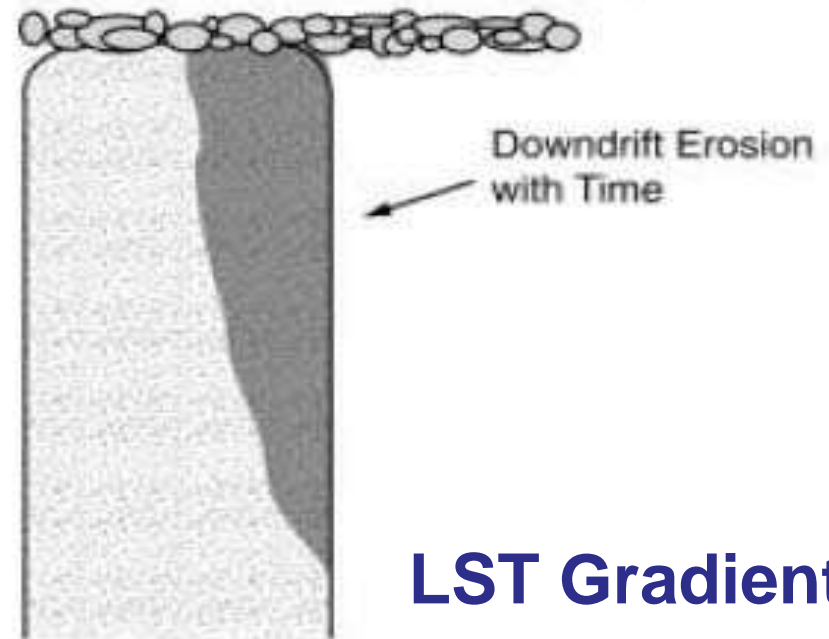
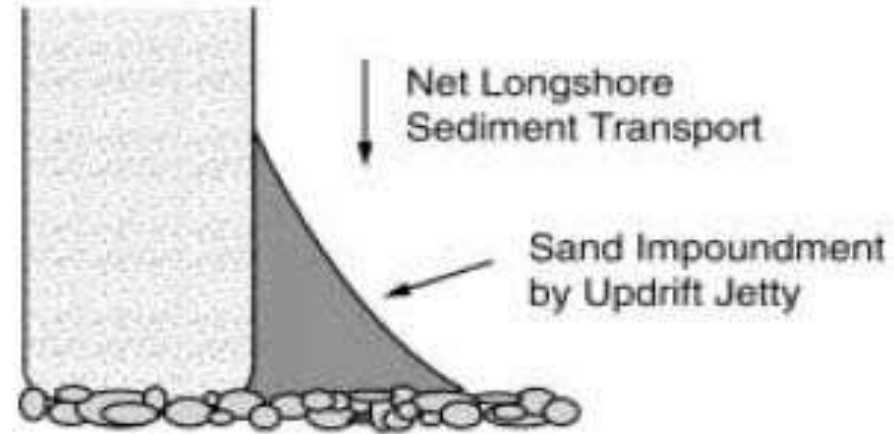
Seawall

