

Living on a Moving Coastal Landscape

PJ Hahn

Former Director of Coastal Zone Management
Plaquemines Parish Government

7th Annual SE Florida
Regional Climate Change
Leadership Summit



PELICAN COAST
CONSULTING

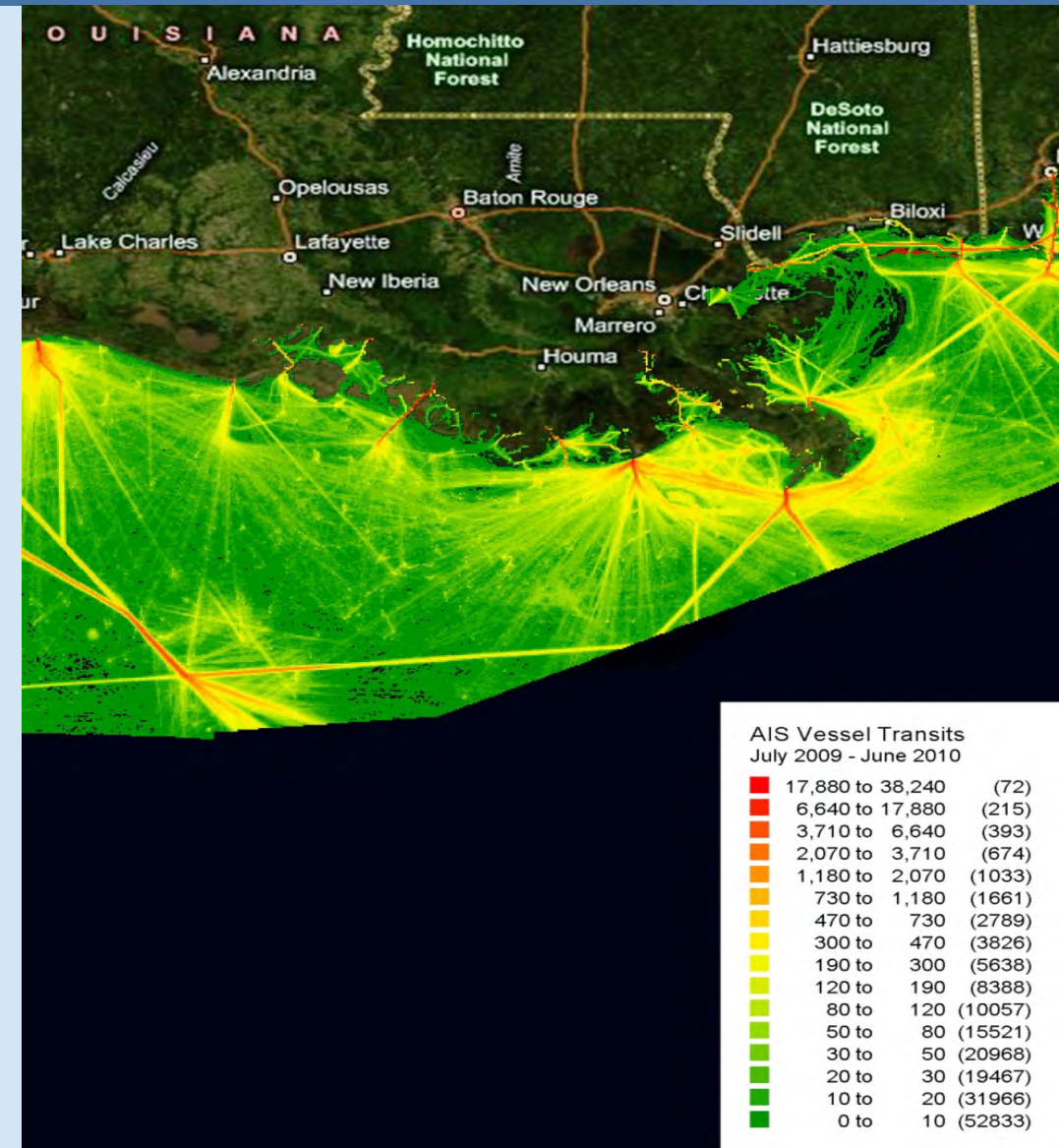
Energy Production

- 54% of U.S. Crude Oil
- 52% of U.S. Natural Gas
- 47% U.S. Refining Capacity

