National Commission on the

BP DEEPWATER HORIZON OIL SPILL AND OFFSHORE DRILLING

Attachment 29

Written Statement and Presentation of Garret Graves

Director, Louisiana Office of Coastal Activities

Chairmen, members of the Commission, thank you for the opportunity to be here today.

The Deepwater Horizon Oil spills brought attention to one of the greatest and most complex environmental, cultural and economic challenges facing our country.

Since the 1930s, coastal Louisiana has lost over 2300 square miles. To put this in perspective, it is like having the entire state of Rhode Island or Delaware removed from the map. Perhaps a little closer to home, it is like eliminating the District of Columbia – 37 times over.

Many may view the challenges that we are facing as a parochial, state, or regional problem with only local repercussions. This impression is flawed. The resources associated with coastal Louisiana have implications in all 50 states and every taxpayer is affected by our ability to develop a resilient coastal landscape and sustainable ecosystem.

Proof lies in experiences that have occurred in the last five years.

First, the U.S. Fish and Wildlife Service determined that coastal Louisiana's ecosystem is the most productive ecosystem in North America. In fact, 70 percent of the commercial seafood harvested in the Gulf of Mexico is from Louisiana's offshore and up to 98 percent of the commercial seafood harvested in the Gulf of Mexico is dependent upon Louisiana's unique estuary. This area produces up to one-third of the wild seafood harvest in the continental United States and is the top source of shrimp, blue crabs, crawfish and oysters in the nation.

Impacts observed following Hurricane Katrina indicated that much of the void in Louisiana fishing fleet was filled by foreign imports. This included filling the void of the most consumed seafood in the country, shrimp, with an influx of foreign, farmed seafood.

Louisiana is also the top producer of domestic energy and one of the nation's top import points for foreign oil and gas. The energy infrastructure in Louisiana's coastal area represents one of the highest concentrations of energy infrastructure in the world. Indicating the national importance and energy security implications of our state's energy production, gasoline prices spiked nearly 75 cents a gallon following Hurricanes Katrina and Rita in 2005 and prices surged over $1/gallon following the Hurricanes Gustav and Ike in 2008. This represents the largest price spike since the Arab oil embargo. Every consumer in the nation paid the price for the vulnerability of coastal Louisiana.

Today, Americans are paying a different price for Louisiana's energy dominance. The offshore energy moratorium is causing increased reliance upon foreign energy and the transfer of jobs and economic activity to foreign energy sources – including Nigeria and Venezuela – and other nation's that do not share America's values.

Coastal Louisiana is also home to five of the nation's top 15 ports. We have the largest tonnage port in the hemisphere and one of the world's largest port cargo complexes in the world (between Baton Rouge and New Orleans). Today, the Mississippi River system, through our ports, provides maritime commerce to over 30 states and is responsible for approximately 19 percent of the water borne commerce in the United States.

Following Hurricane Katrina, the river system was shutdown and products were unable to access markets. This included an estimated 75 percent of the grain produced by the mid-western farmers.

Again, every consumer in the nation experienced the financial pain of not making more proactive investments in coastal Louisiana.

Finally, the reactions to the 2005 hurricanes included the appropriation of response and recovery funds and programs totaling $150 billion. Virtually every penny was financed by deficit spending. Not only did taxpayers in 2005 foot this bill, but generations to come will help to finance these reactions.

We estimate that a proactive investment of $8-10 billion in previously-approved projects before Hurricane Katrina could have saved over 1000 lives and in excess of $100 billion for American taxpayers.

History and federal law are clear, the federal government will pay exponentially more reacting to a storm (Stafford Act) than could be proactively invested to improve the resiliency of the ecosystem and coastal communities.

The problems on Louisiana's coast date back 80 years to the construction of levees on the lower Mississippi River system through the Mississippi River and Tributaries program. While this civil works project was incredibly successful at preventing river flooding and ensuring the deep-draft navigation of the Mississippi River, it has caused one of our nation's worst environmental disasters – the loss of over 2300 square miles of coastal wetlands. In recent years, the loss has averaged up to 70 or 80 square miles of wetland per year. Keep in mind that during this same time, the United States has had a "no net loss of wetland policy" and requires permits for impacting as little as one-tenth an acre of wetland. Meanwhile, the same agency that is responsible for managing the wetland regulatory program is responsible for the majority of this wetlands loss. The U.S. Army Corps of Engineers has not issued a single permit for this loss and has not mitigated any impacts from their continuing actions. This must be addressed.

This encroachment of the Gulf of Mexico upon our coastal communities has increased the vulnerability of our citizens. Hurricane Katrina was evidence of this fact. Today, billions of dollars are being invested in repairs and revisions to the Greater New Orleans area hurricane protection system to provide a 100-year level of protection. Prior to the 2005 hurricane, we were constructing a 1960's-1970's-era protection system that was to provide a 300-year level of protection. In other words, the encroachment of the Gulf of Mexico has resulted in higher levees that actually provide a lower standard of hurricane protection. The coastal wetlands are our natural buffer to storm surge. Their loss not only reduces the ecosystem services, but exacerbates the impact of hurricanes in south Louisiana.

Since Hurricane Katrina, the State of Louisiana has applied many painful lessons learned in our coastal area. We have made fundamental changes in our organizational structure, made record investments in our coastal restoration, resiliency and sustainability efforts and eliminated regulatory and other policy conflicts that prevented, complicated or delayed projects. However, many critical policy and regulatory conflicts continue to exist at the federal level. In addition, coastal Louisiana appears to be a lower

federal budget priority than other less nationally significant ecosystems. We believe that this is a key area where the commission's perspective could yield important progress.

Other large-scale ecosystem restoration efforts such as the Everglades, Chesapeake Bay and Great Lakes have benefited from the federal investment of hundreds of millions of dollars to over $1 billion annually in recent years. While we commend President Obama for recently requesting the first increment of construction funds for coastal restoration in Louisiana, the federal budget associated with the restoration of our ecosystem peaked with this FY2011 request of $36 million. $19 million of this amount is requested for construction.

At this same time, over $165 billion has been derived from offshore energy production seaward of Louisiana's coast for the U.S. Treasury. For energy production on federal lands, states share in 50 percent of the revenue. An additional 40 percent is deposited into the Reclamation Fund for water-related projects in those same states. In effect, 90 percent of the funds generated from energy production on federal lands are returned to those states that host such production. For the $165 billion produced for the federal treasury off of our coast, we have received virtually nothing. The disparity is indefensible. Further adding insult is the fact that our neighbor state of Texas retains full energy revenues for energy production up to approximately nine miles seaward of their coast while Louisiana retains energy revenues for only one-third this distance – or approximately three miles seaward of our coast. It is noteworthy that Louisiana's Constitution requires that any funds provided to the state from offshore energy production must be reinvested in coastal and ecosystem resiliency efforts. Our citizens have made their commitment to their coast evident.

A dedicated, sustainable funding stream comprised of oil spill remediation and energy revenue sharing should be committed to the Gulf Coast.

These unsustainable federal policies that result in the increased expenditure of federal funds, increased cost to taxpayers and increased economic uncertainty must stop. We have been studying coastal Louisiana's ecosystem for nearly five decades – without action. The current federal water resources project process takes 40-years from conception to completion. During this same period, we would lose miles and miles of wetlands – making the solutions studied decades earlier irrelevant to the ever-changing coastal environment. A fundamentally new process that is capable of responding to the dynamic and urgent situation facing coastal Louisiana is needed.

The State of Louisiana developed a coastal revitalization plan in July to address the Deepwater Horizon spills and the historic coastal losses.

This plan includes the following funding recommendations:

1) The dedication of Natural Resources Damage Assessment (NRDA) remediation efforts to fisheries and coastal restoration efforts. This would include a substantial and immediate down payment on NRDA liability. Should the responsible parties refuse to participate in an early settlement, I would urge that Congress act to compel the parties to provide a down payment on

NRDA. This early restoration payment should be allocated among the states based upon need and preliminary data related to oil spill impacts.

2) The dedication of appropriately-apportioned Clean Water Act fines to coastal and ecosystem restoration efforts in Louisiana. Once again, we would urge that a substantial down payment be made against this total liability -- currently estimated to be between $5 and $22 billion. It is critical that the Department of Justice and the Environmental Protection Agency seek full compliance with civil penalties provided under the Clean Water Act for this unique incident. The State of Louisiana, which has taken a Clean Water Act enforcement action against the responsible parties, should be a full partner with the federal agencies in the negotiation of a settlement offer with the responsible parties.

3) Expanding and expediting Gulf of Mexico Energy Security Act revenue sharing to begin immediately rather than beginning to share energy revenues with the Gulf States in 2017 will provide a long-term, sustainable funding stream dedicated to our coastal efforts.

4) Committing the $250 million in New Orleans area hurricane protection system mitigation funds toward large-scale restoration efforts will allow for up to two large-scale restoration efforts to be implemented in the near-term.

5) A substantial, multi-agency budget request for coastal restoration in Louisiana in the President's FY2012 budget request will bring the full expertise of the federal government to the table. Agencies like the U.S. Fish and Wildlife Service, National Oceanic and Atmospheric Administration (NOAA) and the Environmental Protection Agency have largely been sidelined while the Corps of Engineers has led federal efforts in coastal Louisiana.

While the funding stream is critical, the current dysfunctional federal water resources project development and implementation process is equally as challenging. Without changes, oil spill remediation dollars could remain escrowed as federal policy obstacles prevent critical action.

Alternative project implementation venues such as the federal multi-agency Coastal Wetlands Planning Protection and Restoration Act (Breaux Act) process takes four to eight years to take a water resources project from conception to completion. The Coastal Impact Assistance Program has shown another alternative process whereby projects have moved to construction as quickly as two-three years. State-led efforts have shown even greater efficiency.

The bottom line is that a fundamentally new project development and implementation structure is needed. The state recommends a structure that would expand the existing Breaux Act program while allowing greater participation by the state and designating a new rotating task force federal co-chair consisting of high-level representatives from the U.S. Fish and Wildlife Service, NOAA and the Environmental Protection Agency. The State of Louisiana should co-chair the task force. Importantly, we request that alternative National Environmental Policy Act (NEPA) arrangements be granted that would allow the federal-state task force to quickly move forward on restoration and recovery efforts. These alternative NEPA arrangements would primarily apply to projects that are designed to restore or enhance the ecosystem. Expediting this process would result in a net benefit to the environment.

In the interim, the Commission should consider the establishment of an arbitration board that would work to resolve disputes between the State of Louisiana and the Corps of Engineers. An estimated 20 "statutory accountability" issues are stopping progress. A similar process was created for Federal Emergency Management Act claims related to Hurricane Katrina. In that case, the board was able to break the logjam on policy and other conflicts that stymied recovery efforts.

Last, the State of Louisiana has been intimately involved in the Natural Resources Damage Assessment (NRDA) trustee council established for the Deepwater Horizon incident. The council participants representing five states and two federal agencies have been working very hard to progress early restoration actions; however, it is difficult to see how the authors of the Oil Pollution Act framework could have contemplated a spill where five states were affected. To date, the 60-70 trustee representatives have been unable to reach consensus on an offer to proffer to the responsible parties for a NRDA down payment. In the case of Louisiana, this spill placed an additional burden on an already-stressed ecosystem. We must begin remedial actions now.

As this consensus remains elusive, our coastal resources continue to be impacted. The state proposed a solution whereby each trustee would have one, high-level, empowered representative assigned to a trustee management council. The Environmental Protection Agency and the U.S. Department of Justice would also join the management council – thereby providing a holistic picture of two primary funding streams – Clean Water Act fines and NRDA liability. The state also suggested that considerations be given to a change in the law that would require a preliminary Clean Water Act and NRDA assessment be performed by the National Academies in conjunction with the states. The preliminary assessment would yield: a) an estimate of total NRDA liabilities b) an assessment of Clean Water Act liabilities and c) a preliminary apportionment of impacts among the gulf states. The responsible parties would then be legally-compelled or incentivized to make a down payment on their NRDA and Clean Water Act liabilities.

The state of Louisiana has an estimated $9billion in congressionally approved projects for coastal sustainability or ecosystem restoration. The State is prepared to immediately progress these projects as remediation efforts to the Deepwater Horizon spills.

Chairmen, members of the Commission, thank you for the opportunity to share the state's perspective. We appreciate your recognition of the importance of this component of the oil spill recovery. Your

mission is critical not just to the restoration and recovery of the Gulf Coast, but to ensuring a functional response and recovery to future spills in communities around the nation.

We stand ready to address any questions or requests for information that you may have.

State & Federal: Defining a Shared Path for Gulf Restoration (Louisiana)

National Oil Spill Commission

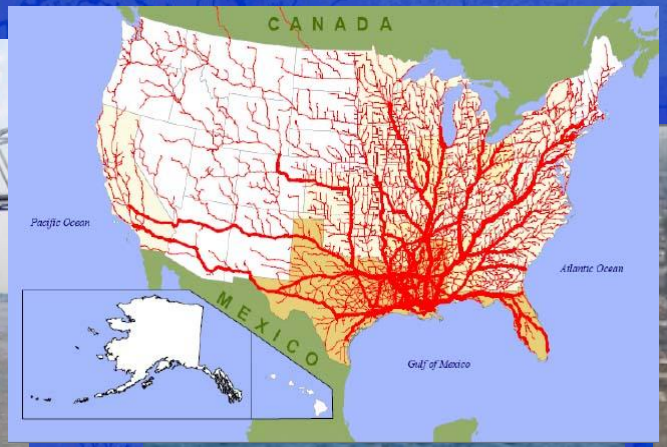
September 28, 2010

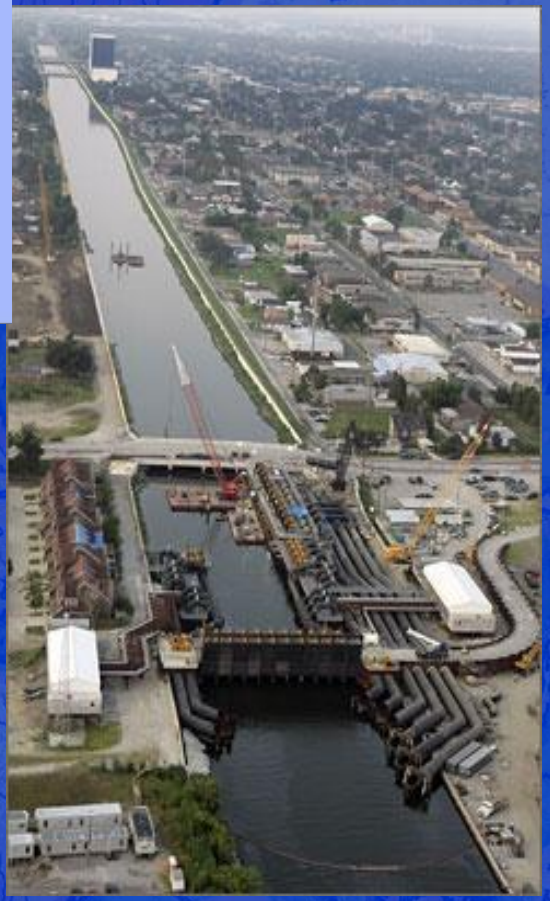
garret graves
Chair, Coastal Protection and Restoration Authority
Lead Trustee, Natural Resources Damage Assessment
garret@LA.gov; 225.342.7669

Planning for the Future: Understanding Current Needs

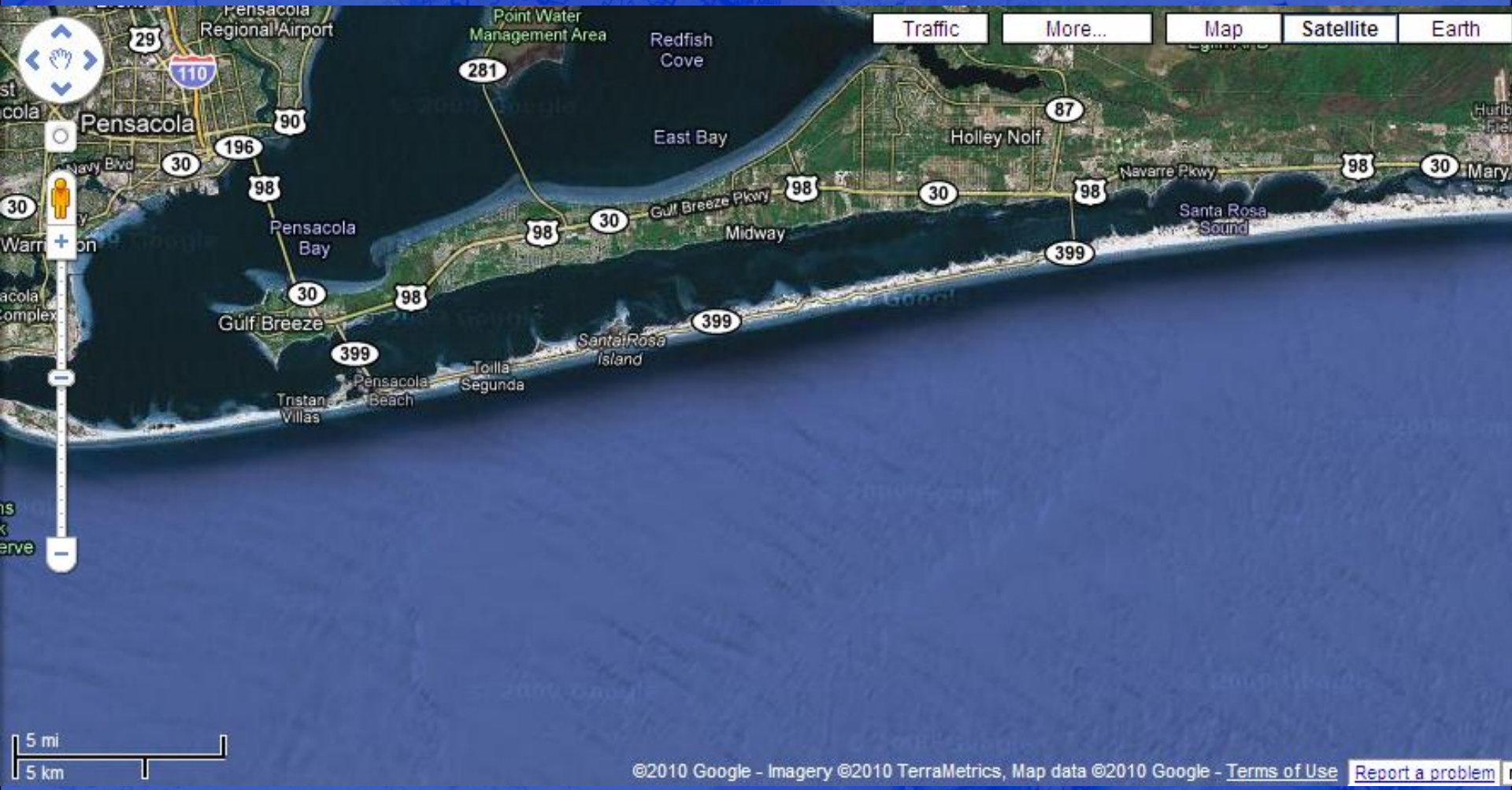
- 5 of the Top 15 ports
- Largest Port Cargo Complex
- Only Intermodal Medium to Over 30 states