**Beach Erosion “Problem”**

# Effect of Jetties on Adjacent Shorelines



Port Canaveral, FL



LST Gradient



# Example

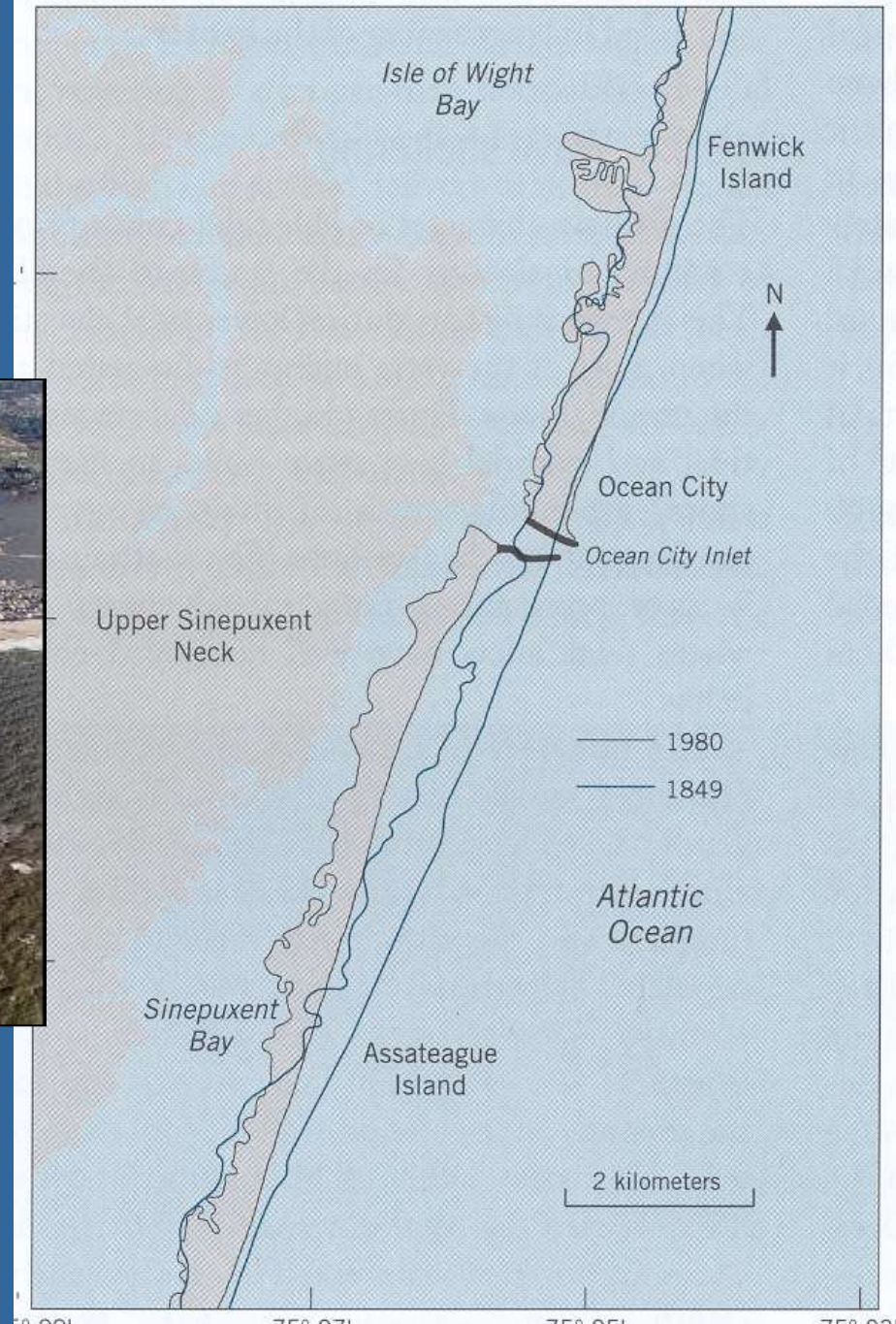
# Jetties



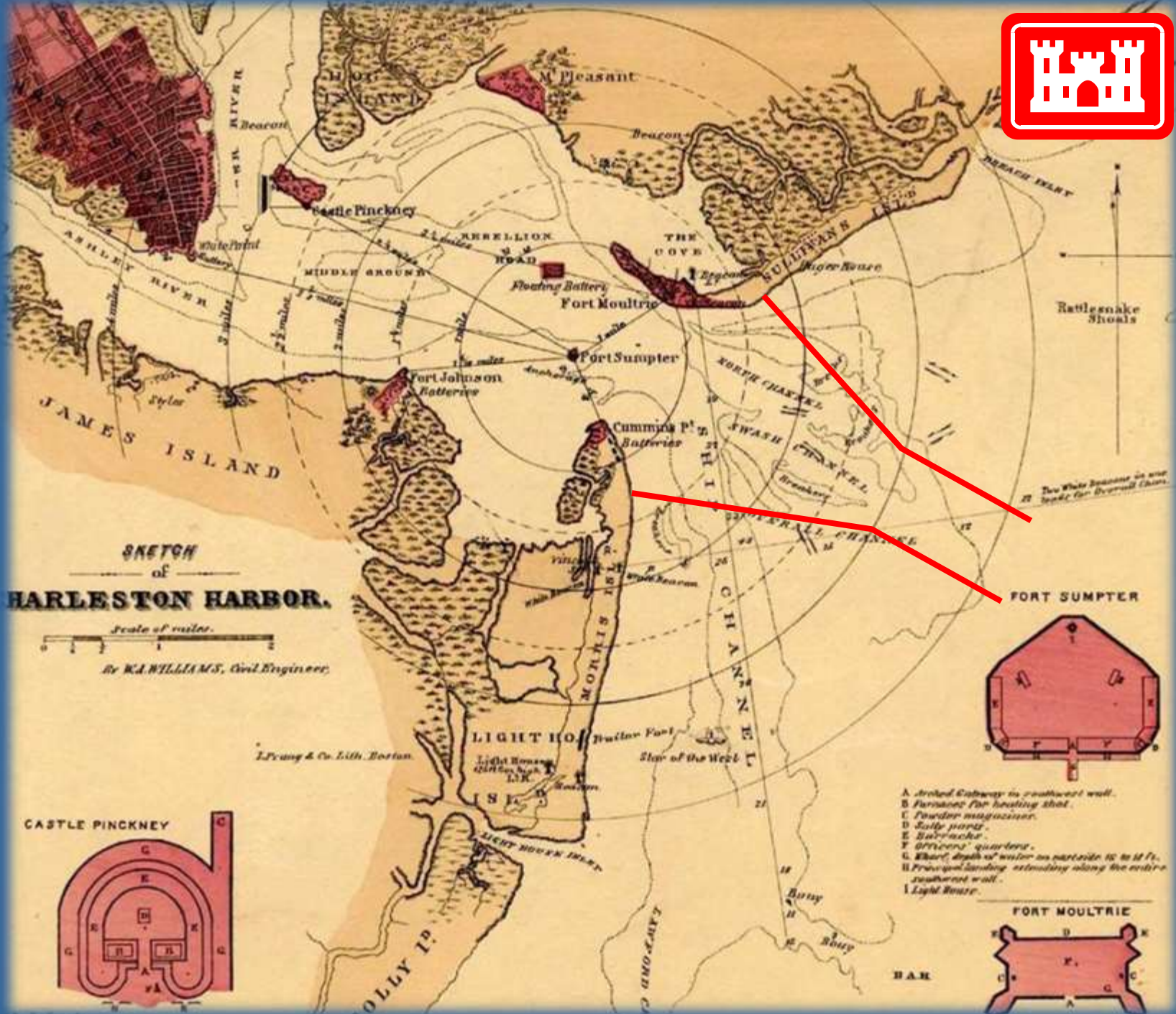
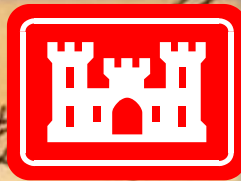


# Ocean City Inlet

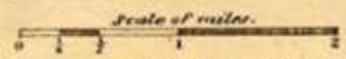
Assateague Island, VA/MD







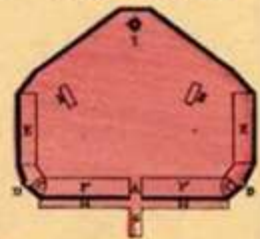
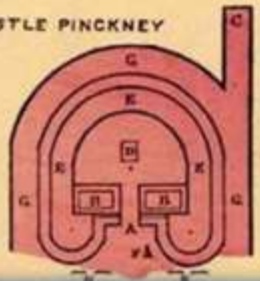
SKETCH of HARLESTON HARBOR.



By W.A. WILLIAMS, Civil Engineer.

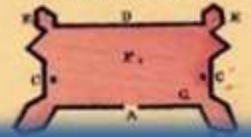
L. Prang & Co. Lith. Boston.