Calculated as a three year average from 2008 to 2010

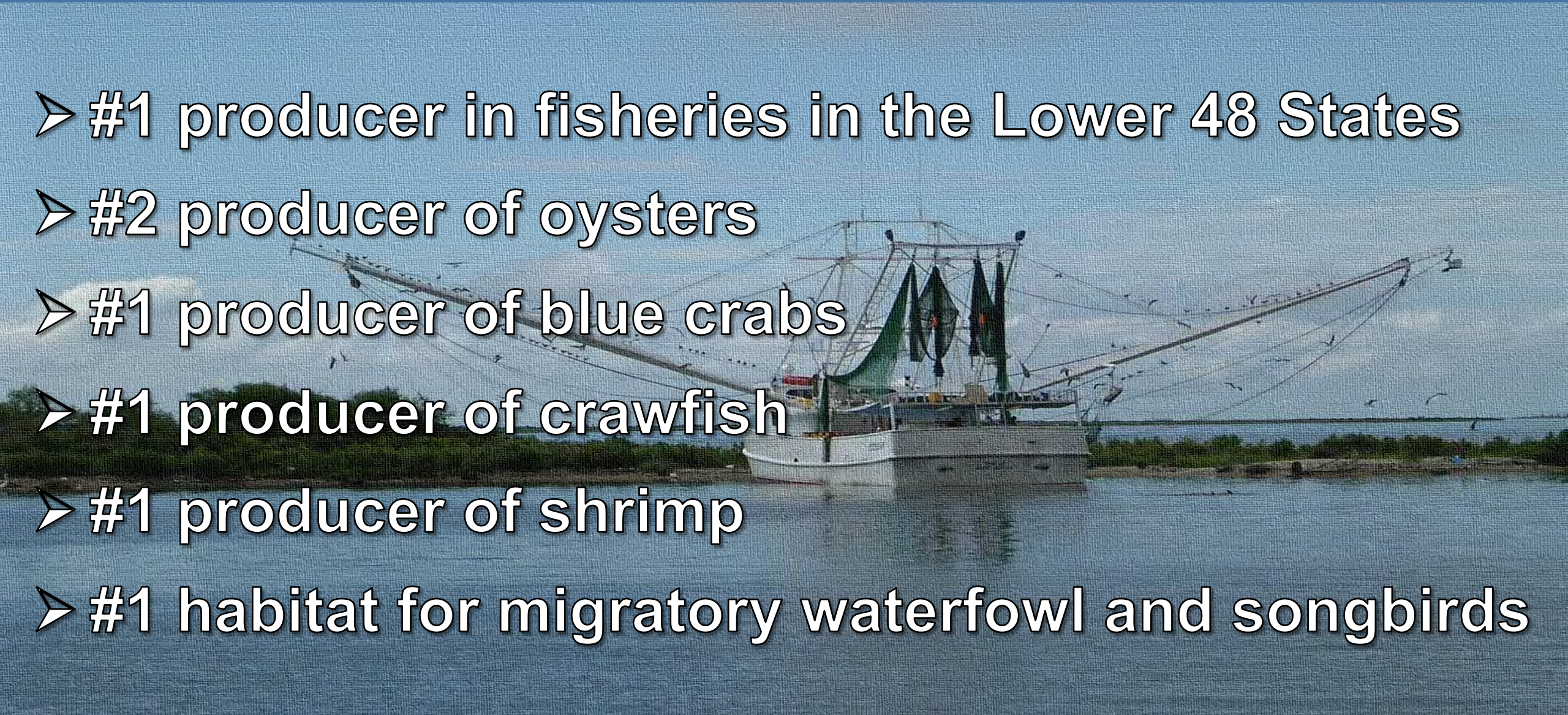
Waterborne Commerce

- 5 of the 15 largest ports in the U.S. in Louisiana
- Port of South Louisiana is the nation's #1 by tonnage
- Louisiana's ports handle cargo accounting for 20% of the nation's waterborne commerce (by tonnage)