- Most Productive Ecosystem in North America
- Top Seafood Producer
- Top Source of Domestic/Imported Energy

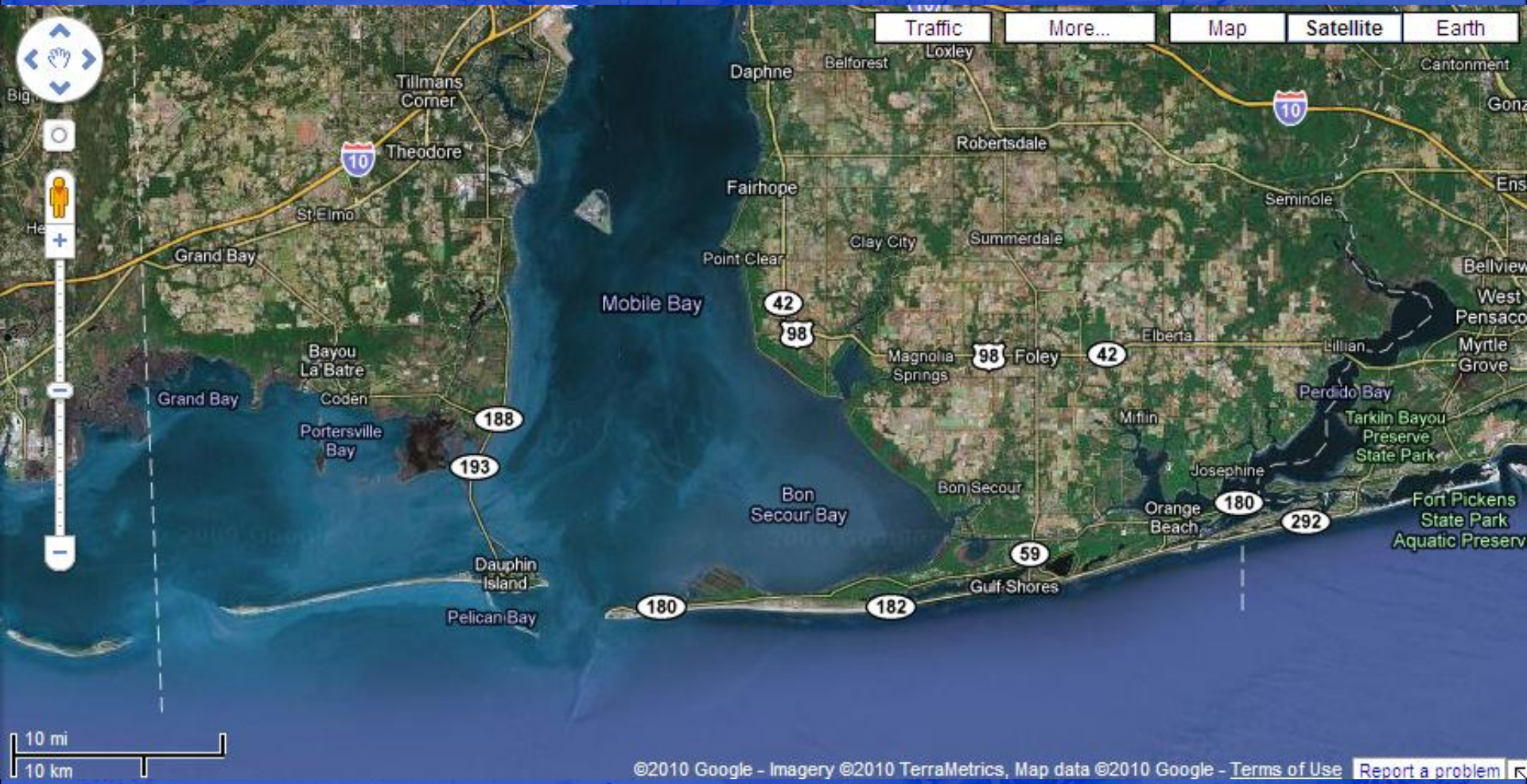




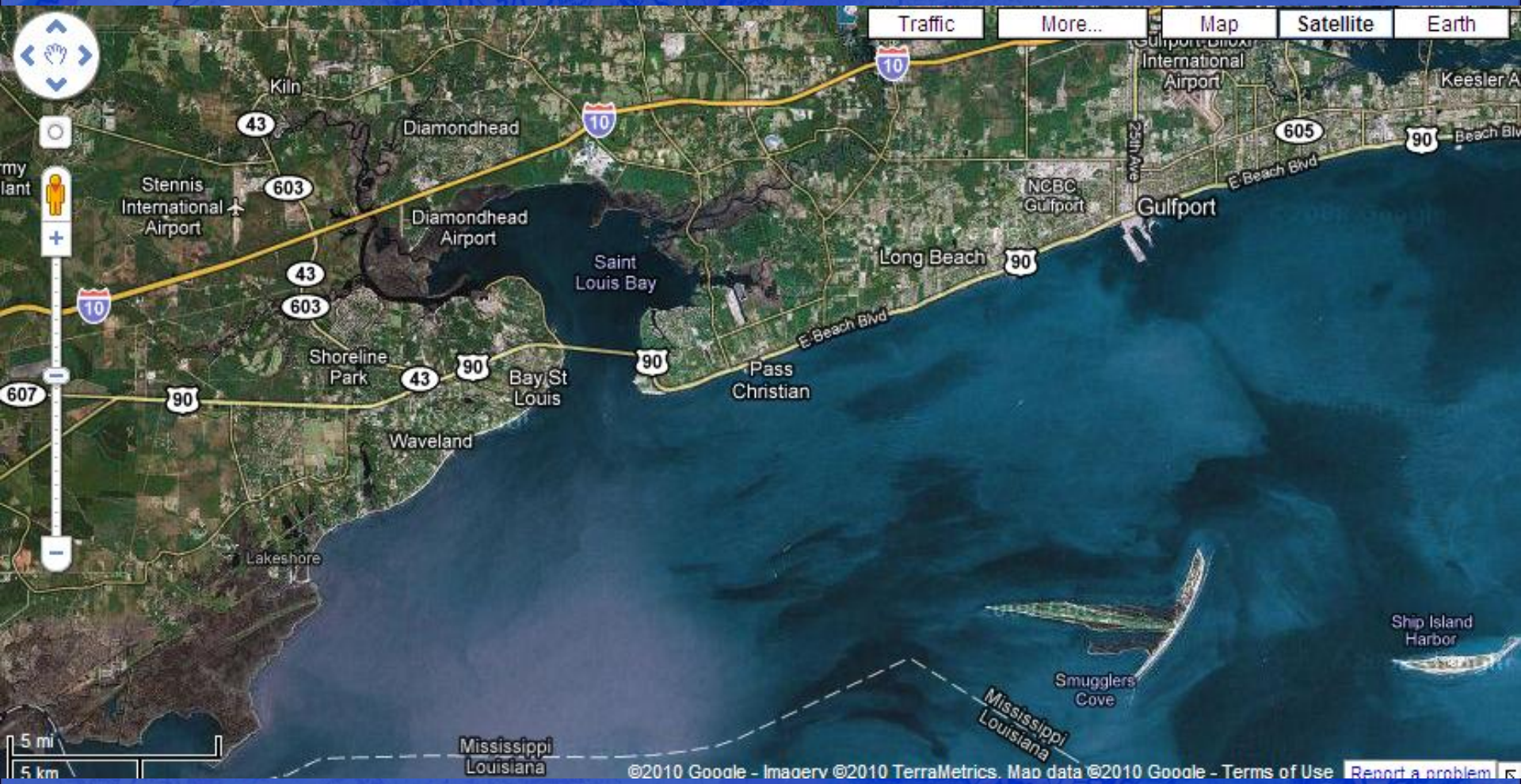
Coastal Florida



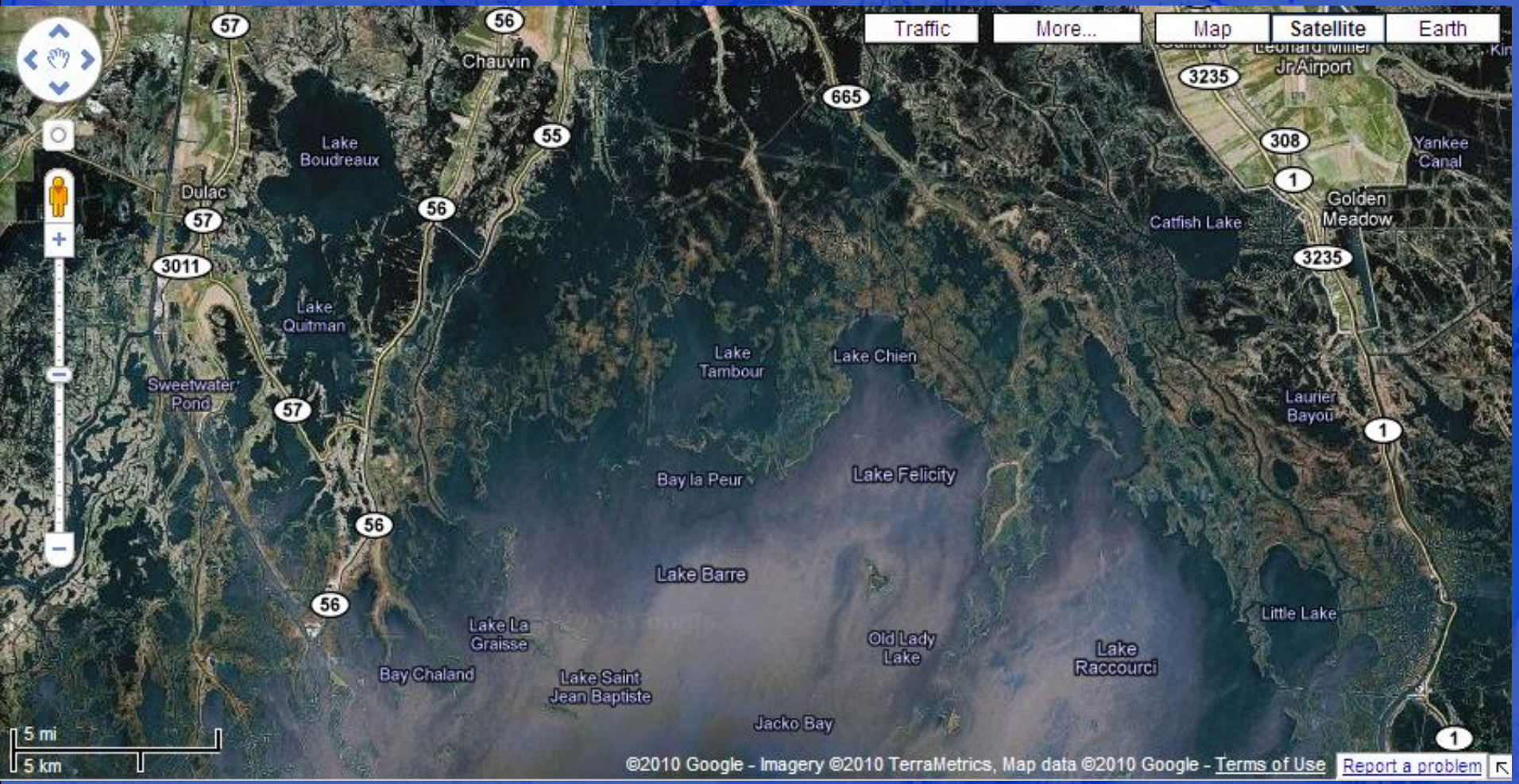
Coastal Alabama



Coastal Mississippi



Coastal Louisiana

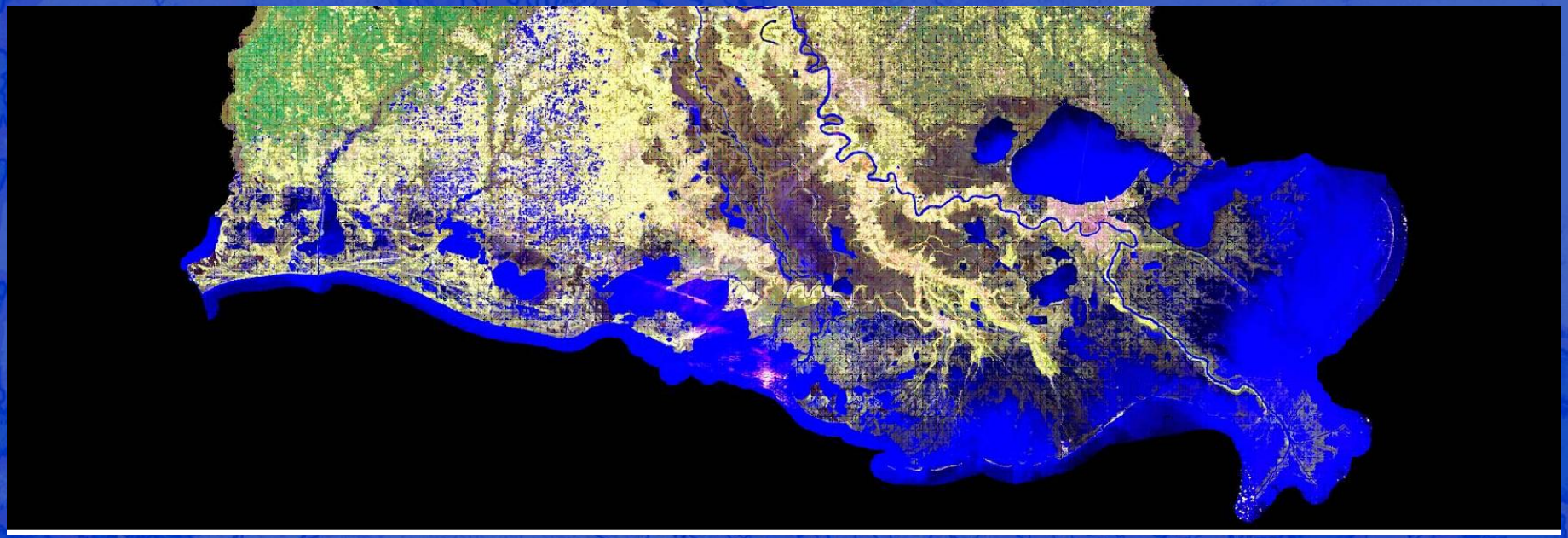


Coastline/Shoreline

STATE	Total Coastline (miles)	Tidal Shoreline (miles)	Tidal Shoreline (feet)	Threatened Shoreline (within 350 miles of incident site)
Louisiana	397	7,721	40,766,880	40,766,880
Mississippi	44	359	1,895,520	1,895,520
Alabama	53	607	3,204,960	3,204,960
Florida	770	8,402*	44,362,560	16,857,773

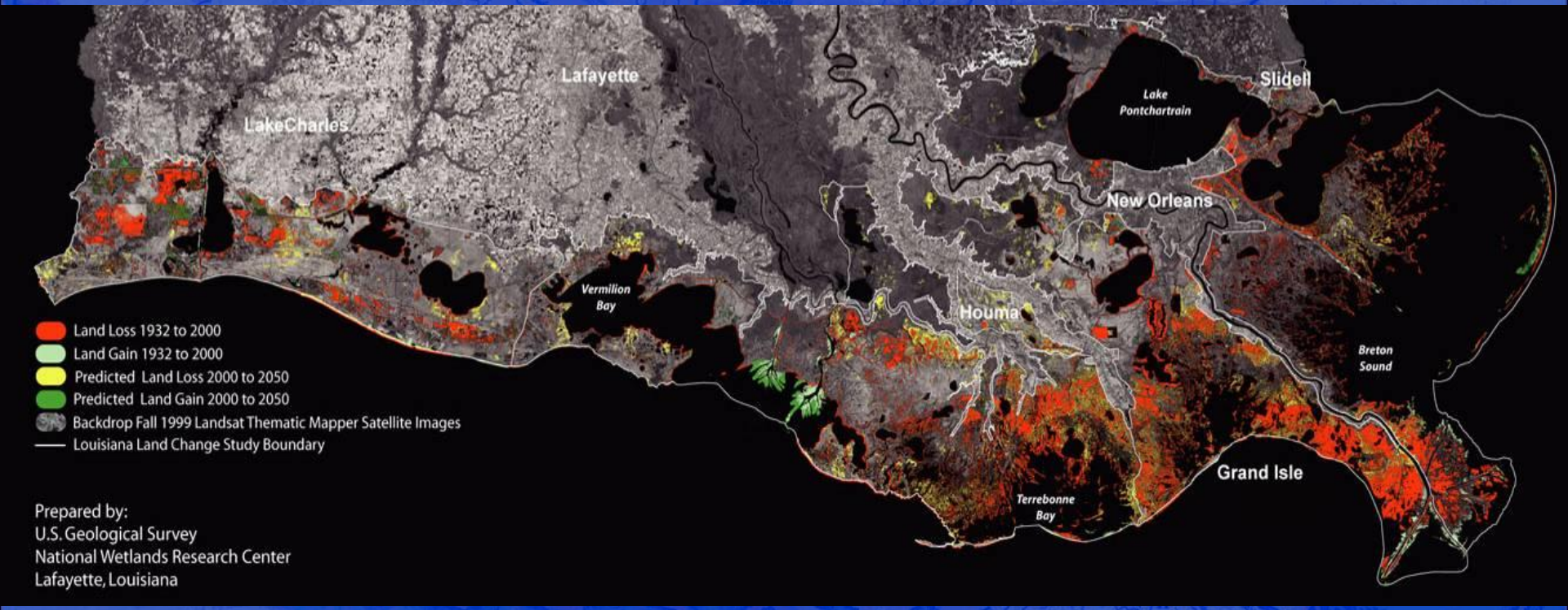
NOTE: compare coastline miles to shoreline miles. Louisiana has a disproportionate ratio