CASTLE PINCKNEY



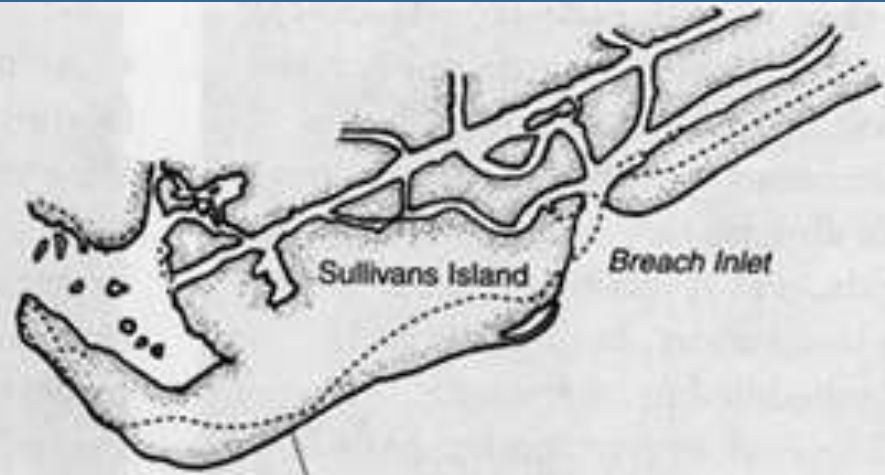
- A Arched Gateway in southwest wall.
- B Furnaces for heating shot.
- C Powder magazines.
- D Sally ports.
- E Barracks.
- F Officers' quarters.
- G Depth of water on outside 10 to 12 fms.
- H Principal landing extending along the entire southwest wall.
- I Light House.

FORT MOULTRIE





..... 1854 high water line  
—— 1979 high water line



Charleston Harbor  
jetties, completed 1896



Morris Island

Folly Island

• Lighthouse  
1890s: 2,700 feet (800 meters) back from shore  
1940s: at the shoreline  
1990s: 2,000 feet (600 meters) offshore and slightly tilted





# Dredging Disposal

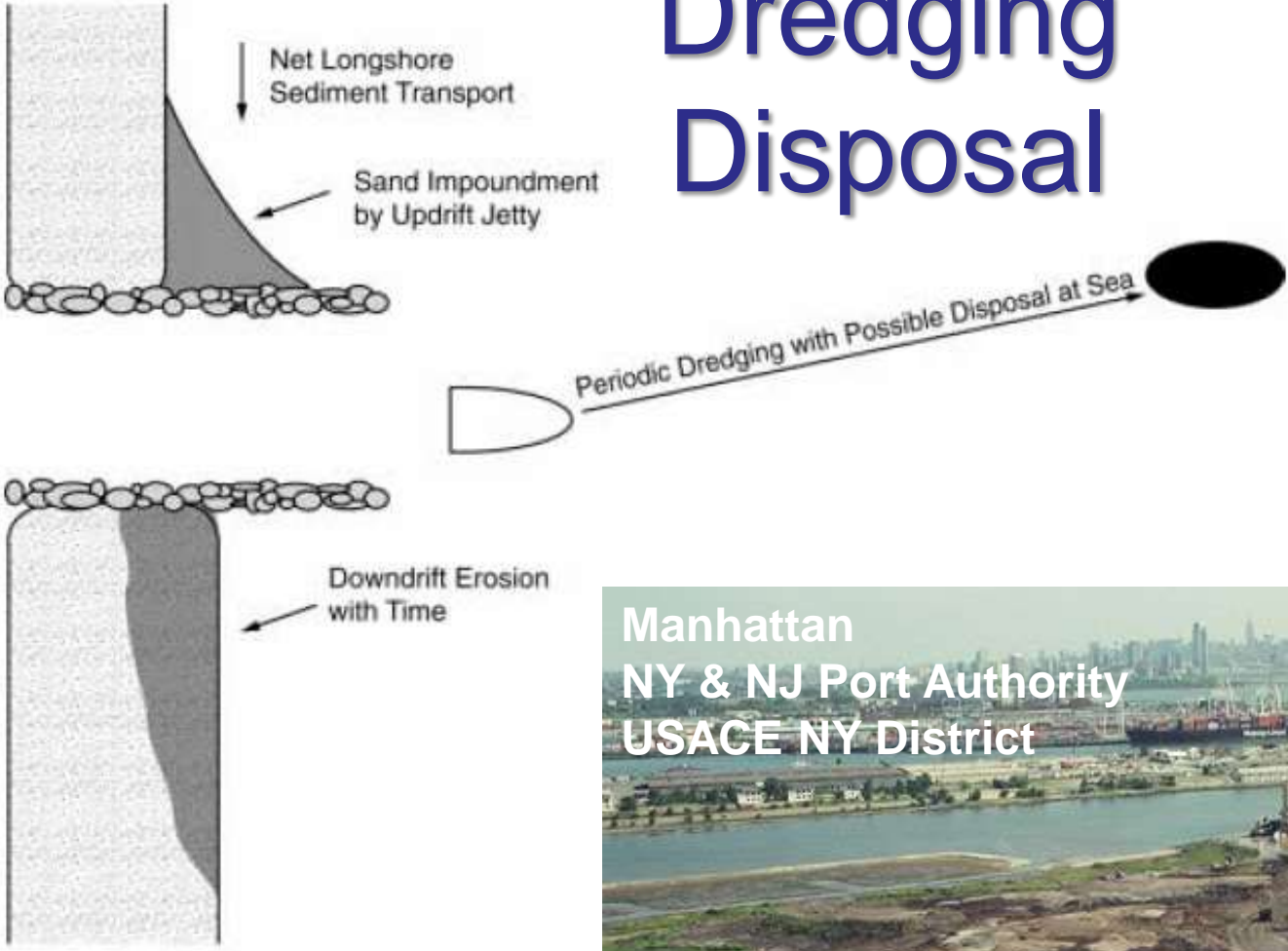
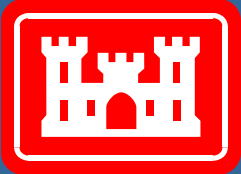