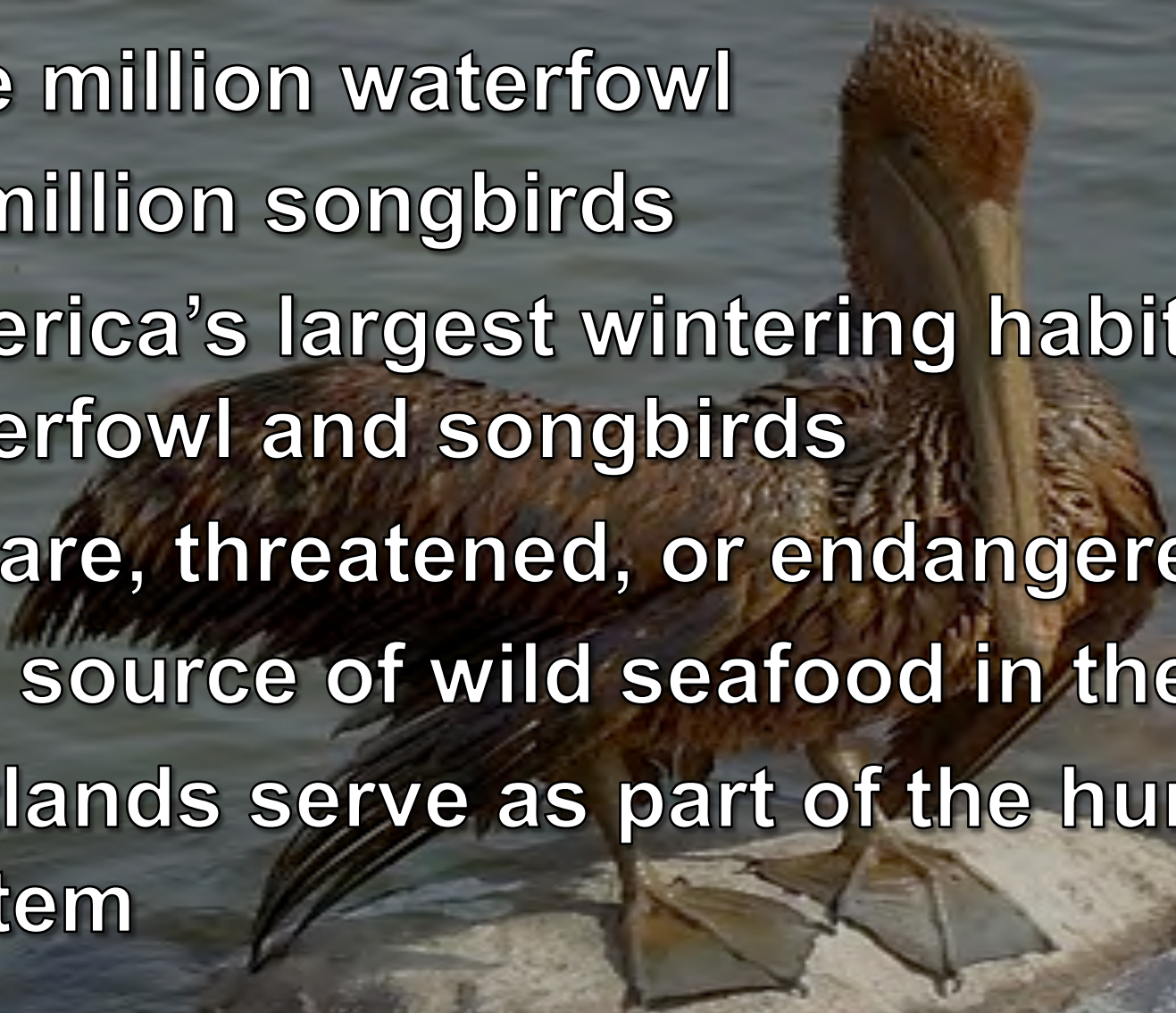
Seafood and Wildlife

- #1 producer in fisheries in the Lower 48 States
- #2 producer of oysters
- #1 producer of blue crabs
- #1 producer of crawfish
- #1 producer of shrimp
- #1 habitat for migratory waterfowl and songbirds