Coastal Louisiana



7,721 miles of tidal shoreline

Coastal Land Loss



Over 2300 square miles lost since 1930

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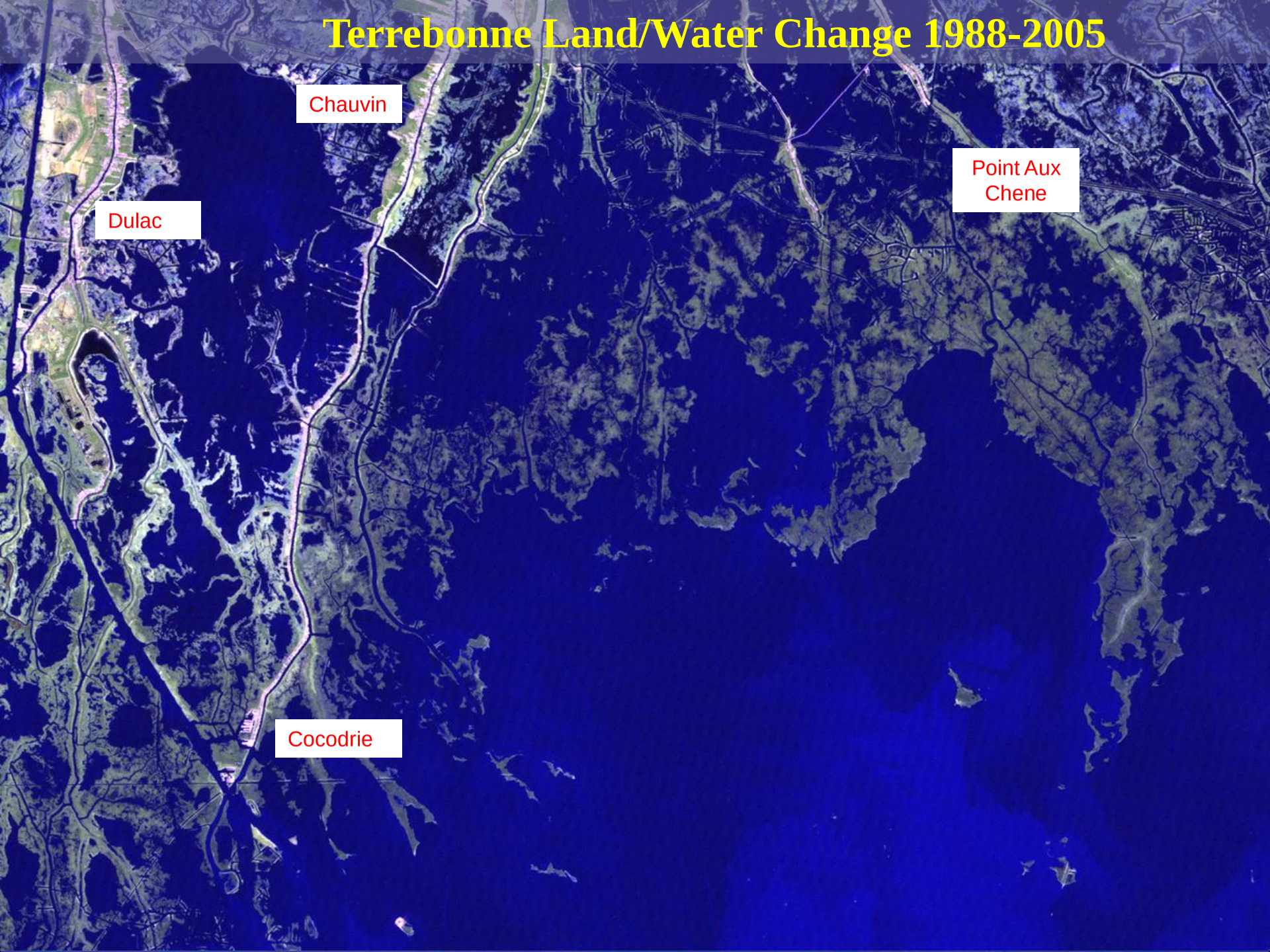
Coastal Protection and Restoration Authority of Louisiana

Terrebonne Land/Water Change 1988-2005



Oil Spill/Coastal Recovery Funding

1. Clean Water Act fines
   - Supplemental Environmental Programs

2. Natural Resources Damage Assessment
   - Actions to remediate spill impacts

3. Gulf of Mexico Energy Security Act funding
   - Offshore energy revenues

4. Hurricane Protection System mitigation funding
   - $250 million available today

5. Fiscal Year 2012 appropriations
   - Multi-agency participation

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Oil Spill/Coastal Recovery
Implementation Structure

1. Joint state-federal decision making
2. Modeled after the Coastal Wetlands Planning Protection and Restoration Act
3. USFWS, NOAA and EPA rotating co-chairs
4. State co-chair
5. Alternative NEPA arrangements
6. Programmatic authority for sustainability/resiliency efforts

CPRA
Coastal Protection and Restoration Authority of Louisiana

Thank You For the Opportunity

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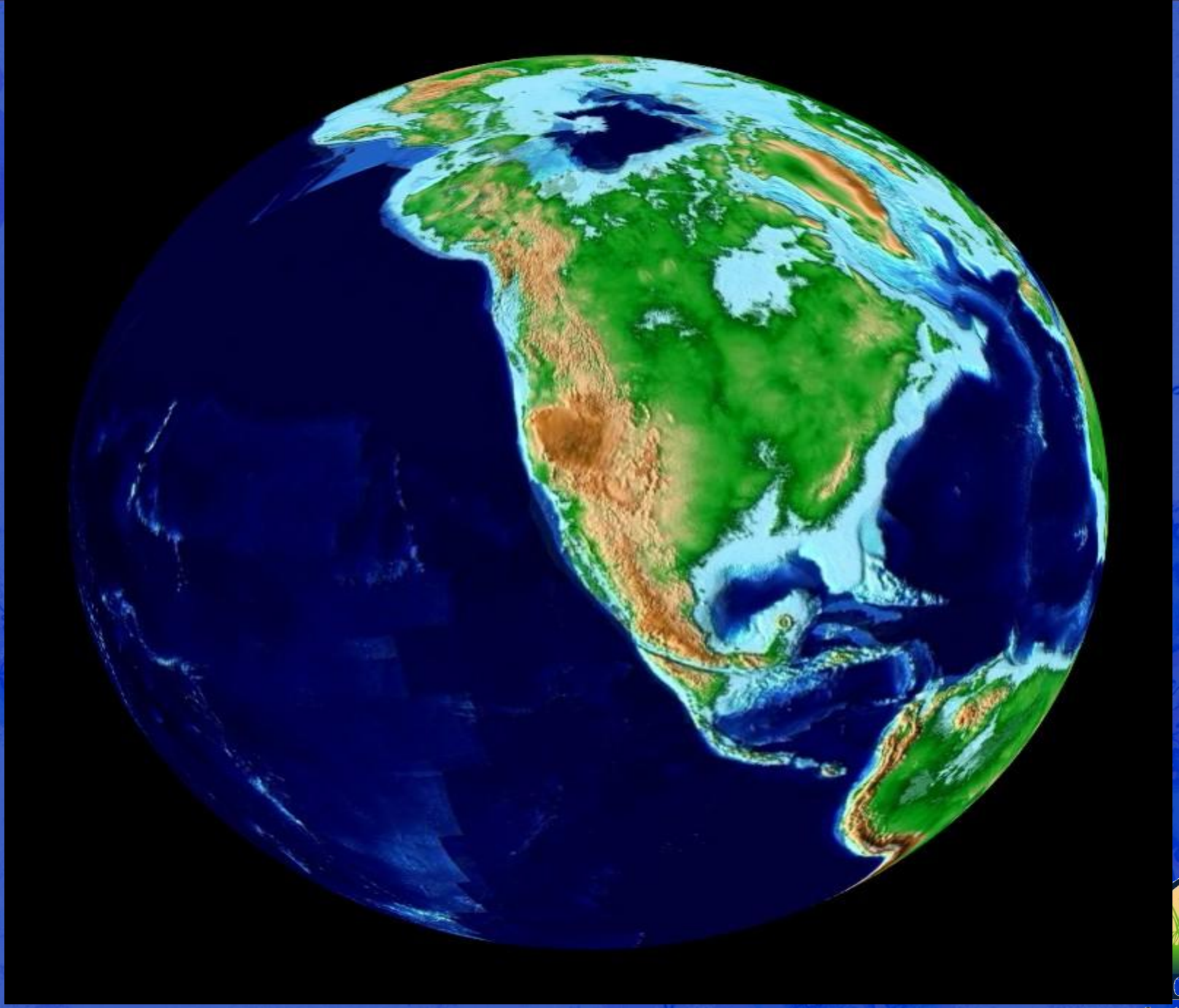
EXTRA SLIDES

Today

Source: Earth Systems Research Laboratory



60 Million Years Ago

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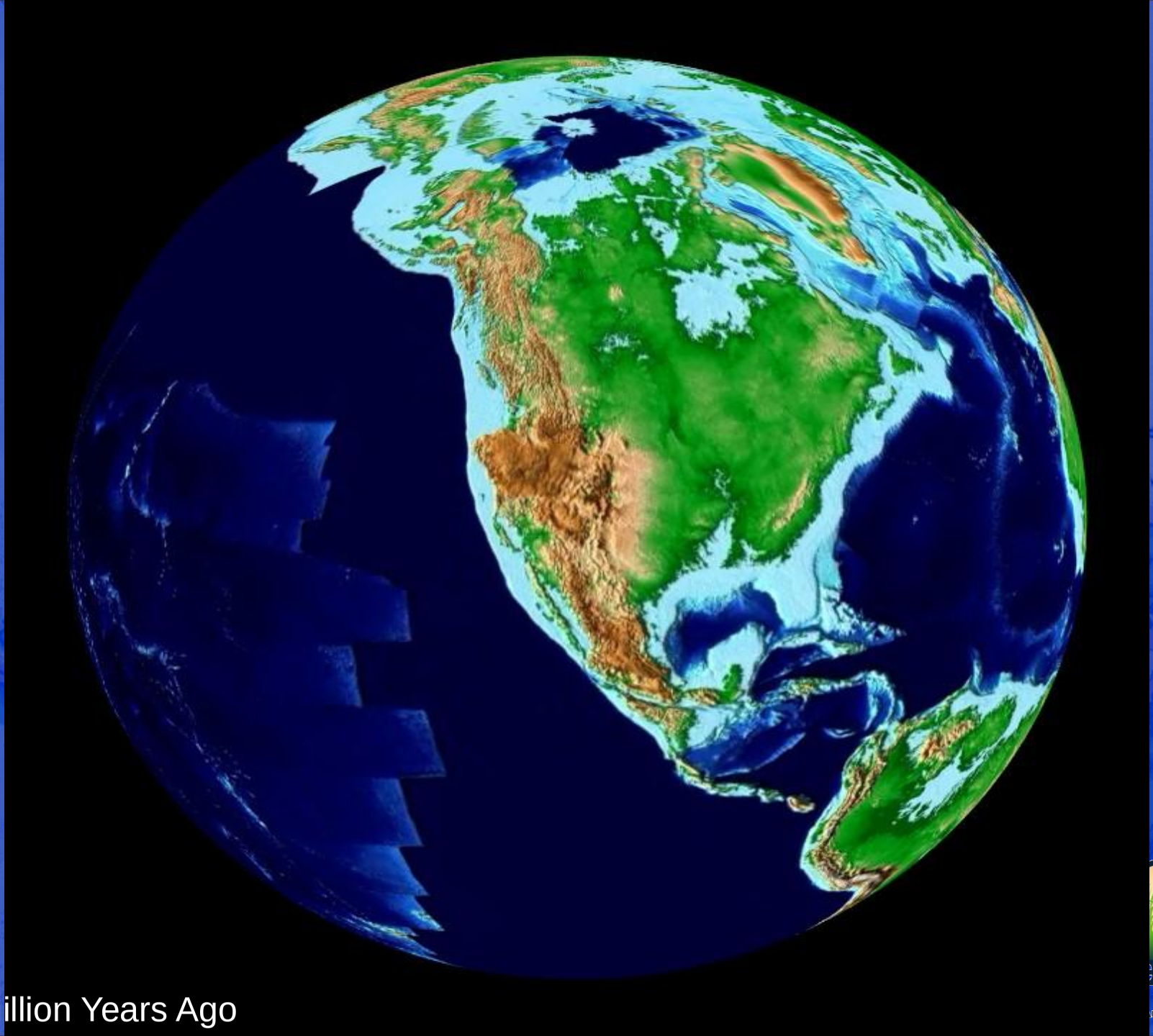
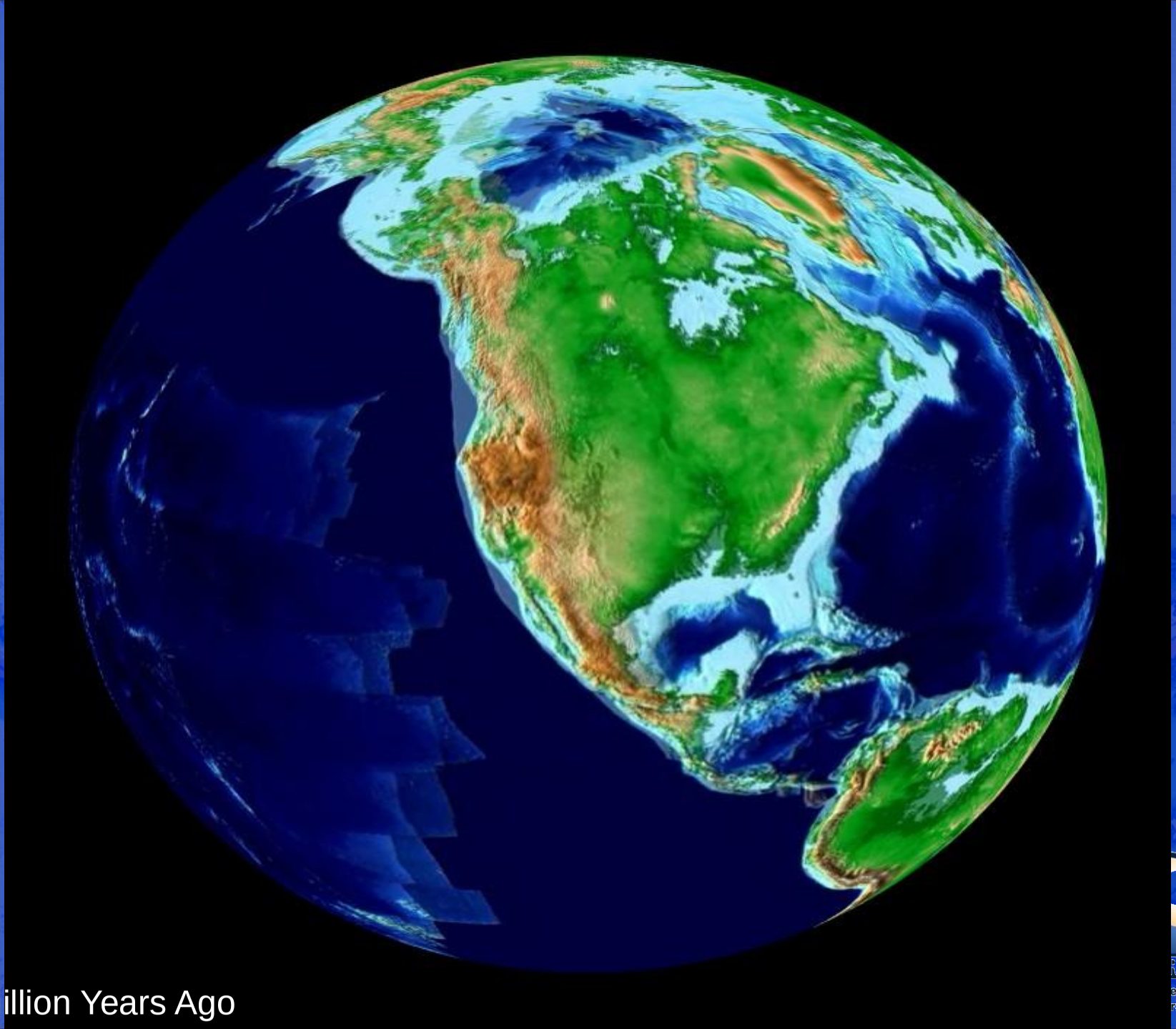
Restoration Authority of Louisiana