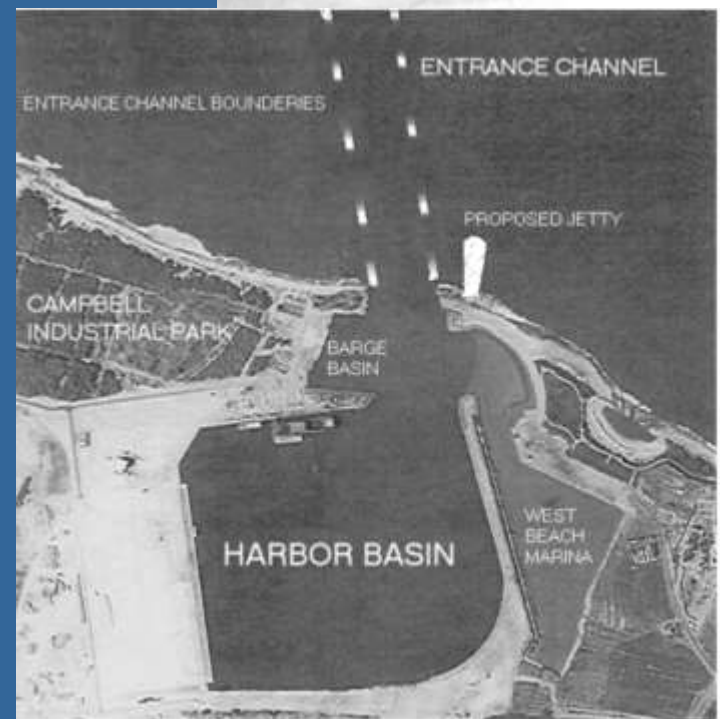
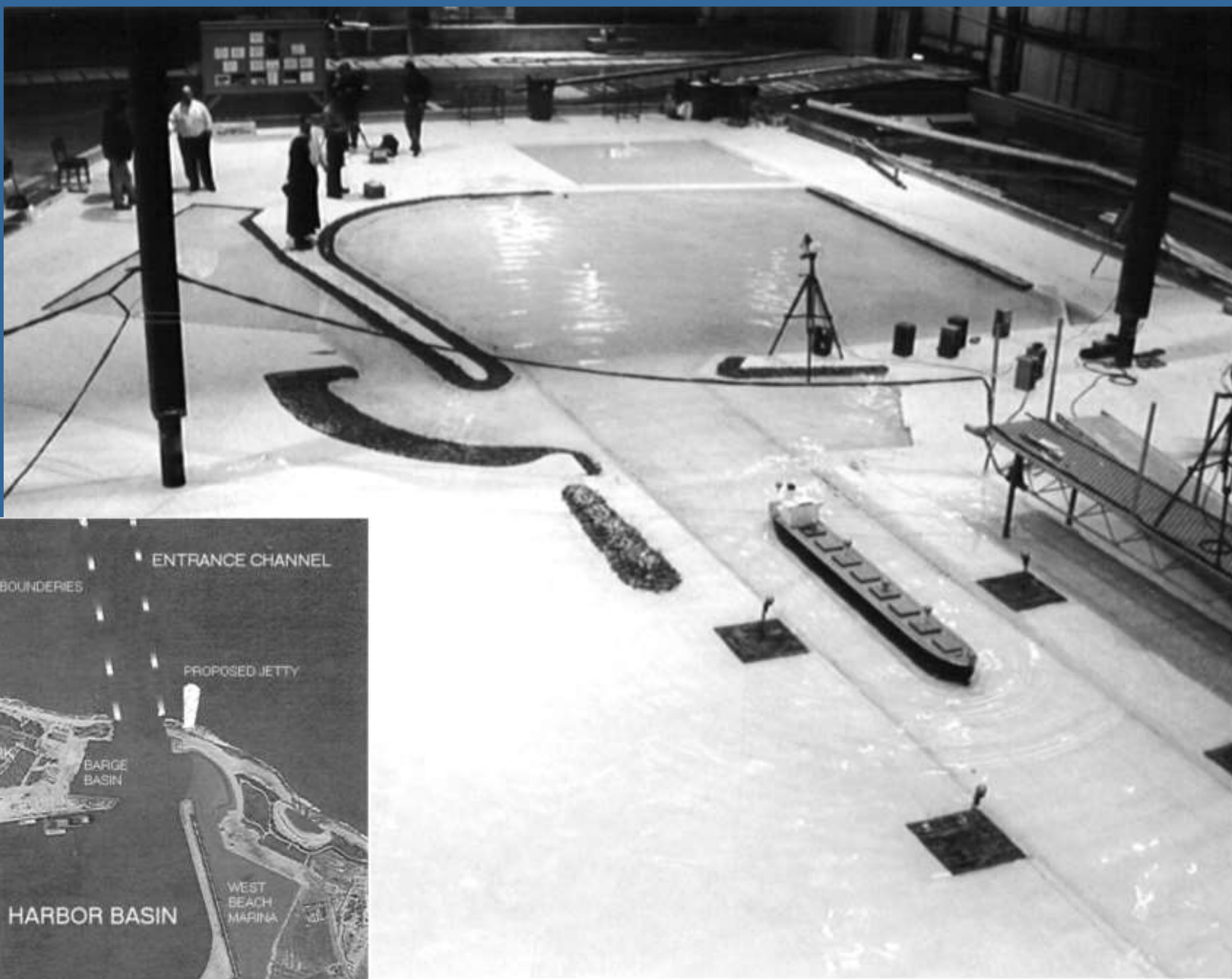
Figure 1.5 Effect of navigational entrance

Manhattan  
NY & NJ Port Authority  
USACE NY District



**DISPOSAL AREA**





**Design of Barbers Point Harbor, Oahu, Hawaii**

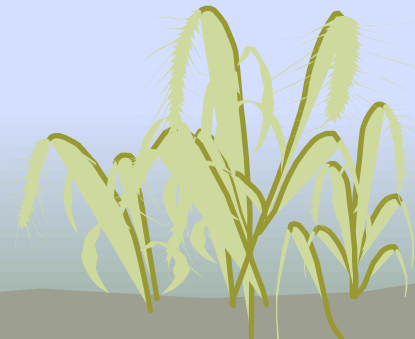
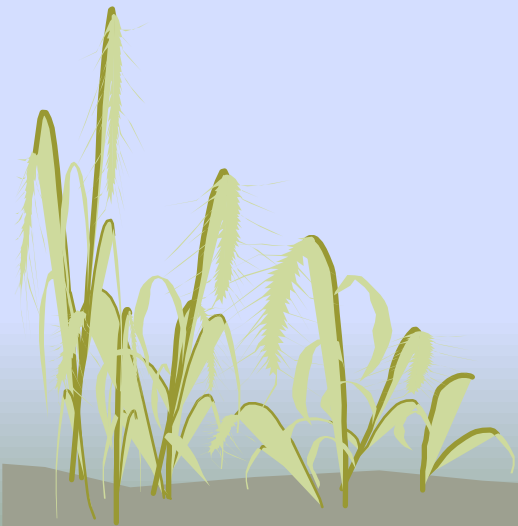
# *Erosion Management Spectrum*