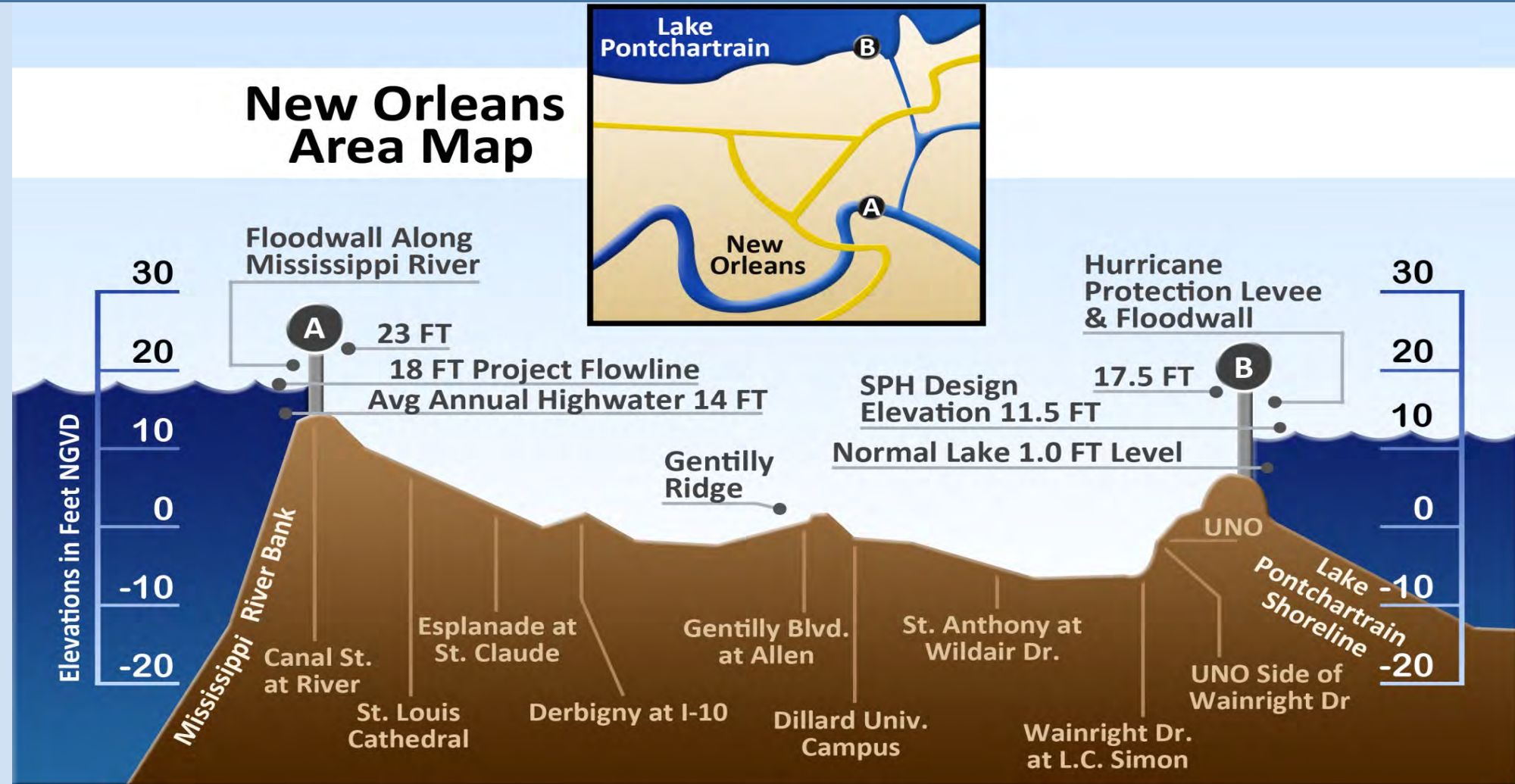


Ecosystem Services

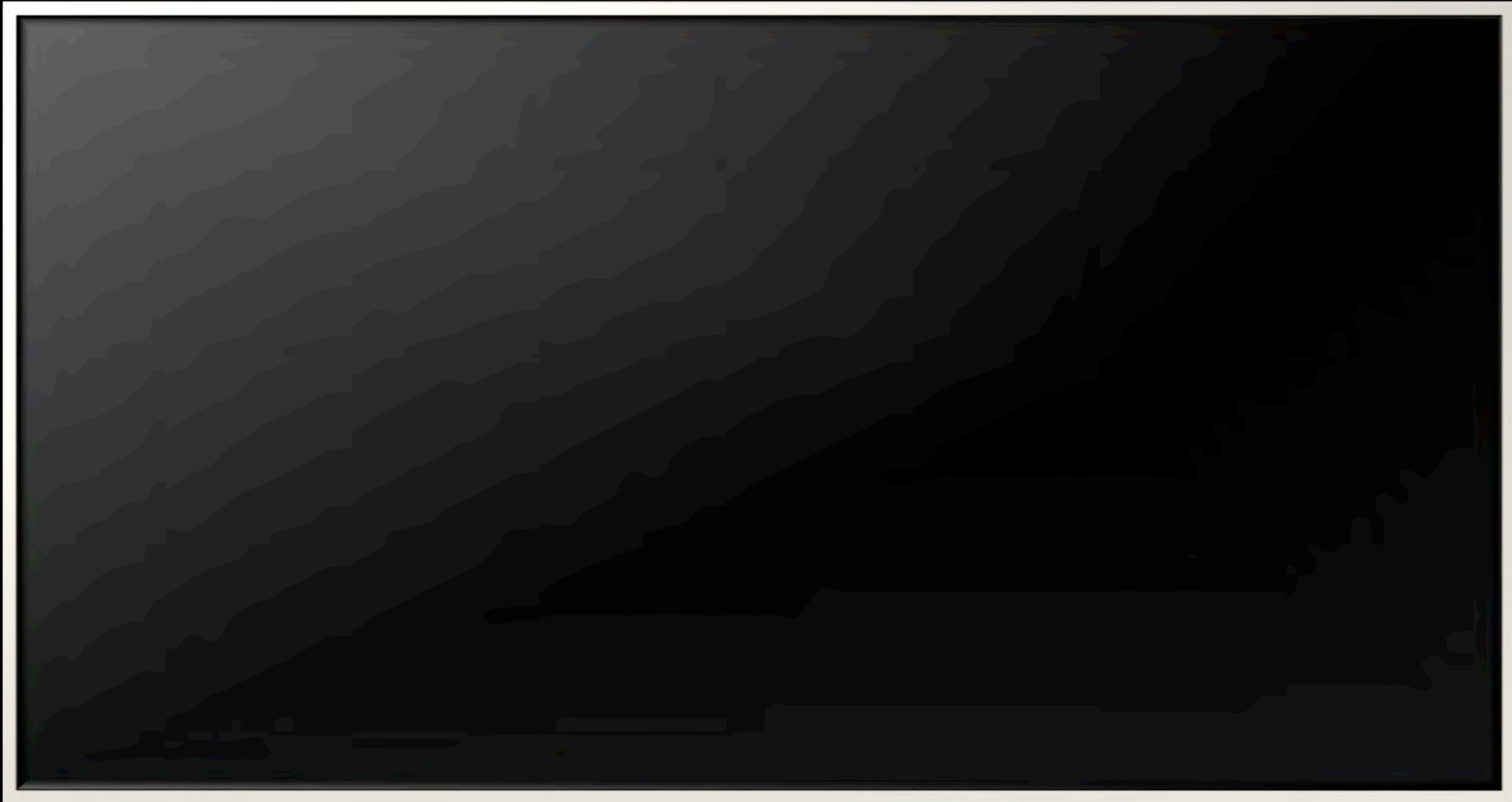
- Five million waterfowl
- 25 million songbirds
- America's largest wintering habitat for migratory waterfowl and songbirds
- 70 rare, threatened, or endangered species
- Top source of wild seafood in the continental US
- Wetlands serve as part of the hurricane protection system