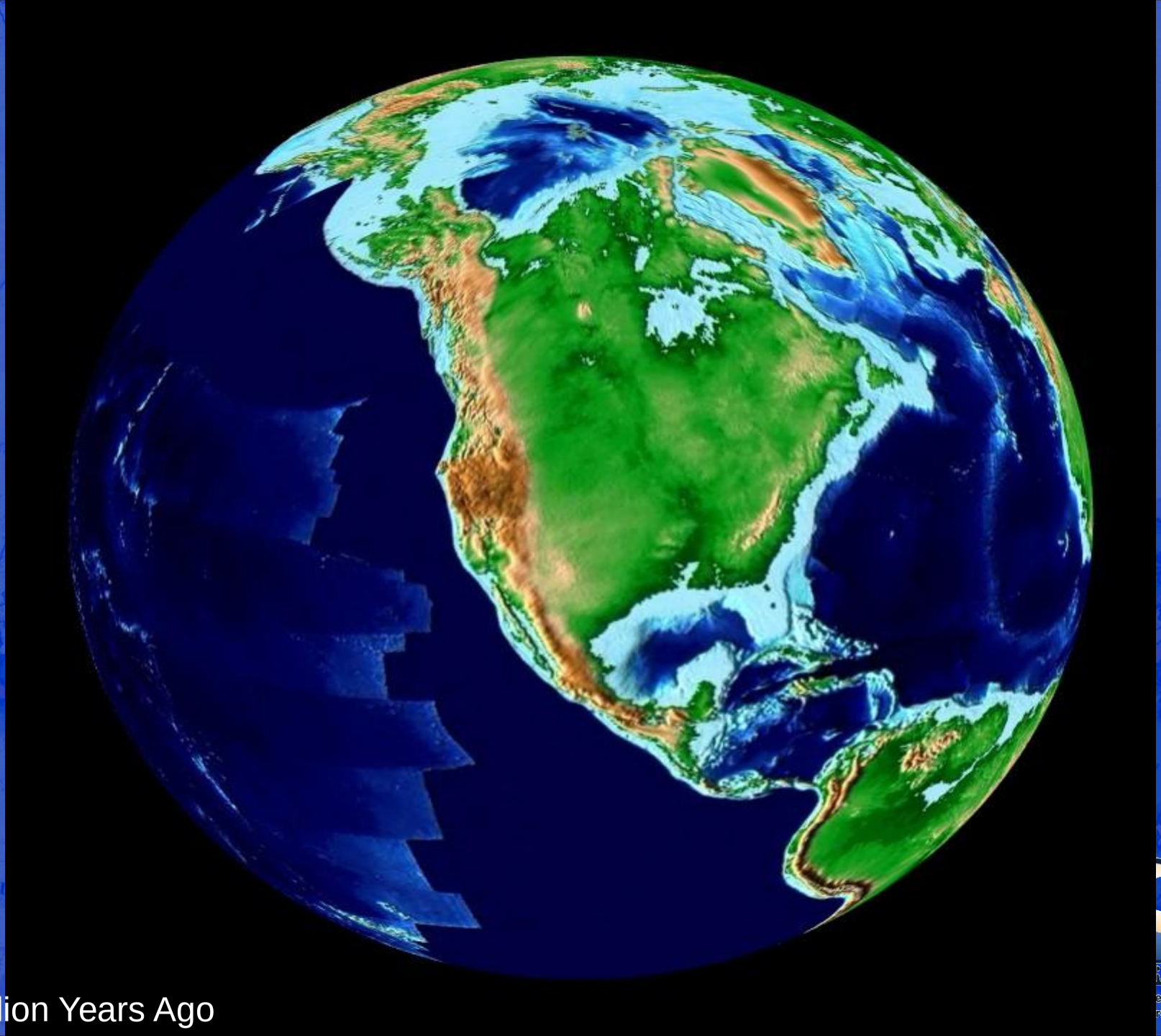


55 Million Years Ago

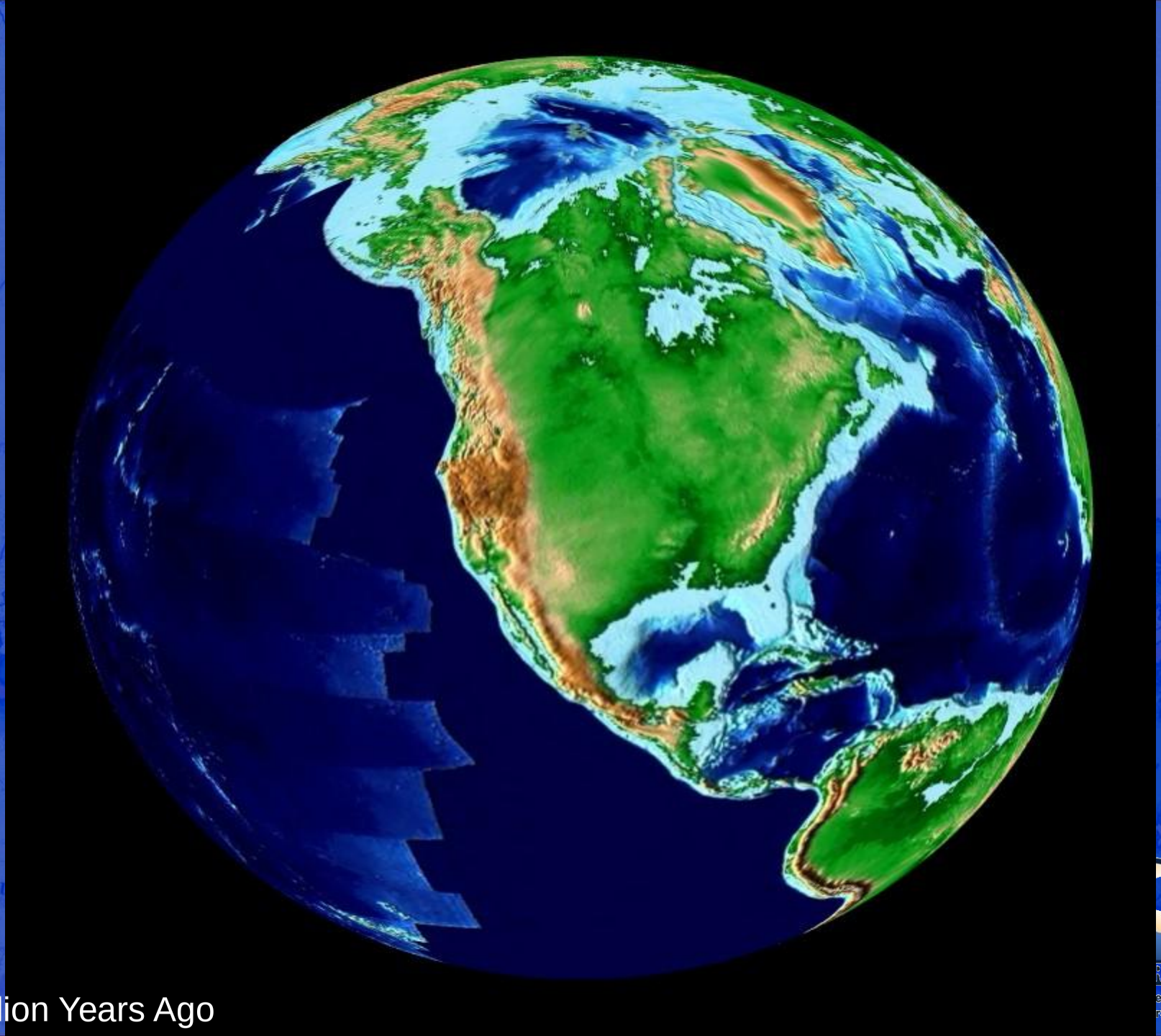
Protection and
uthority of Louisiana



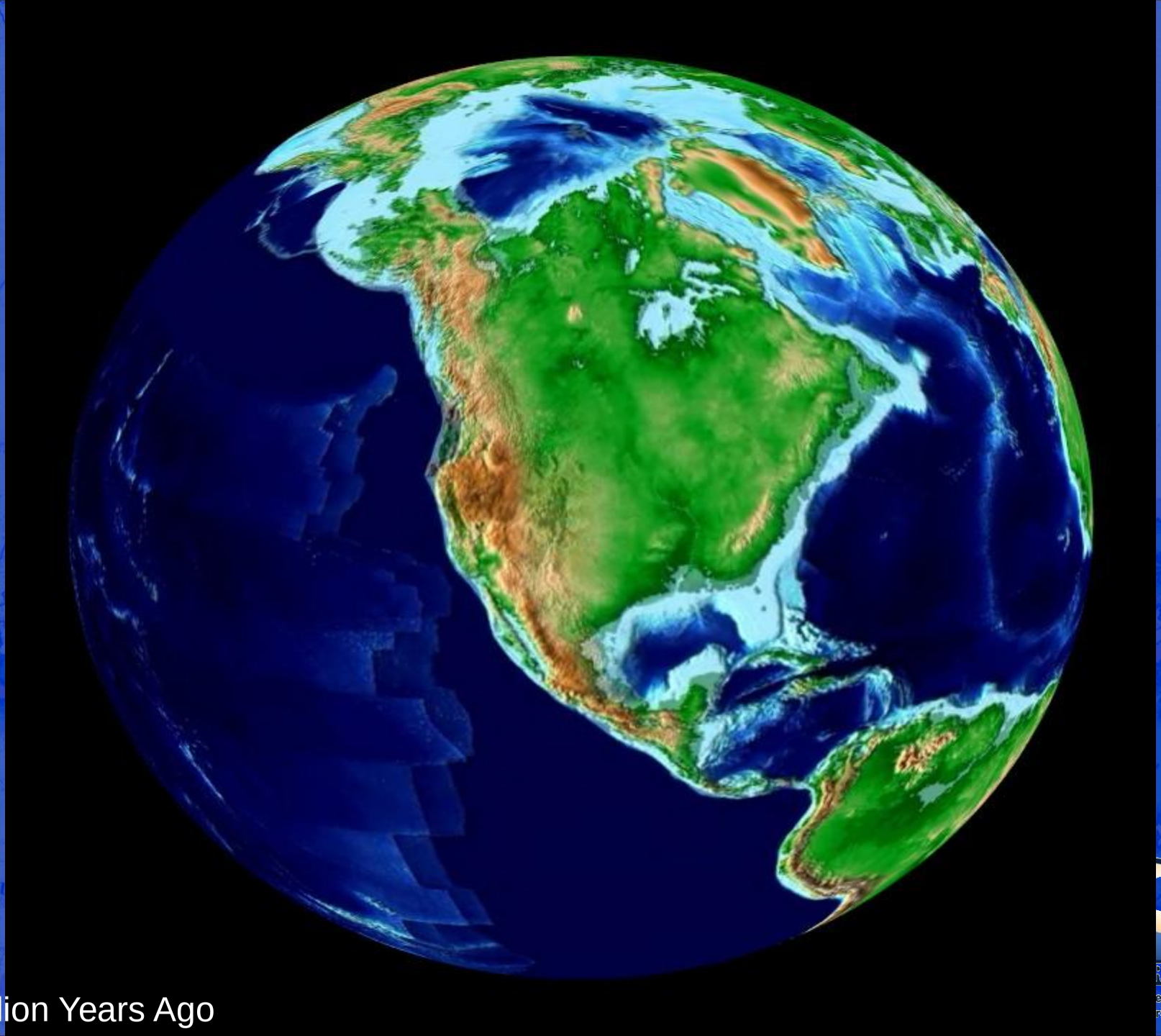
50 Million Years Ago



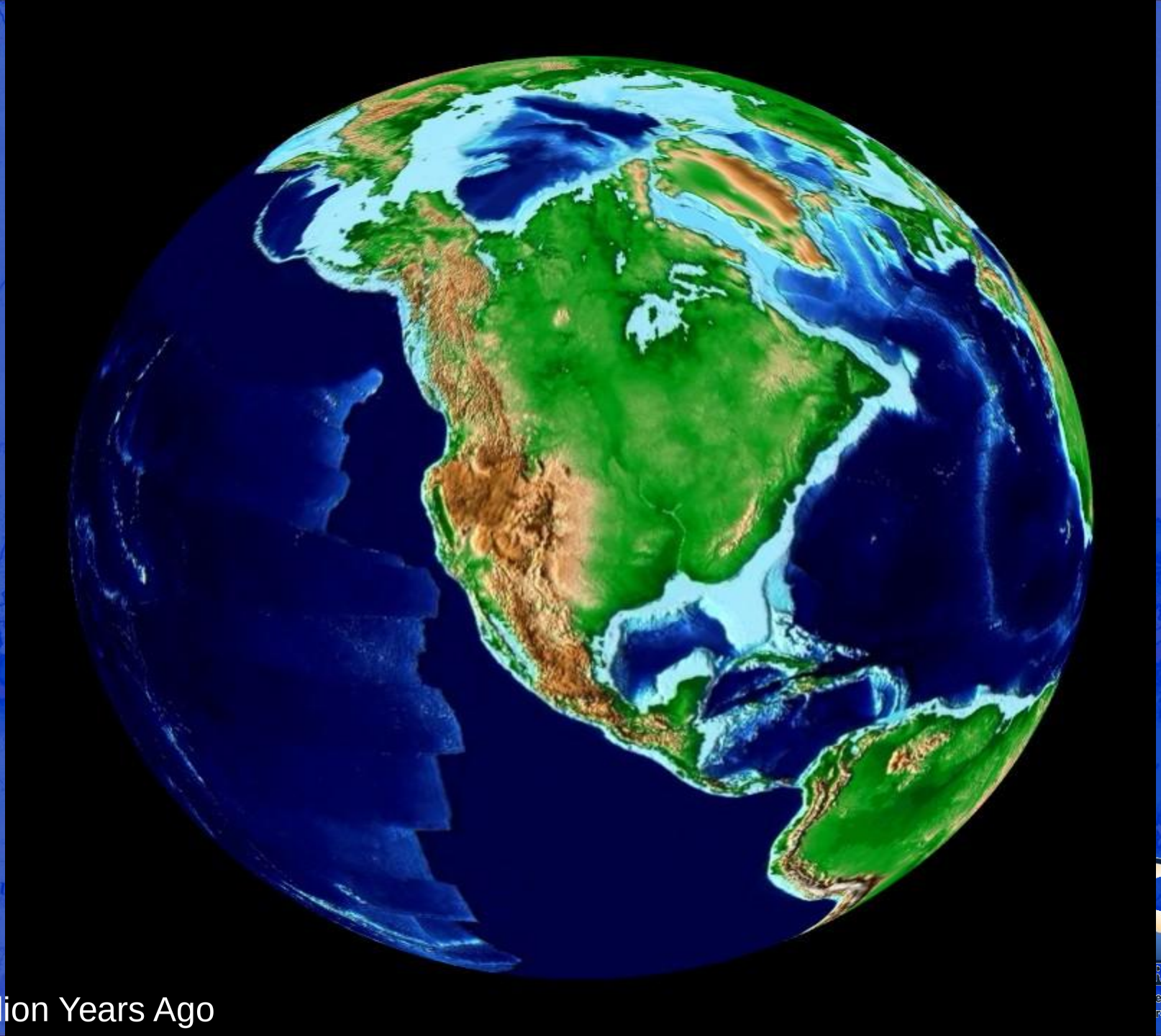
45 Million Years Ago



40 Million Years Ago



35 Million Years Ago



30 Million Years Ago

25 Million Years Ago

20 Million Years Ago

15 Million Years Ago

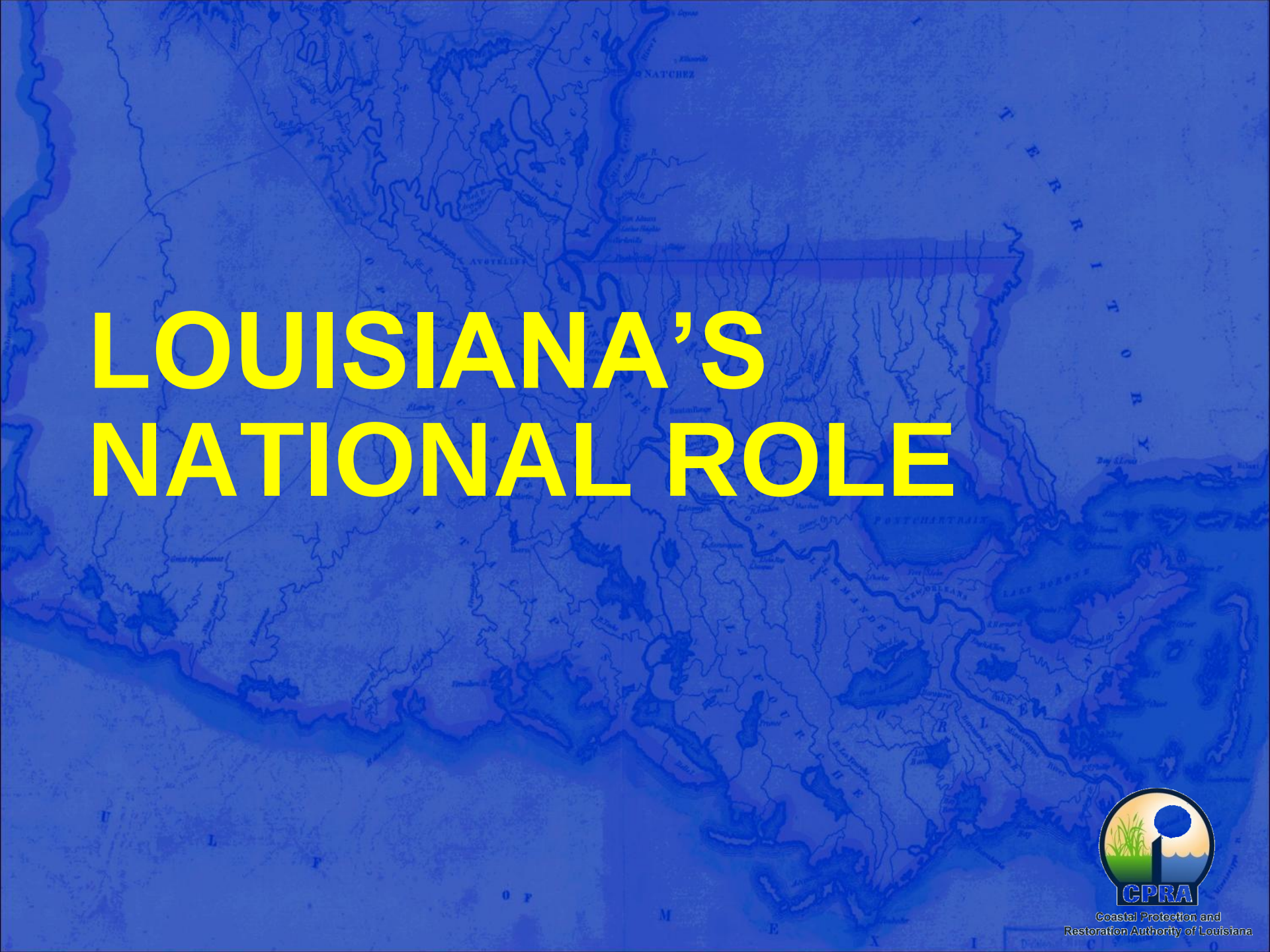
10 Million Years Ago

5 Million Years Ago

Today

Source: Earth Systems Research Laboratory

LOUISIANA'S NATIONAL ROLE



The Louisiana Purchase

"It is New Orleans, through which the produce of three-eighths of our territory must pass to market..."