Retreat

Armor



Beach Restoration



# Erosion Management: Spectrum of Tools

Armor



- Structures
  - Armoring
  - LST
    - Geotextiles
- Soft shore protection
  - Beach nourishment
  - Dune restoration
- Managed Retreat
- Do Nothing





# Why Preserve Beaches?

- **Storm protection**
- Recreational use = TOURISM = JOBS!
- Environmental enhancement

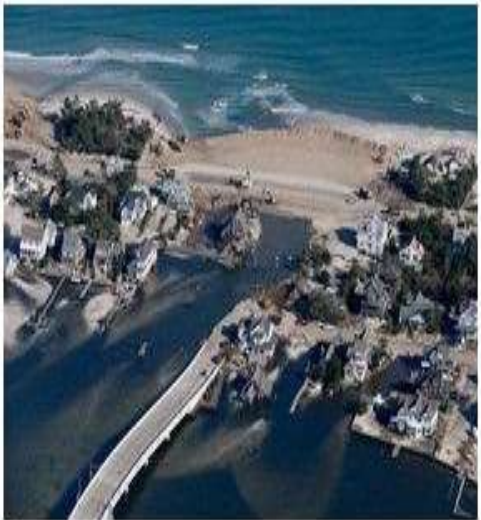


# N.J. sand dunes protected Shore towns from Hurricane Sandy's wrath

By Star-Ledger Staff  
on November 08, 2012 at 7:05 AM, updated November 08, 2012 at 11:44 AM [Email](#) [Print](#)

By Ryan Hutchins and Seth Augenstein/The Star-Ledger

Hurricane Sandy did something unusual to Long Beach Island, a narrow 18-mile strip of land: The storm's raging winds and powerful surge of water carved two communities out of one.



Enlarge Andrew Mills/The Star-Ledger

Workers have closed a breach in the barrier island at the base of the Mantoloking Bridge where Barnegat Bay met the Atlantic Ocean here after Hurricane Sandy pummeled the Jersey Shore last week. 11/5/12 (Andrew Mills/The Star-Ledger)

Aerial photos of the Jersey Shore as repairs begin after Sandy gallery (17 photos)



There are the places that had a protective dune system installed and, as a result, sustained minimal damage. Then there are the areas where there were no tall dunes, where Sandy

## N.J. News Essentials

See top photos The Star-Ledger

Find fun events in Jersey

Search New Jersey business listings

## Most Comments

539 N.J. Assembly gutted gun bills to save lives: Editor

481 N.J. braces for 'doom' as sequestration

257 N.J. Assembly passes package of gun bills despite Republicans' protest

• “It really works. Where there was a beach fill in place, there was no major damage – no homes destroyed.”  
*-Dr. Stewart Farrell, Coastal Research Center, NJ*