New Orleans Cross Section



Hurricane Isaac



Hurricane Aftermath



Storm Surge to Communities



Power of Storms



Strain on Resources



Coastal Communities



Grand Bayou Indians



Grand Bayou Indian Funeral



Pass Chaland



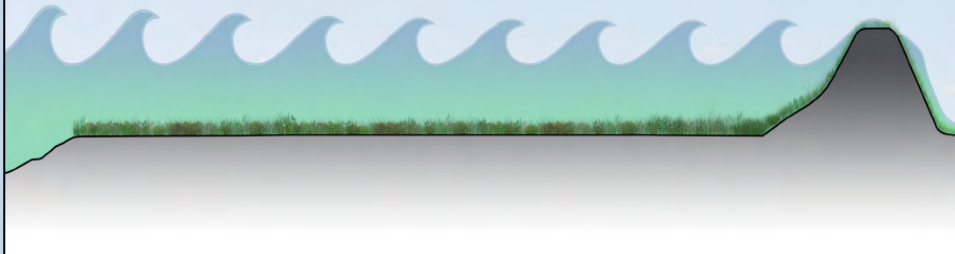
6 Months Later



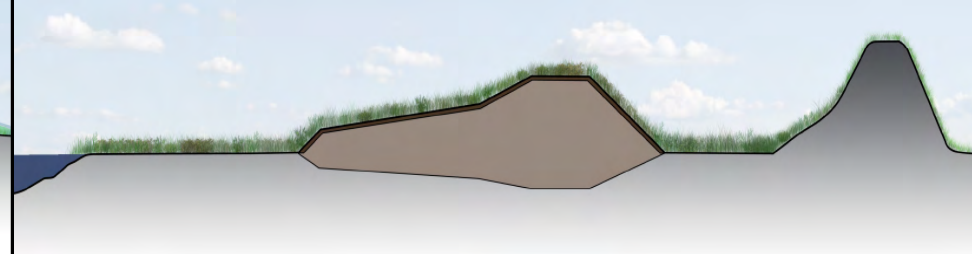
Restoration of Ridges for Improved Storm Protection



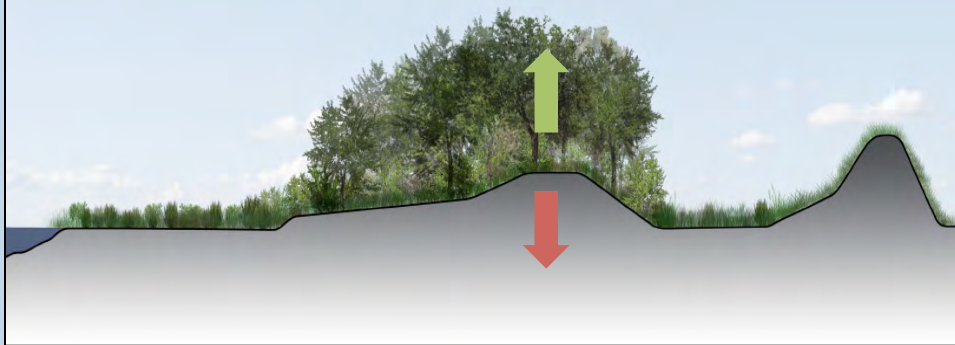
1. Land loss decreases storm energy dissipation



2. Ridge created using dredged Mississippi River sediments



3. Vegetation can offset subsidence elevation losses over time



4. Natural vegetated ridges efficiently dissipate storm energy, reducing surge potential.



New Orleans Levees



Collaboration between Parish, State, and USACE to utilize maintenance dredging for priority projects. Parish is only responsible for 30% over Federal Standard.