Thomas Jefferson to Robert R. Livingston,
Washington,
April 18, 1802

U.S. Department of Transportation
Federal Highway Administration
Office of Freight Management and Operations
Freight Analysis Framework

Total Combined Truck Flows
(1998)

NEW YORK

Network Flows
(Tons)
- 0 - 2,000,000
- 2,000,000 - 5,000,000
- 5,000,000 - 10,000,000
- 10,000,000 - 25,000,000
- More Than 25,000,000

BEA to State Flows
(Tons)
- 0 - 1,000,000
- 1,000,000 - 3,000,000
- 3,000,000 - 9,000,000
- More Than 9,000,000

U.S. Department of Transportation
Federal Highway Administration
Office of Freight Management and Operations
Freight Analysis Framework

Total Combined Truck Flows
(1998)

LOS ANGELES

Network Flows
(Tons)
- 0 - 2,000,000
- 2,000,000 - 5,000,000
- 5,000,000 - 10,000,000
- 10,000,000 - 25,000,000
- More Than 25,000,000

BEA to State Flows
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- More Than 9,000,000

U.S. Department of Transportation
Federal Highway Administration
Office of Freight Management and Operations
Freight Analysis Framework

Total Combined Truck Flows
(1998)

HOUSTON

Network Flows
(Tons)
- 0 - 2,000,000
- 2,000,000 - 5,000,000
- 5,000,000 - 10,000,000
- 10,000,000 - 25,000,000
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BEA to State Flows
(Tons)
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U.S. Department of Transportation
Federal Highway Administration
Office of Freight Management and Operations
Freight Analysis Framework

Total Combined Truck Flows
(1998)

NEW ORLEANS

Network Flows
(Tons)
- 0 - 2,000,000
- 2,000,000 - 5,000,000
- 5,000,000 - 10,000,000
- 10,000,000 - 25,000,000
- More Than 25,000,000

BEA to State Flows
(Tons)
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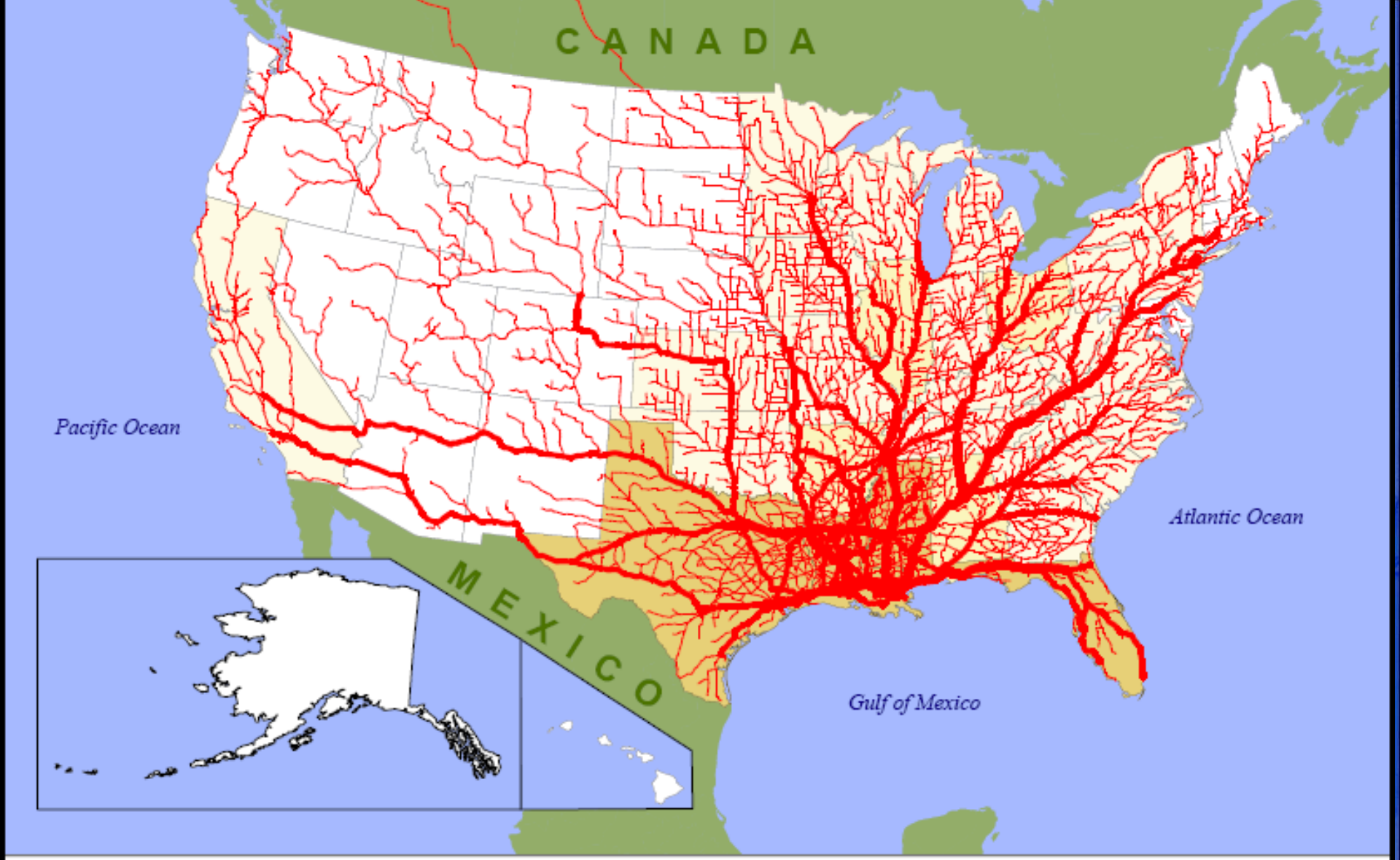


U.S. Department of Transportation
Federal Highway Administration
Office of Freight Management and Operations
Freight Analysis Framework

Total Combined Truck Flows
(1998)

LOUISIANA

Network Flows
(Tons)
- 0 - 500,000
- 500,000 - 1,000,000
- 1,000,000 - 10,000,000
- 10,000,000 - 50,000,000
- More Than 50,000,000

State to State Flows
(Tons)
- 0 - 1,000,000
- 1,000,000 - 5,000,000
- 5,000,000 - 10,000,000
- More Than 10,000,000

Tonnage on Domestic Waterway Network

al Perspective:
Cargo

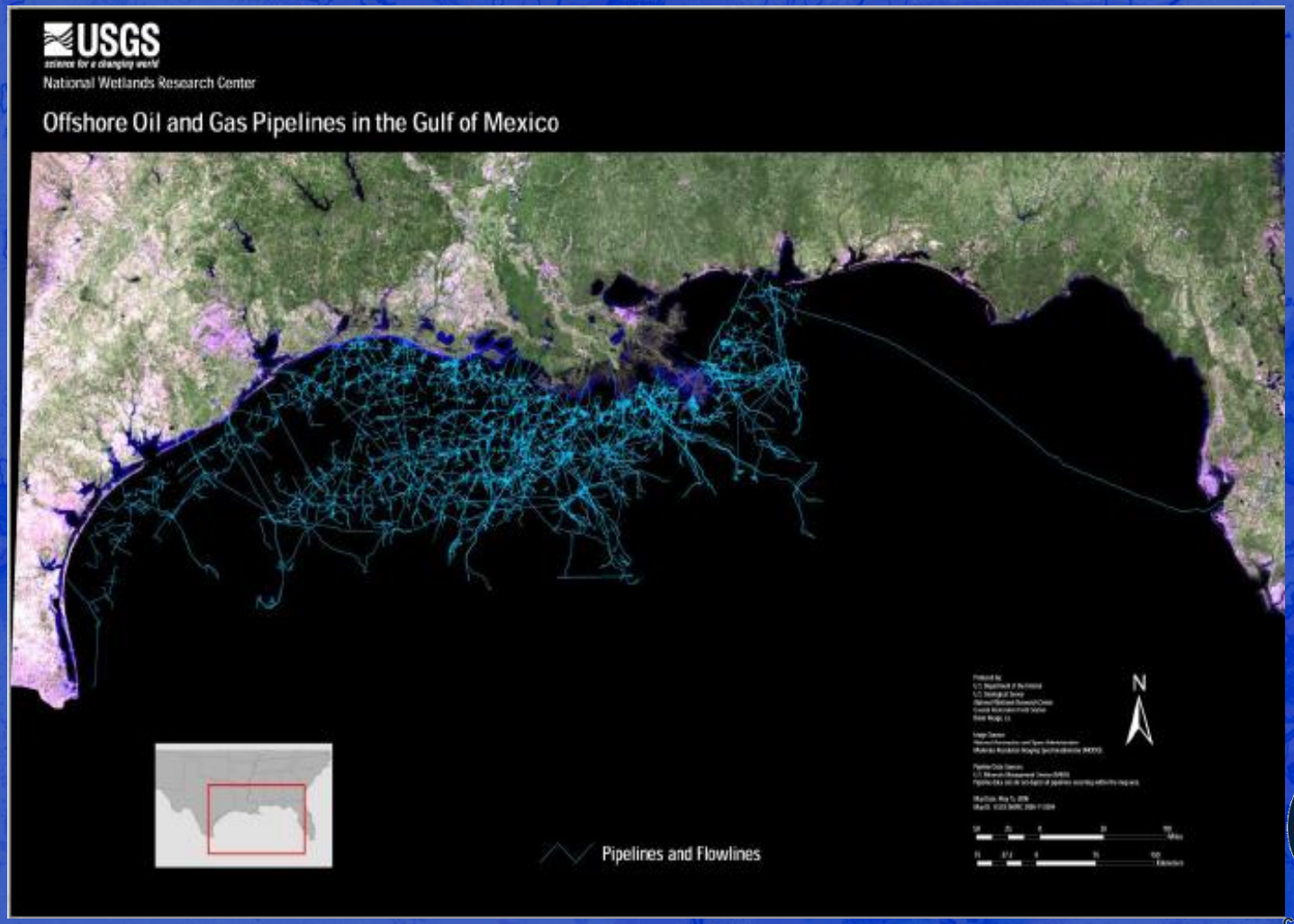
- Top tonnage port in the nation
- Five of the top 15 tonnage ports in the US
- Largest cargo port complex in the world
- 19 percent of all waterborne commerce
- Over 30 states depend upon Louisiana's ports for imports and exports…..

photo LA DOTD

nal Perspective:
gy

- Top producer of domestic oil
- Top domestic reserves of oil and gas
- Top producer of offshore oil
- #2 producer of offshore gas
- Significant offshore alternative energy potential
- Top producer of offshore revenues for US Treasury

Offshore oil and gas pipelines in Gulf of Mexico



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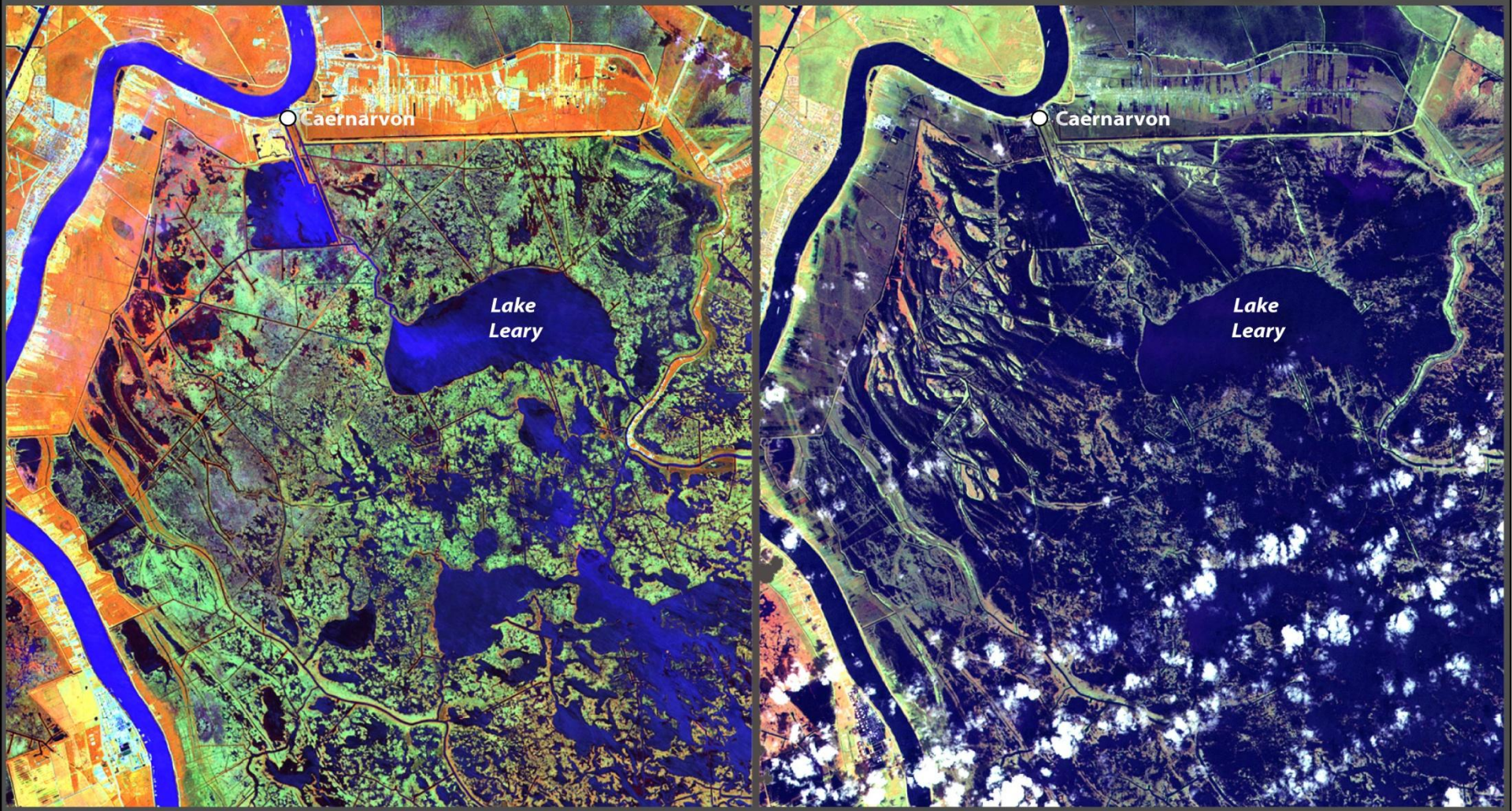
al Perspective:
eafood

- Top producer in fisheries in the Lower 48 States
- Top producer of oysters
- Top producer of blue crabs
- Top producer of crawfish
- Top producer of shrimp

Without Aggressive Efforts, the Gulf Will Continue to Encroach Upon Our Communities

Landsat Thematic Mapper 5 Hurricane Katrina Comparison Images
Upper Breton Sound Area