# *Dunes + Wide Beaches*



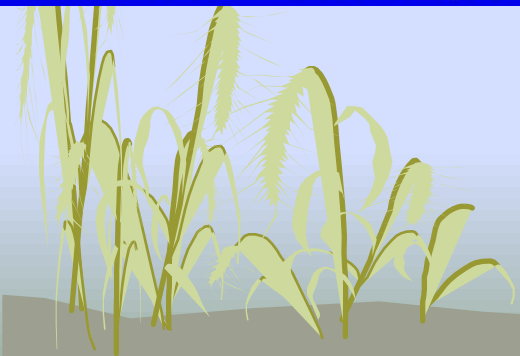
**With Nourished Protective Beach**

**Atlantic City, NJ, was up and serving tourists 4 days after Sandy**



**Without Nourished Protective Beach**

**Ortle Beach, NJ, was still a disaster 6 Months after Sandy**



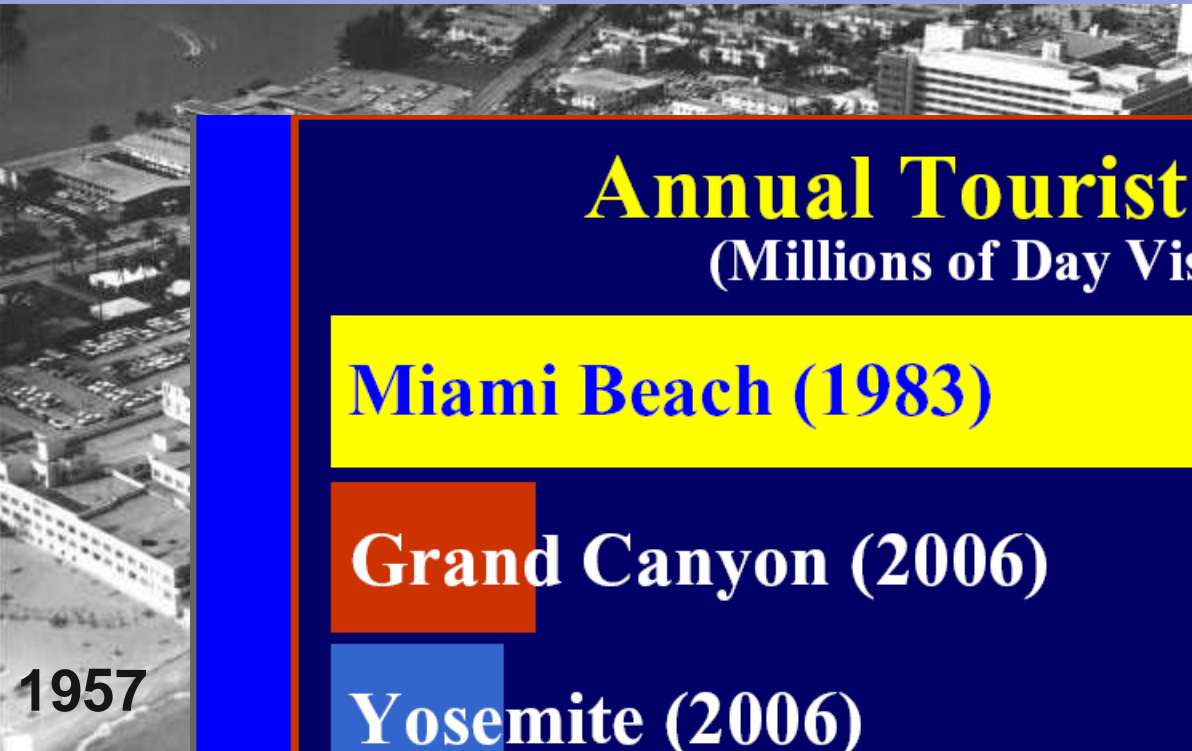


# Why Preserve Beaches?

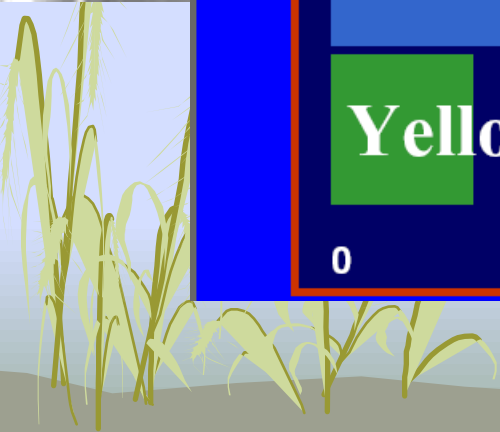
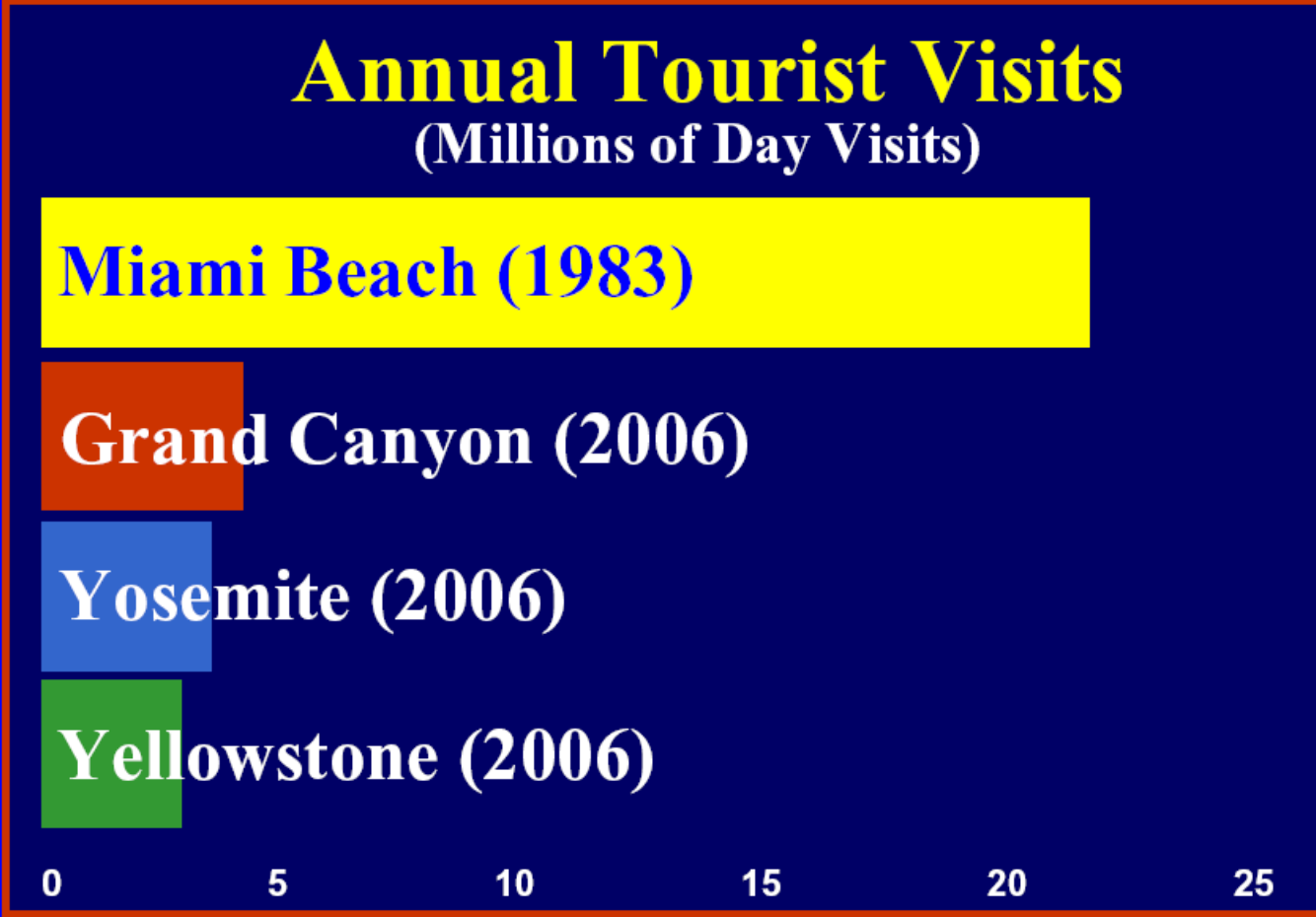
- Storm protection
  - **Recreational use = TOURISM = JOBS!**
  - Environmental enhancement
- 85% of all tourism related revenue in the U.S. is generated in coastal states
  - Beach tourists contribute \$225 billion to US economy
    - Exceeds economies of 150 countries



# *Increase Property Value: Miami Beach*



1957



# Why Preserve Beaches?

- Storm protection
- Recreational use = TOURISM = JOBS!
- Environmental enhancement