BUDMAT WEST BAY RESTORATION PARTNERSHIP



TWI Alternative #2 (Preferred Alternative)



Imagine the result



CAT ISLAND RESTORATION PARTNERSHIP



Plaquemines Parish Government
 Barataria – Terrebonne National Estuary Program
 Shell
 Apache Minerals
 Coastal Impact Assistance Program
 American Bird Conservancy
 National Audubon Society



Total funds and donations: \$3M



Imagine the result

BUDMAT



BUDMAT

Agreement between Corps of Engineers and Plaquemines Parish signed on August 6, 2014 to restore approximately 300 to 600 acres of marsh habitat

The intent is to use dredged material to create habitat each year. Only 38 percent of dredged material is currently used beneficially

A potential source of sediment for marsh restoration projects in Plaquemines and St. Bernard Parishes

Imagine the result



Long Distance Sediment Pipeline



Long Distance Sediment Pipeline



Cat Island



January 2011



June 2011



January 2012



June 2012



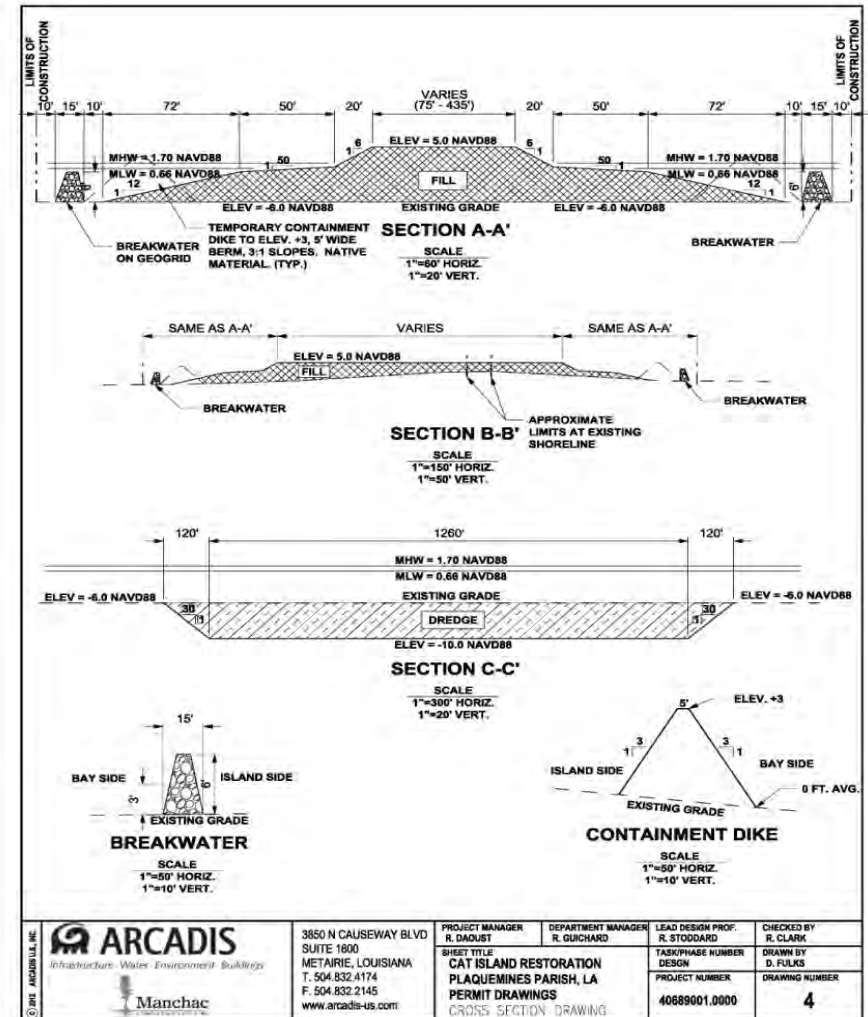
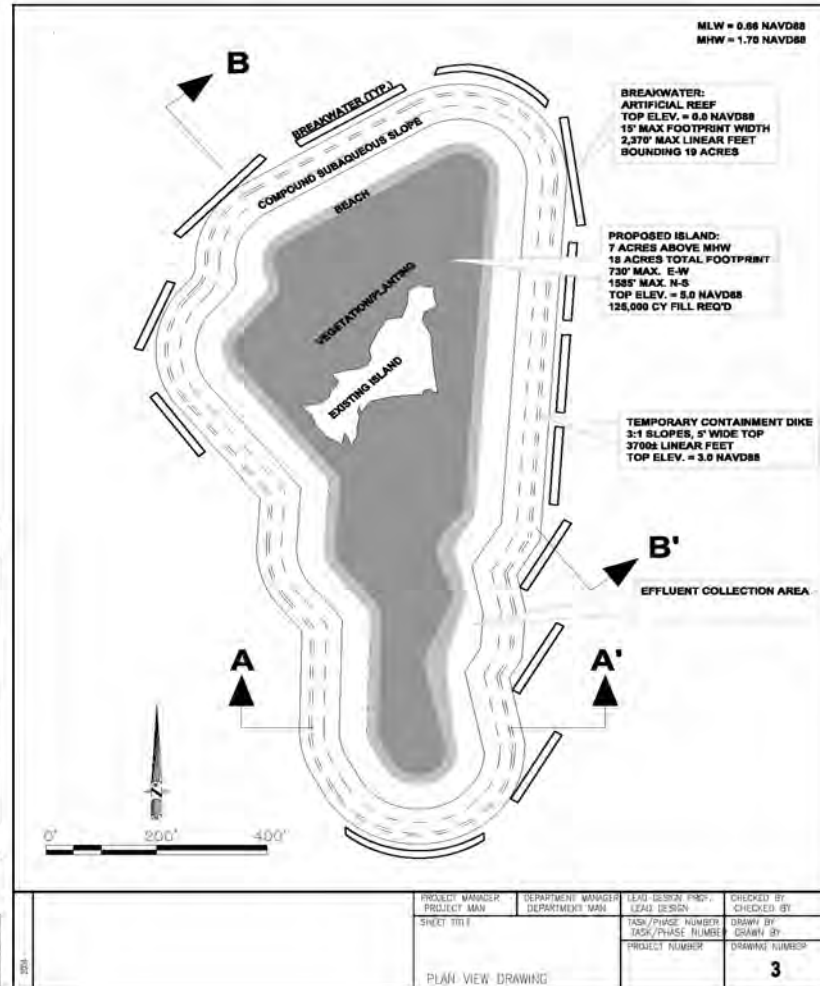
Cat Island West - January 2012



Cat Island West - November 2012



Restoration Plan - Cat Island West



Summary

- The Processes and Rates of Change Have Been Described for Over 100 Years as Well As Their Impacts
- Our Own Development Activities Have Made the Coast, Our Populations and Infrastructure Even More Vulnerable to Present and Future Relative Sea Level Rise (SLR and Subsidence)
- An Open Question Exists On the Affordability of Being Able to Continue to Live and Work in A Landscape Changing More Quickly Than Almost Anyplace on the Planet



From 1965 Betsy to 2005 Katrina

11 foot surge (up to 9 foot flooding in city)
13,000 houses flooded
57 deaths in New Orleans



16.5 foot surge (up to 14 foot deep flooding in city)
95,000 houses flooded
1292 deaths in S. Louisiana

QUESTIONS ?