What Could Happen by 2100 Without Action

Blum and Roberts

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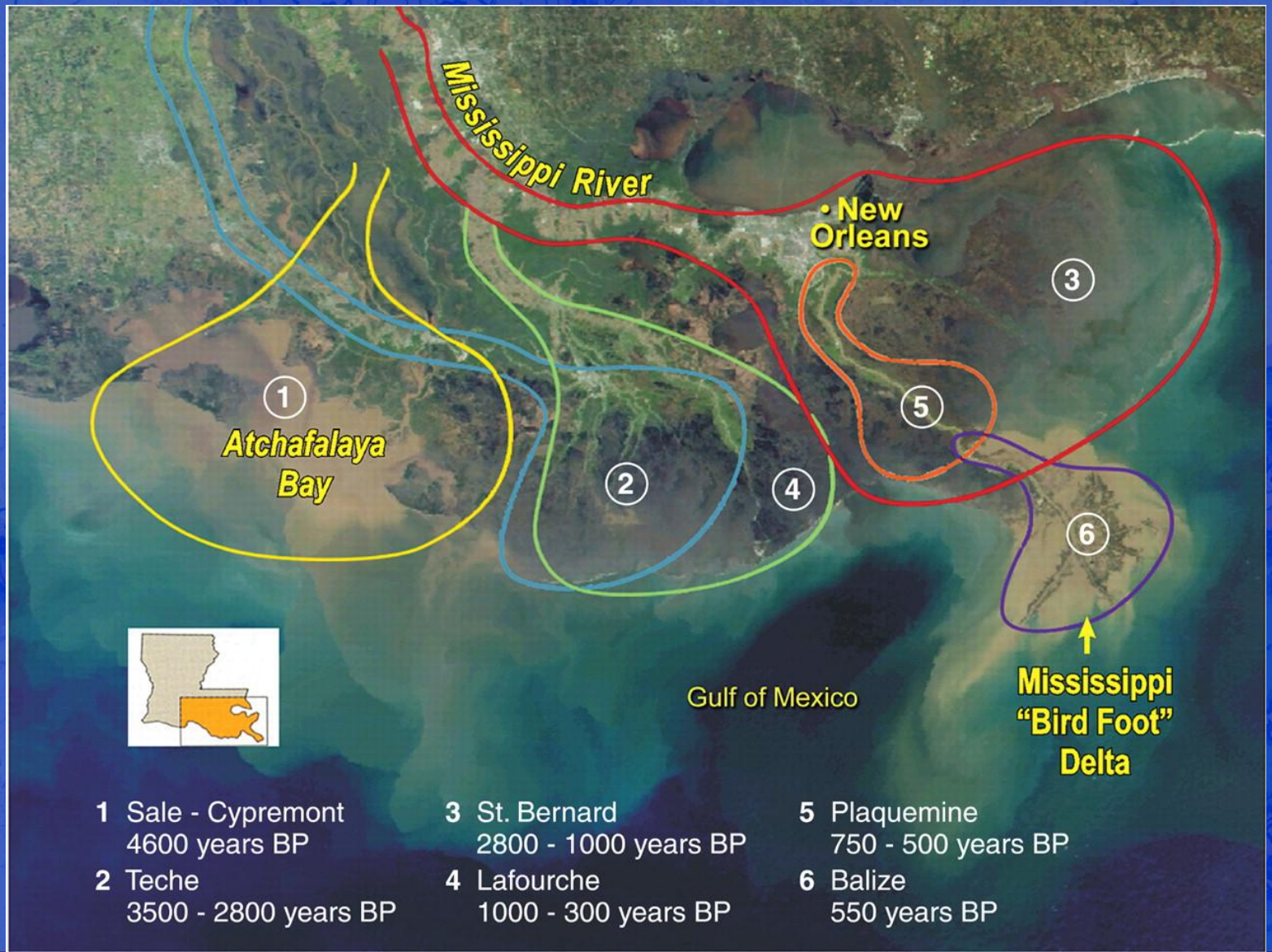
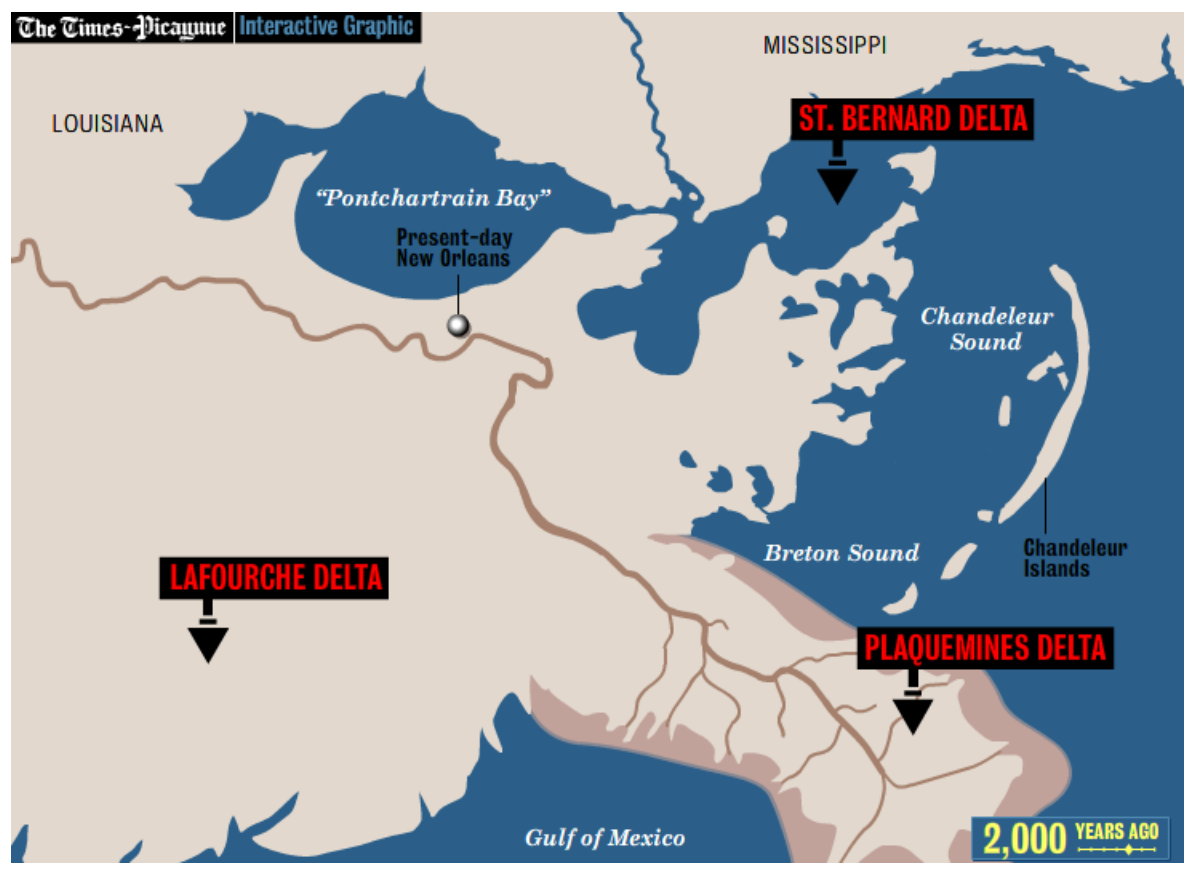
Coastal Protection and Restoration Authority of Louisiana

Mississippi River & Tributaries (MRT)



A healthy, accreting coastal system – Before river levees



A system that was building ~ 1 square mile of land a year is now collapsing and unsustainable

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THEN, THE FLOODS CAME…

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Coastal Protection and Restoration Authority of Louisiana

The Great Flood of 1927

- Most destructive river flood
- 145 levee breaks
- 27,000 square miles flooded
- 246 deaths

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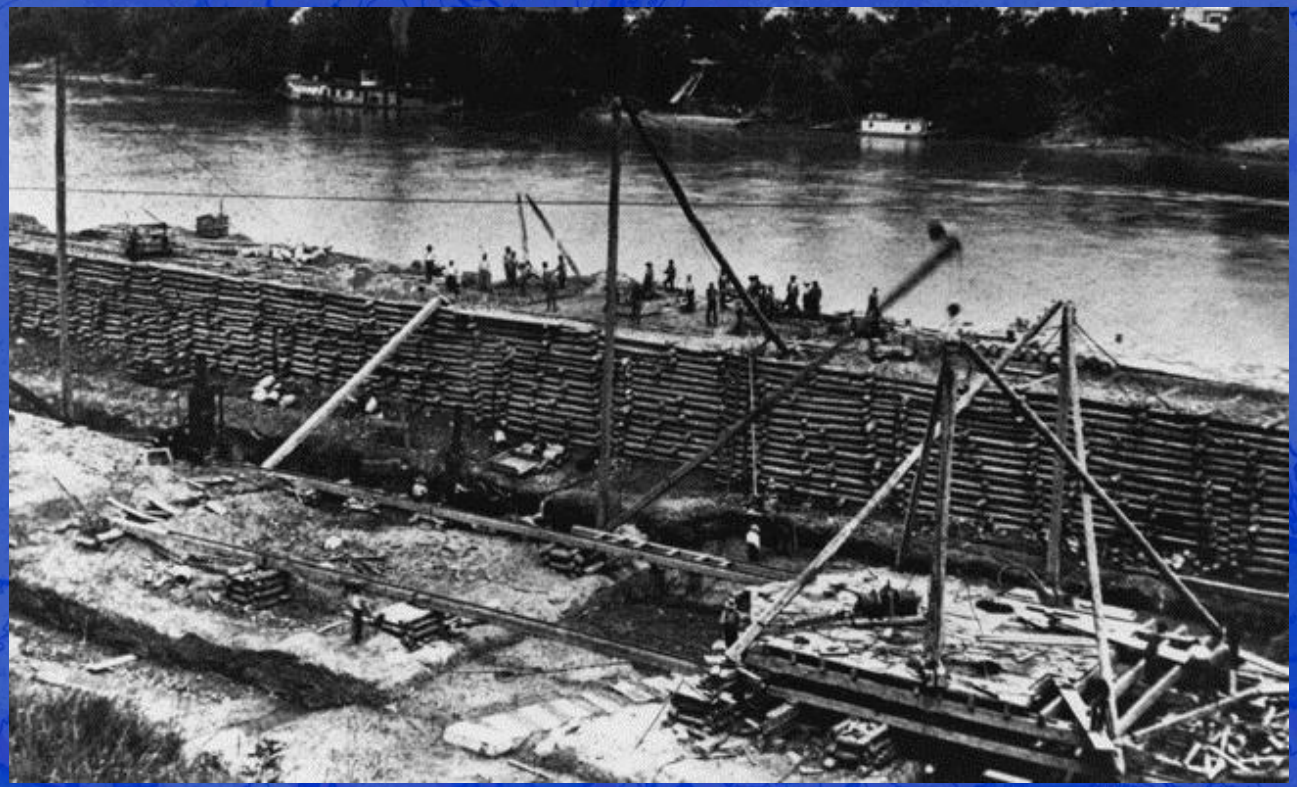
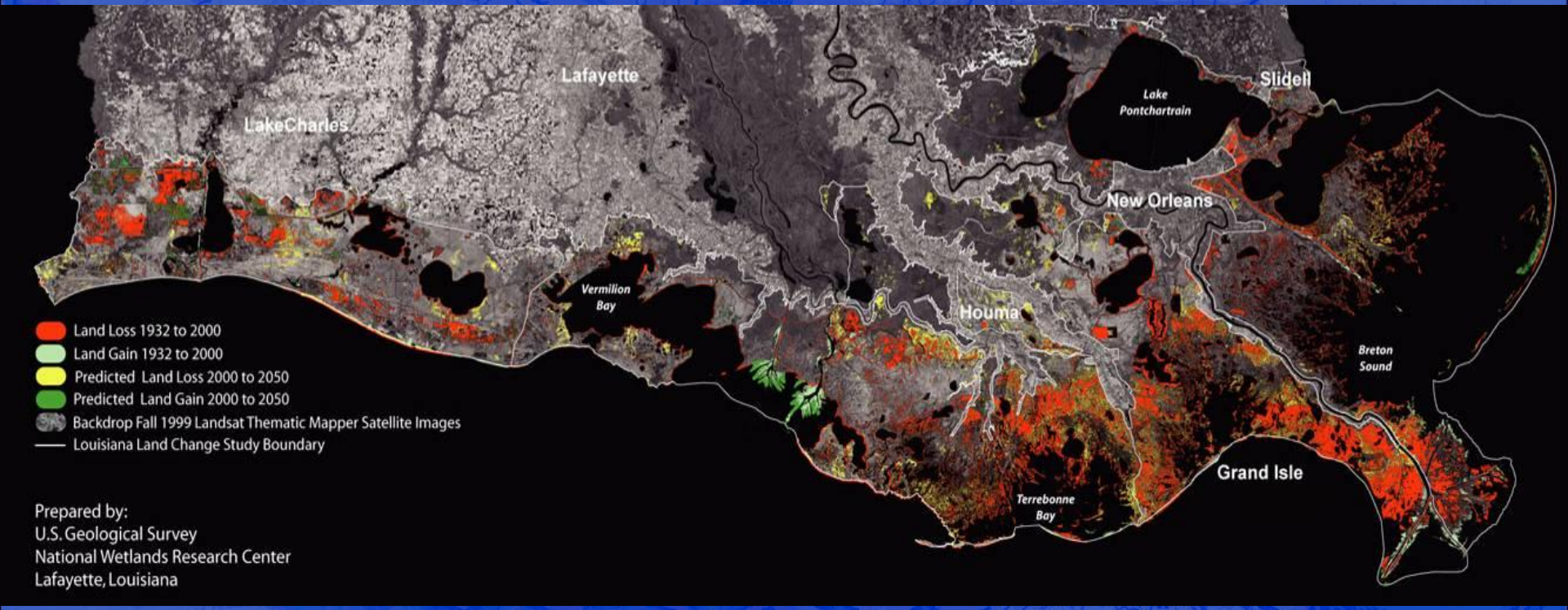
Mississippi River & Tributaries (MRT)



The Flood Control Act of 1928 put flood control on par with other major projects of its time with the largest public works appropriation ever.

CPRA
Coastal Protection and Restoration Authority of Louisiana

Coastal Land Loss



Over 2300 square miles lost since 1930

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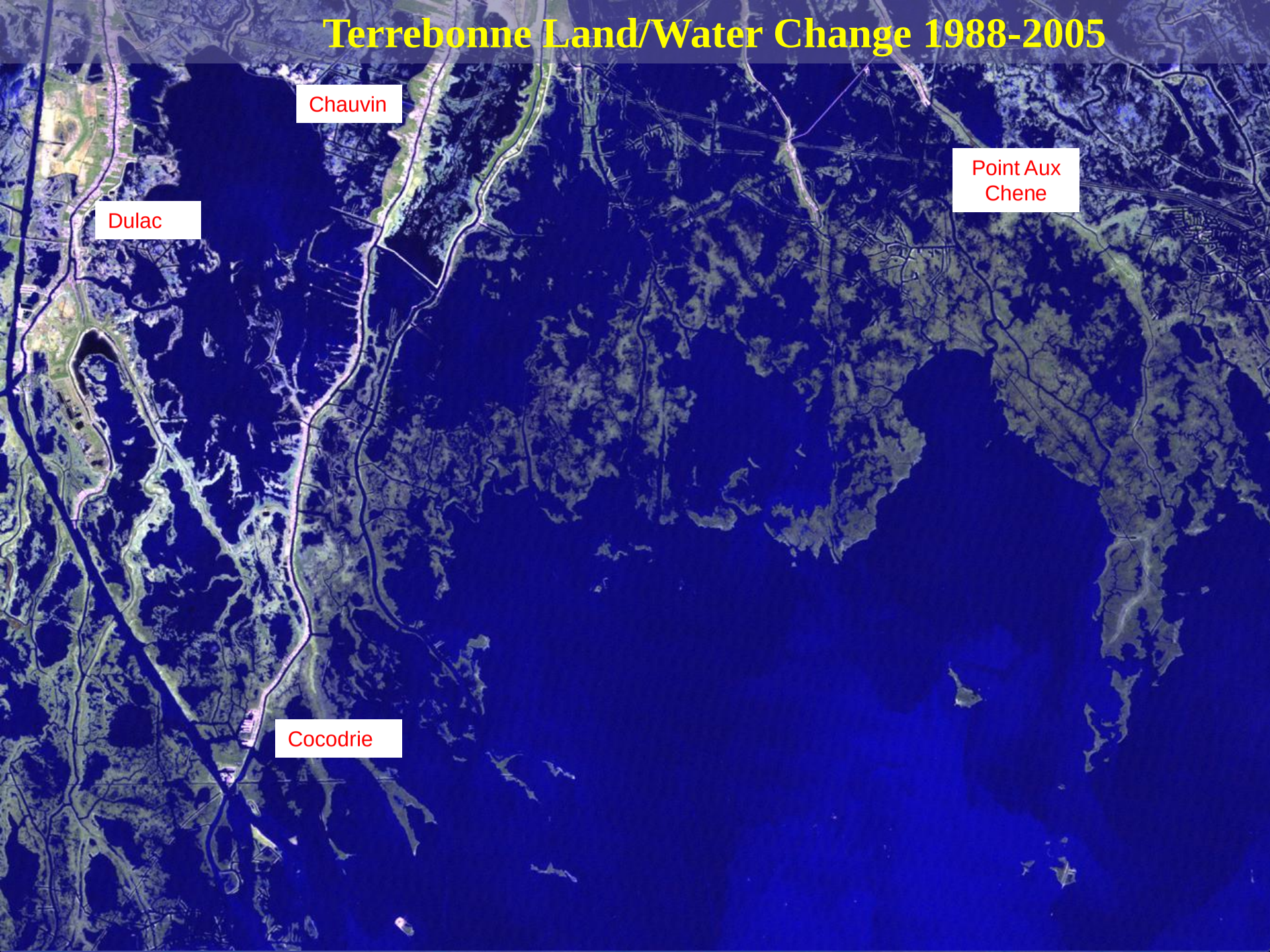
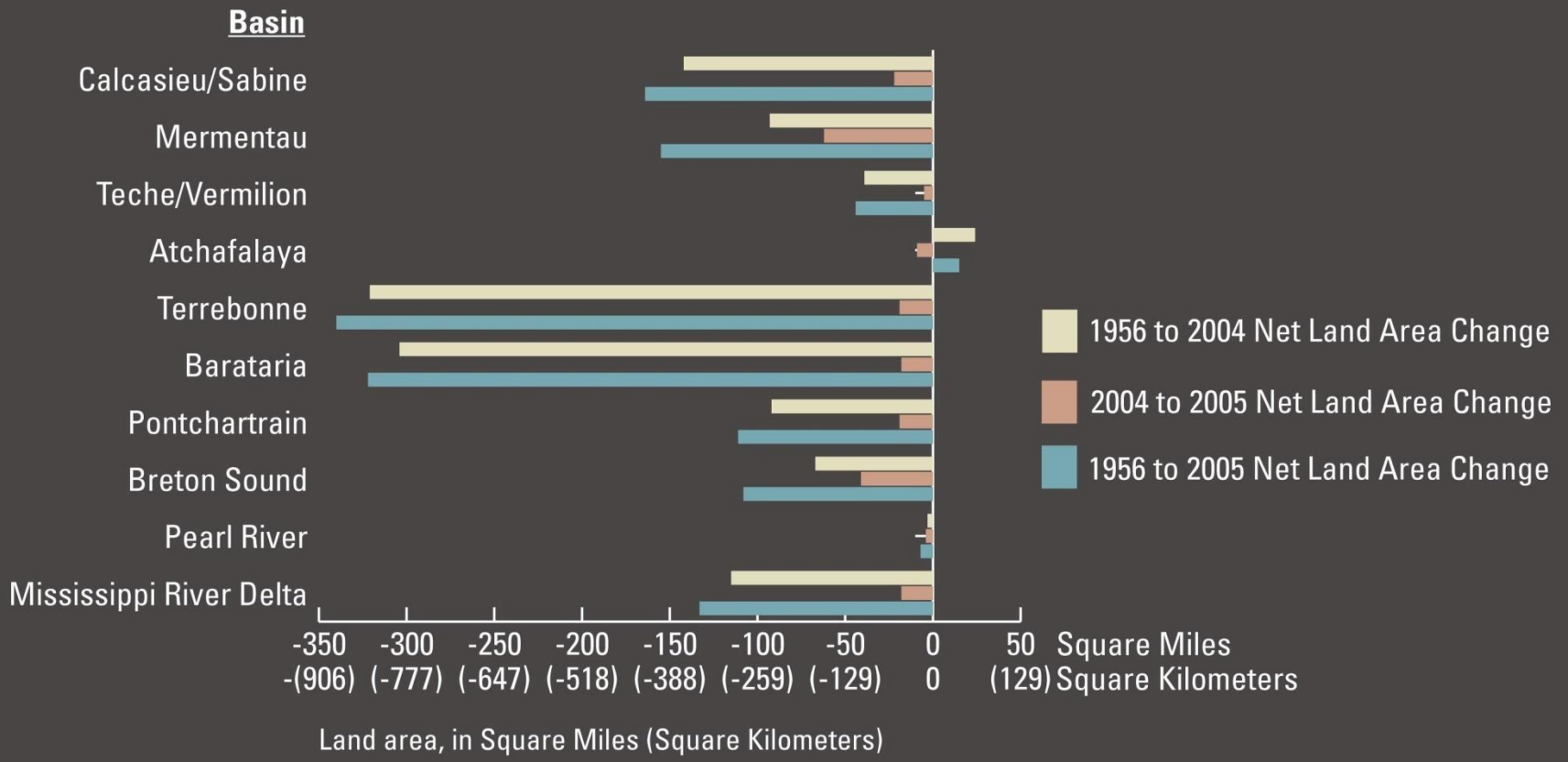
Terrebonne Land/Water Change 1988-2005