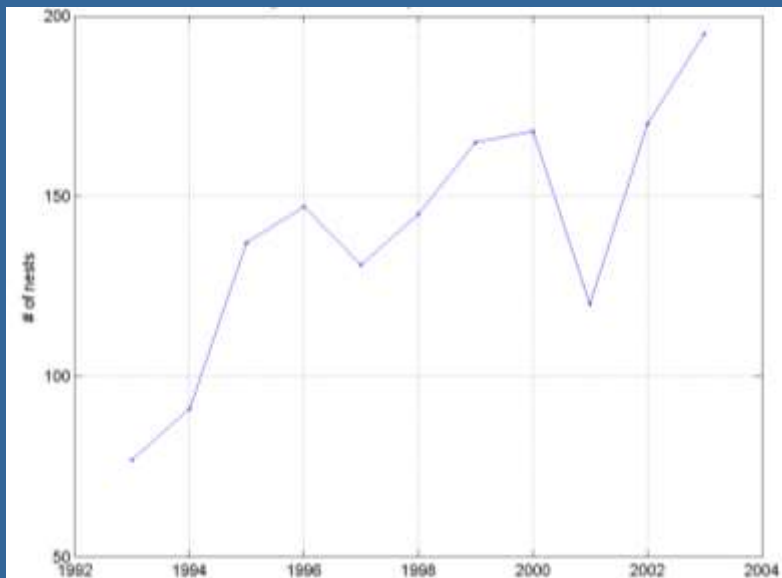
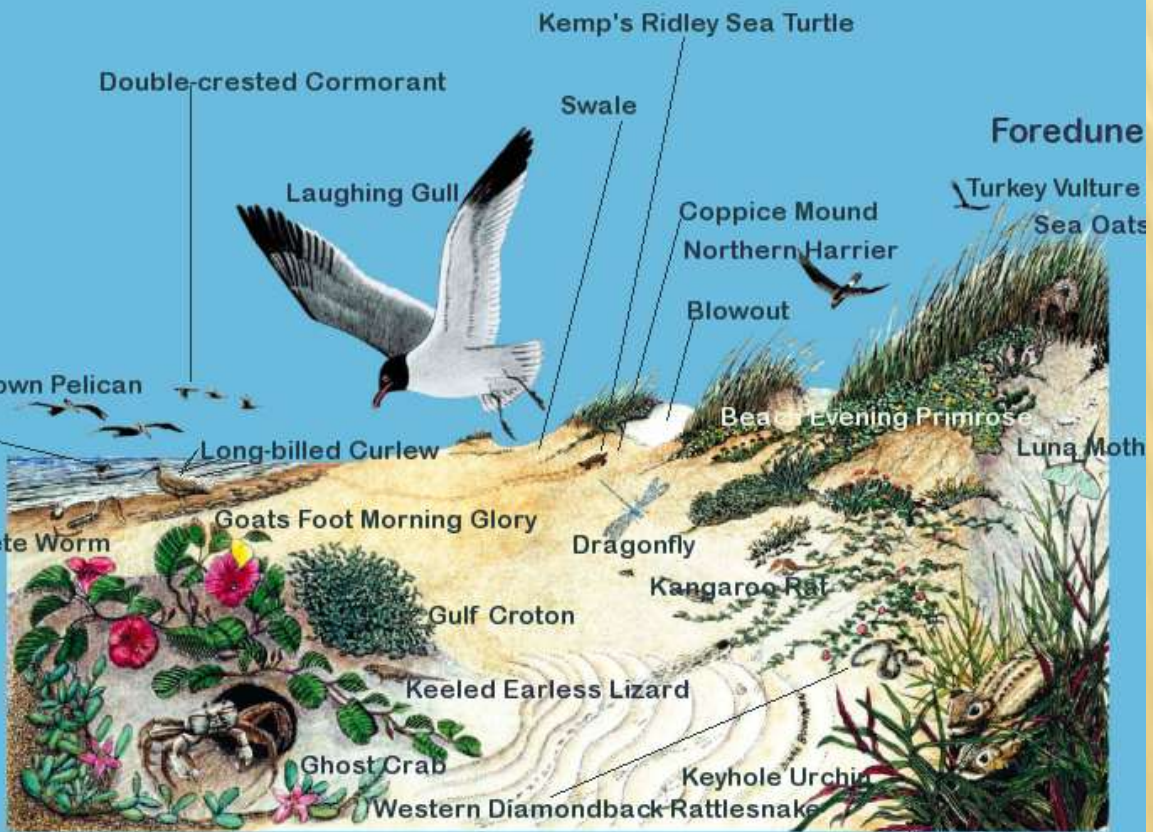


Photo courtesy Blair Witherington



# WHY PRESERVE BEACHES & DUNES?



Spotted Ground Squirrel  
hiding in Bitter Panicum leaves

*Texas beaches and dunes*





1993

Storm protection  
Tourism  
Habitat

2006

Same View

Beach and Dune  
Restoration  
have been effective





# Funding Models



***“Without dedicated funding sources at all levels, your state does not have a comprehensive beach management program.”***

# State Funding Models

State	Dedicated?	Source	% state cost share	Annual funding
FL	yes	Real Estate transfer fee	50%	\$30 M*
NJ	yes	Real Estate transfer fee	75%	\$25 M*
DE	yes	State tourist tax (1%) + general bonds	100%	\$2 M +
LA	no*	Wetlands Trust Fund	100%	\$13-25 M
TX	no	CEPRA (sporting goods sales tax) + general fund	75%	\$5.5 M
SC	no	General revenue	varies	\$3 M



# Successful Funding Models

- Catalyst to provide inertia
- Political vehicle
- All Coastal Counties
- Advocacy group/coalition to sustain momentum
  - Collaboration with state resource agency
- Funding source to generate known \$
  - ~targets users
- Defined taxing regions
- Repeated attempts
- Educational materials focused on economic benefits

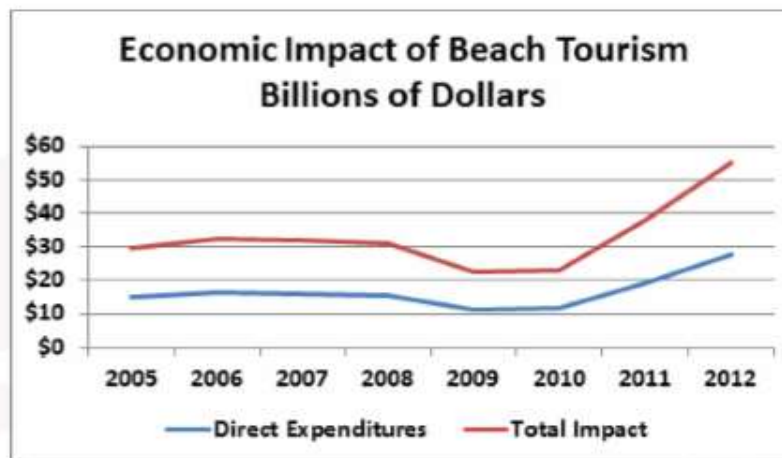




## HEALTHY BEACHES DRIVE FLORIDA'S ECONOMY

Beaches are the engine that drives Florida's tourism economy. Beaches are our Number 1 tourist attraction – In 2012, 91.4 million out-of-state visitors traveled to Florida. 38.4 million, or 42% were beach-oriented visitors.