USGS
science for a changing world

1956 to 2004 and 2004 to 2005 Net Land Area Changes Graph*

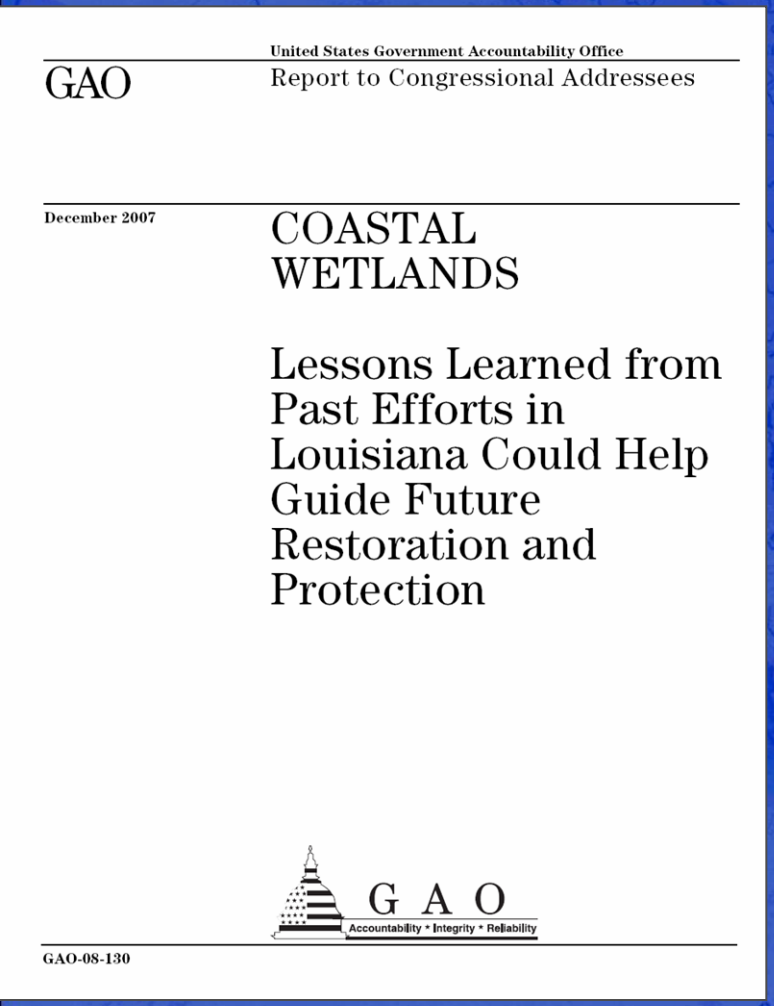


*The 1956 to 2004 net land decrease is 1,149 mi^2 (2,975.91 km^2). The 2004 to 2005 net land decrease is 218 mi^2 (564.62 km^2), which slightly varies from the 217 mi^2 given elsewhere in this report. The variation results from matching the CZB (1956) and LCA (2004 to 2005) data sets, as discussed in this methodology.

Source: Open-File Report 2006-1274, Land Area Change in Coastal Louisiana After the 2005 Hurricanes: A Series of Three Maps

Land Area Change in Coastal Louisiana After the 2005 Hurricanes: A Historical Perspective (from 1956)

Greatest Ecosystem Loss



United States Government Accountability Office

GAO

Report to Congressional Addressees

December 2007

COASTAL WETLANDS

Lessons Learned from Past Efforts in Louisiana Could Help Guide Future Restoration and Protection

GAO

Accountability * Integrity * Reliability

GAO-08-130

"Coastal wetland losses in Louisiana account for up to 90 percent of the total coastal wetlands loss occurring in the lower 48 states today and expose the state's coastal areas to the devastating effects of hurricane storm surges."

Coastal Wetlands: Lessons Learned From Past Efforts in Louisiana Could Help Guide Future Restoration and Protection

GAO, December 2007

CPRA

Coastal Protection and Restoration Authority of Louisiana

Hurricanes Approaching Louisiana's Coast Are More Likely to Be Intense

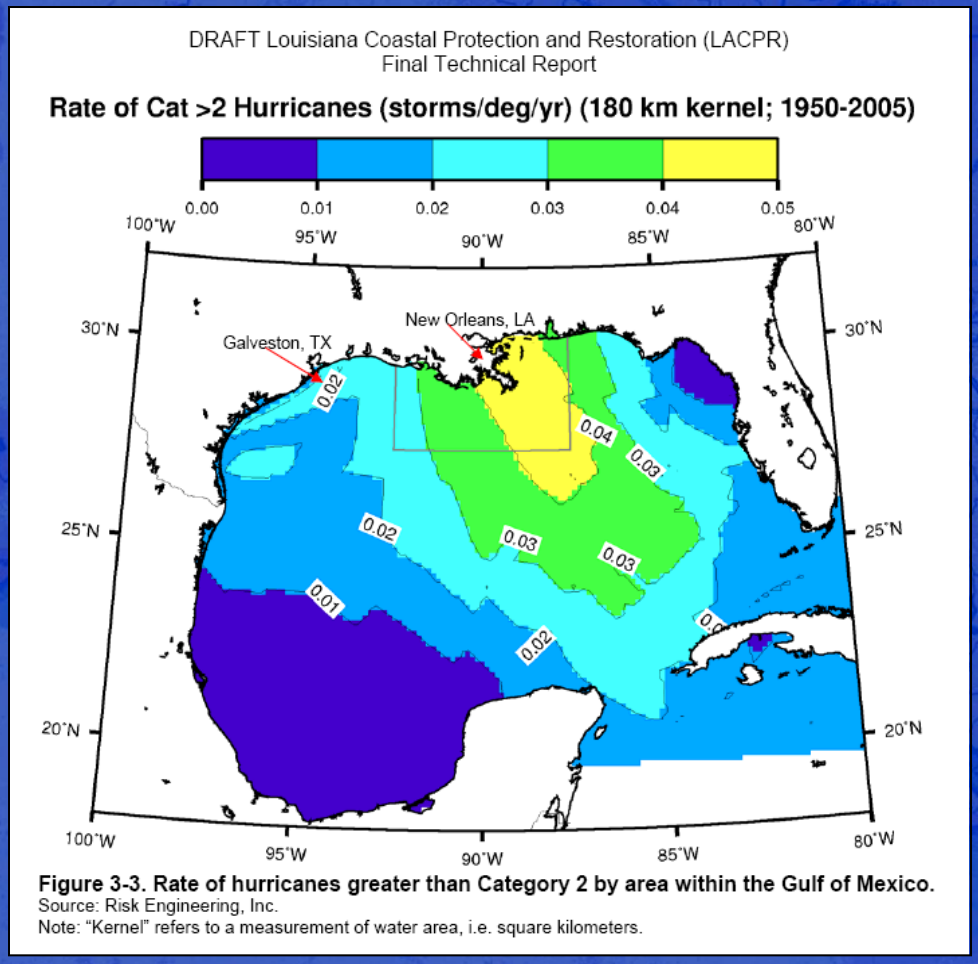


Figure 3-3. Rate of hurricanes greater than Category 2 by area within the Gulf of Mexico.
Source: Risk Engineering, Inc.
Note: "Kernel" refers to a measurement of water area, i.e. square kilometers.

- Based on probabilities calculated from the historical record from 1950 to 2005, storms striking New Orleans, LA are twice as likely to be a Cat 2 or higher storm than storms striking the Galveston, TX area.

DRAFT LACPR
Final Technical Report
USACE
March 2009

Effects of Hurricane Katrina

Four major hurricanes in last four years:

- Katrina (2005)
- Rita (2005)
- Gustav (2008)
- Ike (2008)

2005 Hurricane Impacts

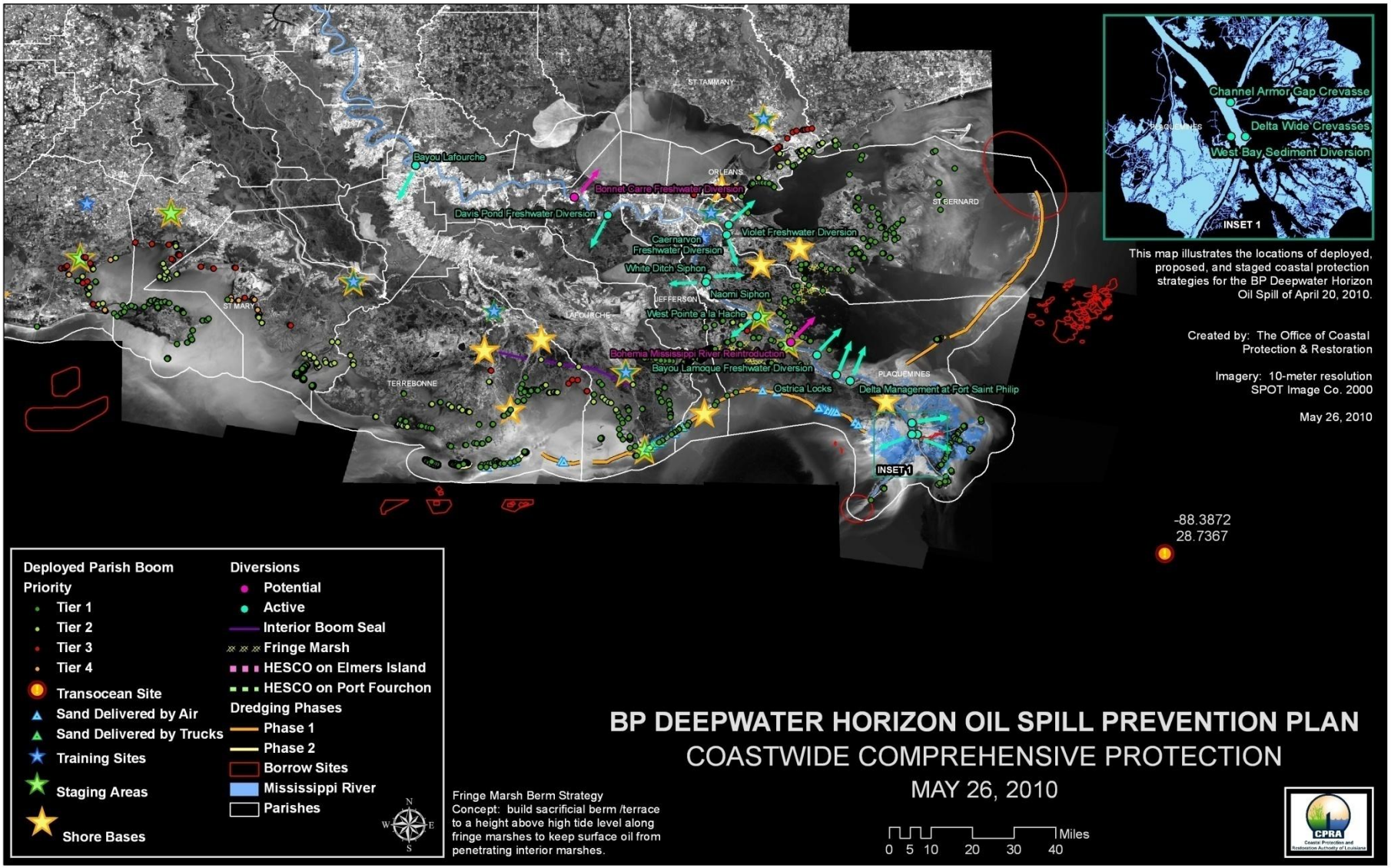
- Over 1400 Louisianans died
- Over 200,000 homes and businesses destroyed, damaged or flooded
- 1,000,000 displaced citizens
- Economic Impact Exceeded $100 billion
- State/parish budget/economy devastated


OIL SPILL

Multiple Lines of Defense

1. Well capping
2. Dispersant
3. Skimming
4. Burning
5. Freshwater Diversions
6. Shoreline Terracing/Fringe Marsh
7. Boom plans
8. Gap-filling/Air-drops
9. Tiger Dams/gabion baskets
10. Barrier Island Sand booms
11. Active skimming/sorbent operations