The 2012 economic benefits of beach tourism were \$55.2 billion in sales added to Florida's economy.



In addition to the \$55 billion total statewide impact of beach tourism, state sales tax paid by beach tourists in 2012 was almost \$1 billion (\$972 M)  
(Dr. William Stronge)

For every dollar the state appropriated for beach projects (FY 2012/13) it received \$48.60 in revenues. With this ROI, instead of asking whether the state can afford to spend more money on beaches, perhaps we should be asking if we can afford not to.

# Louisiana

- **1989** – Act 6 of the Louisiana Legislature passed R.S. 46: 213-214
  - + constitutional amendment approved by the citizens of Louisiana
- Established the Coastal Wetlands Conservation and Restoration Trust Fund (aka Wetlands Trust Fund)
- Source: % of the state's mineral revenues
- Amount: varies from \$13 million -\$25 million annually
  - dependent up on oil and gas price and availability.
- \*NOTE: State dedicated fund for ALL coastal restoration projects

# Texas

- **1999**: Coastal Erosion Planning and Response Act (CEPRA)
- Depends on legislature for biennial appropriation
- Source has changed 3x:
  - General revenue
  - Oil spill response \$
  - % of TX Parks and Wildlife Department's dedicated fund
    - Sales taxes on sporting goods
- 2009: Proposed legislation failed
  - Tax on imported oil for the state's coastal protection fund (used for oil spill response)
  - Increase from 1.3 to 3.5 cents for beaches



# Funding Options for the Dredging and Maintenance of the State's Coastal Inlets from Fees Charged to Those Who Make Use of the Inlets

NORTH CAROLINA WILDLIFE RESOURCES COMMISSION &  
NORTH CAROLINA DIVISION OF MARINE FISHERIES



**September 1, 2012**

# Local Funding: Nags Head, NC



- \$37M beach nourishment project
- Largest locally-funded project
- \$18M: Loan to be repaid with new tax
  - 2 cents/\$100 property value
  - 16 cents in special beachfront district
  - Additional 1% county bed tax, yet approved
- \$18M: Cash from county bed taxes
- \$ 1M: Town's general fund

# Total Hotel Taxes: Charleston County, SC

● State Sales Tax	5%
● County Sales Tax	1%
● County Infrastructure Tax	1/2 %
● County School District Tax	1%
● State Accommodations Tax	2%
● County A-Tax	2%
● Municipal A-Tax	2%*
● <b>TOTAL TAXES:</b>	<b>13.5%</b>



Hotel  
“Occupancy”  
or  
“Accommodation”  
Taxes  
in U.S. Cities

City	Total tax rate
Houston	17
Indianapolis	17
Columbus	16.75
San Antonio	16.75
Chicago	16.39
Los Angeles	15.5
San Francisco	15.5
Austin	15
New York	14.75
Philadelphia	14.2
San Jose	14
Phoenix	13.27
Dallas	13
Jacksonville	13
San Diego	12.5

# *Coastal Management Challenges*

- Research Needs
  - Sediment quality
  - Storm protection benefits
  - Dunes for resilience
  - Compaction
- Funding
  - Economic Value
- Sea Level Rise
- Retreat
- CBRA Zones
- Environmental
  - Critical Habitat
  - Dredging Windows
  - Benthic recovery
- USACE/Congress coastal commitment
- Regional vs. local management
- Sand Rights





# *ASBPA: 1926*

# asbpa

American Shore & Beach Preservation Association

Advocating for healthy coastlines



## Shore & Beach

# *FSBPA: 1957*

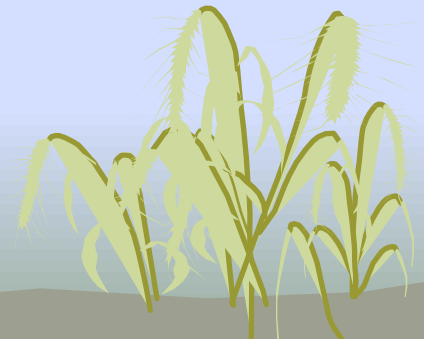
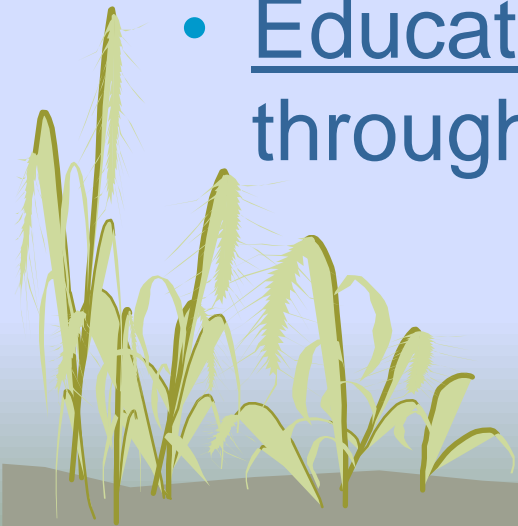


FLORIDA SHORE & BEACH  
PRESERVATION ASSOCIATION  
A League of Cities and Counties on Beach and Coastal Issues



# *Organization functions*

- Advocate for beach preservation issues & funding to the Legislature and Congress.
- Collaborate with academics and local, state, & federal agencies to promote effective beach management.
- Educate elected officials and the public through conferences & publications.





# ASBPA Chapters & “Sister” Organizations

- Northeast
- California
- Texas
- Great Lakes
- Central East Coast
- STUDENT chapters!



South Carolina  
Beach Advocates

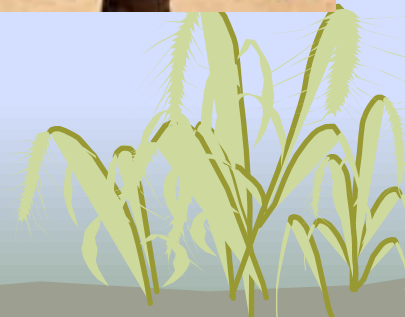


# *Local Advocates*

- Barrier Islands Governmental Council – BIG C
- Mayors: 11 coastal municipalities



# *Beginning a Puerto Rico Coastal Managers Consortium?*





*Thank you!*



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