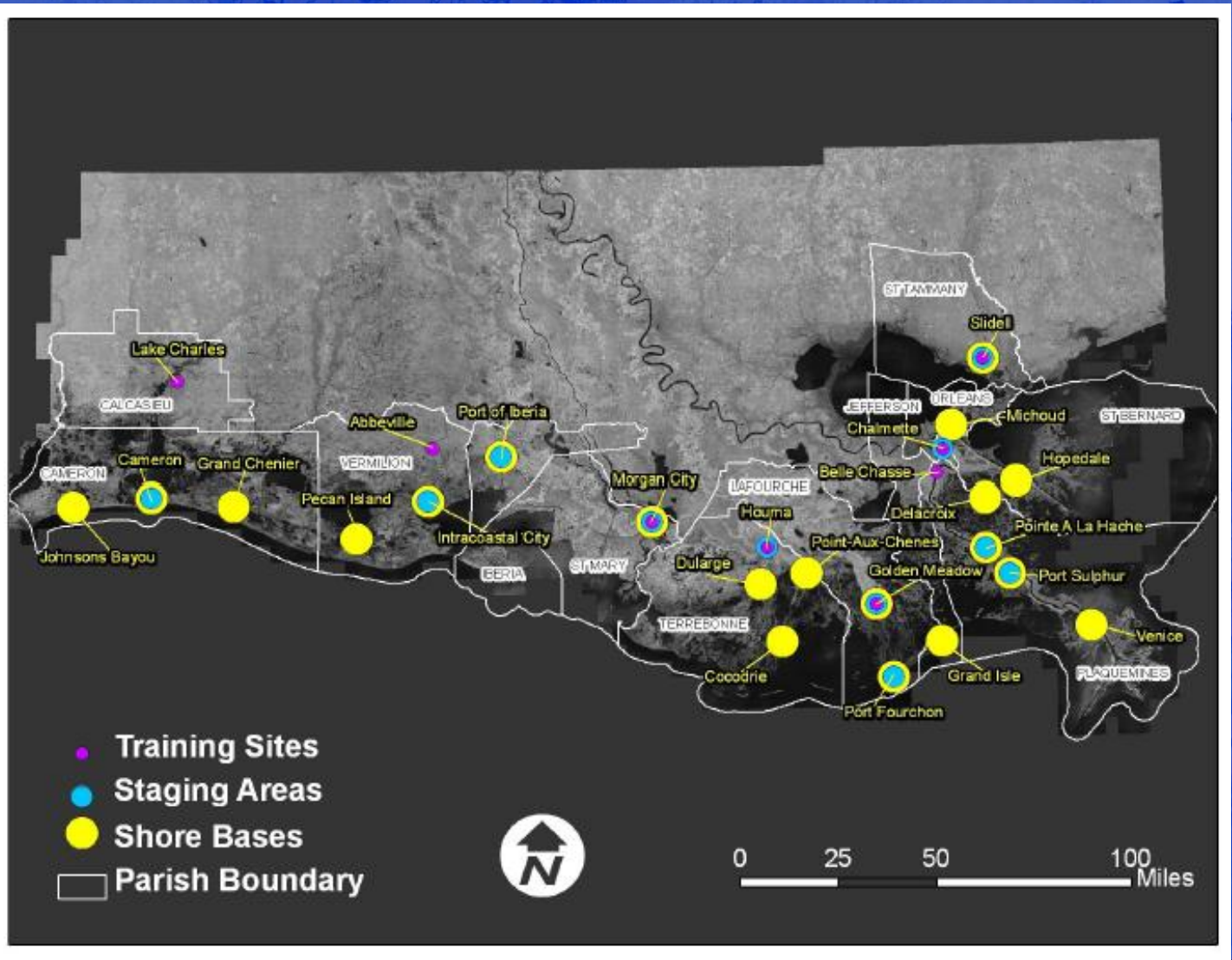
Comprehensive Plan



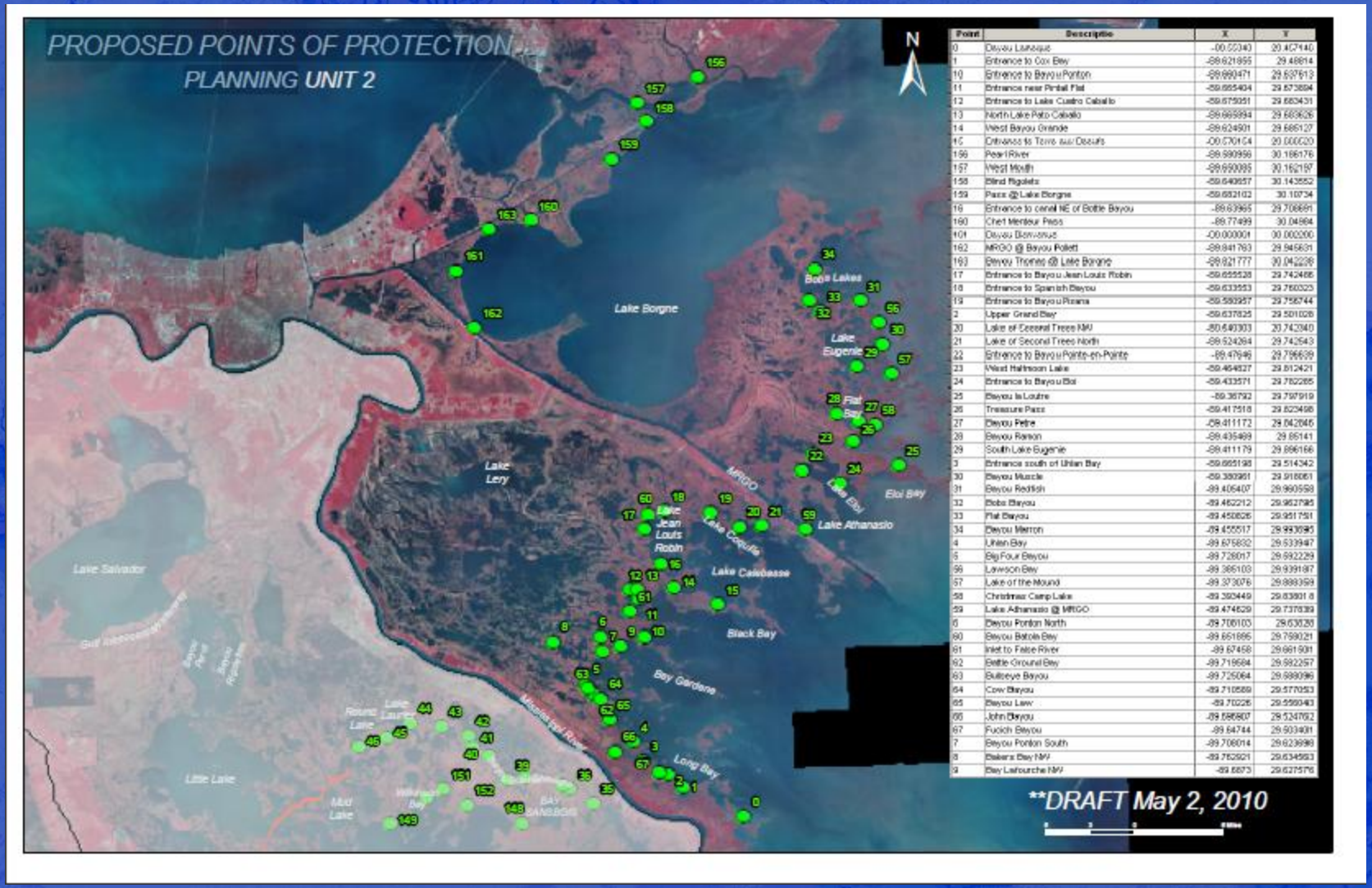
Diversions

- Caernarvon Diversion
- Davis Pond Diversion
- Ostrica Locks
- Bayou Lamoque
- Bohemia Spillway
- Violet Siphon
- White's Ditch Siphon
- Naomi Siphon
- West Pointe a la Hache
- Lower Delta Management

Coastal Boom Strategy

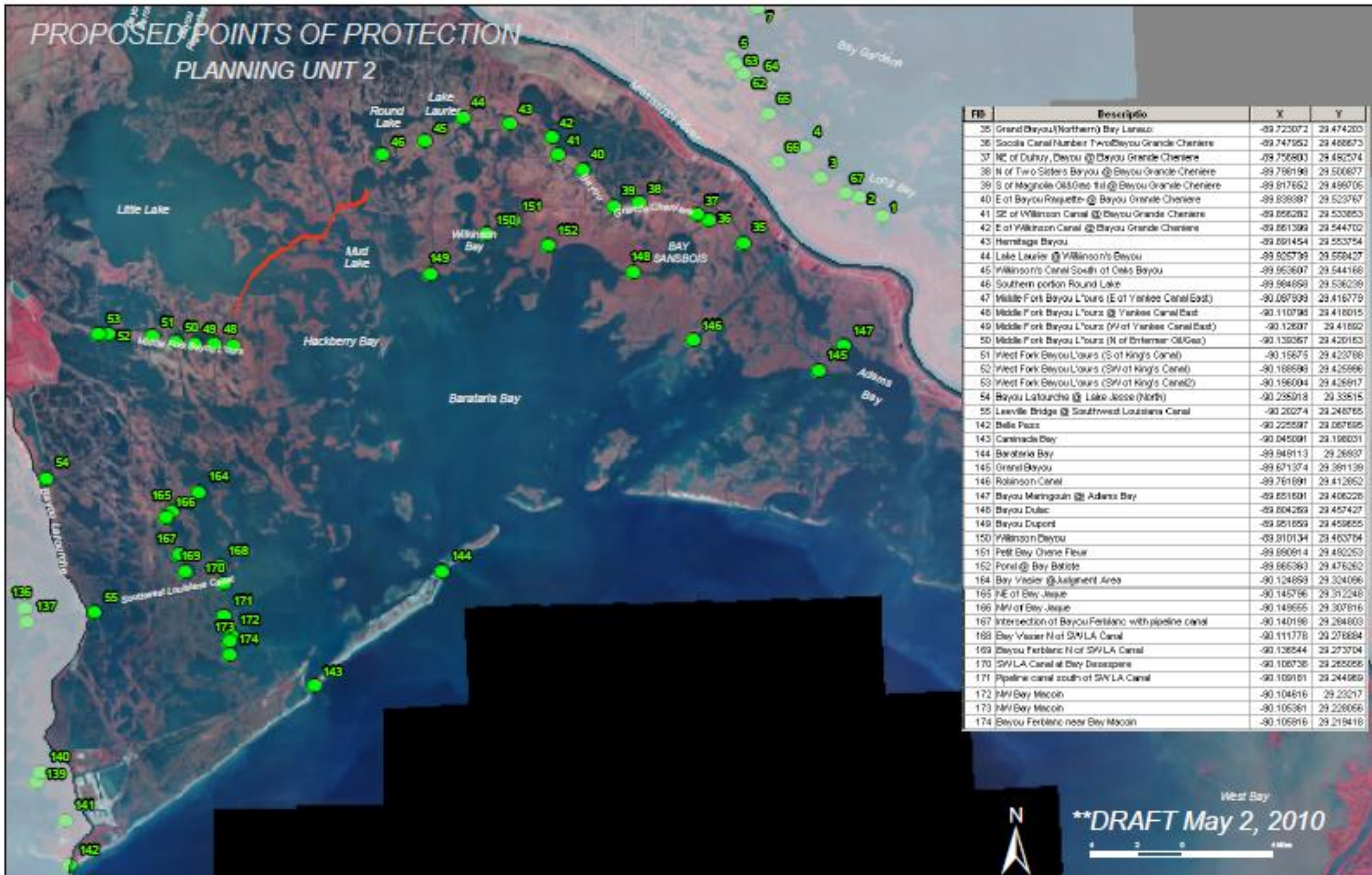


Boom Plan



Point	Description	X	Y
0	Bayou Lauraque	-89.55340	29.467440
1	Entrance to Cox Bay	-89.621895	29.48814
10	Entrance to Bayou Ponton	-89.660471	29.597613
11	Entrance near Pintail Flat	-89.655404	29.573894
12	Entrance to Lake Cuatro Cabello	-89.675051	29.682431
13	North Lake Pato Cabello	-89.669894	29.689626
14	West Bayou Grande	-89.624501	29.686127
15	Entrance to Terre aux Oeufs	-90.070104	29.000020
156	Pearl River	-89.980956	30.186176
157	West Mouth	-89.690095	30.162157
158	Blind Rigolets	-89.640857	30.143552
159	Pass @ Lake Borgne	-89.682102	30.10734
16	Entrance to canal NE of Bottle Bayou	-89.63965	29.708691
160	Chet Menteur Pass	-89.77499	30.04984
161	Bayou Bienvenue	-90.000001	30.002000
162	MRGO @ Bayou Poliett	-89.841763	29.945631
163	Bayou Thomas @ Lake Borgne	-89.821777	30.042239
17	Entrance to Bayou Jean Louis Robin	-89.655528	29.742466
18	Entrance to Spanish Bayou	-89.633553	29.760323
19	Entrance to Bayou Rosina	-89.592957	29.756744
2	Upper Grand Bay	-89.637825	29.501028
20	Lake of Ceceral Trees NW	-89.649303	29.742340
21	Lake of Seconal Trees North	-89.624264	29.742543
22	Entrance to Bayou Pointe-en-Pointe	-89.47946	29.796639
23	West Halfmoon Lake	-89.464827	29.812421
24	Entrance to Bayou Eloi	-89.433571	29.782265
25	Bayou la Loutre	-89.36792	29.797919
26	Treasure Pass	-89.417518	29.822498
27	Bayou Petre	-89.411172	29.842645
28	Bayou Ramon	-89.435499	29.86141
29	South Lake Eugenie	-89.411179	29.866166
3	Entrance south of Urban Bay	-89.665198	29.514342
30	Bayou Muscle	-89.389961	29.918661
31	Bayou Redfish	-89.405407	29.960558
32	Bobs Bayou	-89.462212	29.962795
33	Flat Bayou	-89.450826	29.951751
34	Bayou Merron	-89.455517	29.993095
4	Urban Bay	-89.675832	29.533947
5	Big Four Bayou	-89.728017	29.592229
56	Lawson Bay	-89.385103	29.939187
57	Lake of the Mound	-89.373076	29.888359
58	Christmas Camp Lake	-89.393449	29.83901 8
59	Lake Athanasio @ MRGO	-89.474629	29.737839
6	Bayou Ponton North	-89.706103	29.630328
60	Bayou Batola Bay	-89.651896	29.759021
61	Inlet to False River	-89.67458	29.661901
62	Battle Ground Bay	-89.719684	29.582257
63	Bullseye Bayou	-89.725064	29.589096
64	Cow Bayou	-89.710569	29.577053
65	Bayou Law	-89.70226	29.569043
66	John Bayou	-89.686807	29.524762
67	Fuciich Bayou	-89.64744	29.503401
7	Bayou Ponton South	-89.706014	29.623996
8	Bakers Bay NW	-89.762921	29.634563
9	Bay Lafourche NW	-89.6873	29.627576

Boom Plan



FID	Descriptio	X	Y
35	Grand Bayou(Northern) Bay Laneux	-89.723072	29.474203
36	Socola Canal Number Two/Bayou Grande Cheniere	-89.747952	29.488673
37	NE of Duhuy, Bayou @ Bayou Grande Cheniere	-89.756803	29.492574
38	N of Two Sisters Bayou @ Bayou Grande Cheniere	-89.798198	29.500877
39	S of Magnolia Oil&Gas fld @ Bayou Grande Cheniere	-89.817652	29.499705
40	E of Bayou Raquette @ Bayou Grande Cheniere	-89.839387	29.523767
41	SE of Wilkinson Canal @ Bayou Grande Cheniere	-89.856282	29.533853
42	E of Wilkinson Canal @ Bayou Grande Cheniere	-89.861399	29.544702
43	Hermitage Bayou	-89.891454	29.553754
44	Lake Laurier @ Wilkinson's Bayou	-89.925739	29.558427
45	Wilkinson's Canal South of Oaks Bayou	-89.953607	29.544168
46	Southern portion Round Lake	-89.984658	29.536239
47	Middle Fork Bayou L'ours (E of Yankee Canal East)	-90.087939	29.416779
48	Middle Fork Bayou L'ours @ Yankee Canal East	-90.110798	29.418015
49	Middle Fork Bayou L'ours (W of Yankee Canal East)	-90.12607	29.41892
50	Middle Fork Bayou L'ours (N of Enterner Oil/Gas)	-90.139367	29.420163
51	West Fork Bayou L'ours (S of King's Canal)	-90.15675	29.423788
52	West Fork Bayou L'ours (SW of King's Canal)	-90.188598	29.425996
53	West Fork Bayou L'ours (SW of King's Canal2)	-90.196004	29.426817
54	Bayou Lafourche @ Lake Jesse (North)	-90.295918	29.33515
55	Leeville Bridge @ Southwest Louisiana Canal	-90.20274	29.248765
142	Belle Pass	-90.225597	29.087695
143	Caminada Bay	-90.045091	29.198031
144	Barataria Bay	-89.948113	29.26937
145	Grand Bayou	-89.671374	29.381139
146	Robinson Canal	-89.761891	29.412852
147	Bayou Maringouin @ Adams Bay	-89.651601	29.406226
148	Bayou Dulac	-89.804269	29.457427
149	Bayou Dupont	-89.951659	29.459655
150	Wilkinson Bayou	-89.910134	29.463784
151	Petit Bay Chene Fleur	-89.890814	29.492253
152	Pond @ Bay Batiste	-89.865383	29.476262
164	Bay Vasier @Judgment Area	-90.124859	29.324096
165	NE of Bay Jaque	-90.145796	29.312248
166	NW of Bay Jaque	-90.149655	29.307816
167	Intersection of Bayou Ferblanc with pipeline canal	-90.140198	29.284803
168	Bay Vasier N of SW LA Canal	-90.111778	29.278884
169	Bayou Ferblanc N of SW LA Canal	-90.136544	29.273704
170	SW LA Canal at Bay Desespere	-90.106738	29.265056
171	Pipeline canal south of SW LA Canal	-90.109181	29.244969
172	NW Bay Macoin	-90.104616	29.23217
173	NW Bay Macoin	-90.105361	29.228066
174	Bayou Ferblanc near Bay Macoin	-90.105816	29.219418

Air Drops

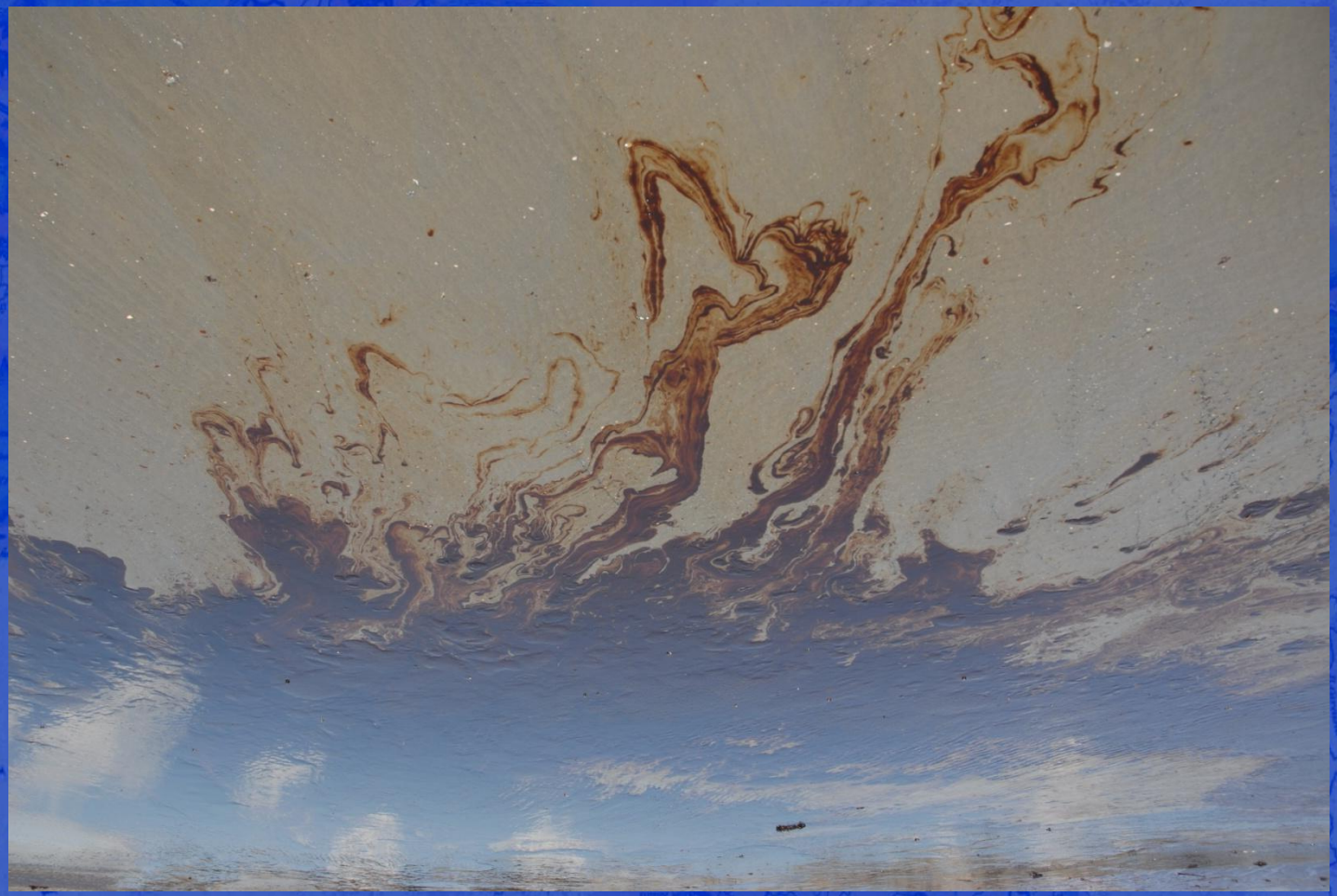
Gap Filling/Landbridge

Proven Success!

Landbridges Working

Sand Berms


© DubinskyPhotography.com for HealthyGulf.org




IMPACTS

At Risk

- Commercial Fishermen
  - Hundreds of thousands of Louisianans
  - Unique culture
  - Best food in the nation/restaurants

- Most Productive Ecosystem
  - Oysters
  - Shrimp
  - Finfish
  - Crabs

At Risk

Top Recreational Fishing Destination

- Bait shops
- Marinas
- Tackle suppliers
- Restaurants
- Hotels

At Risk

- Reverses recovery from Hurricanes Katrina, Rita, Gustav and Ike
  - Communities
  - Coastal systems
  - Economies
- Threatens unique culture, heritage and way of life
- Fundamentally destroys ecosystems/coastal resources

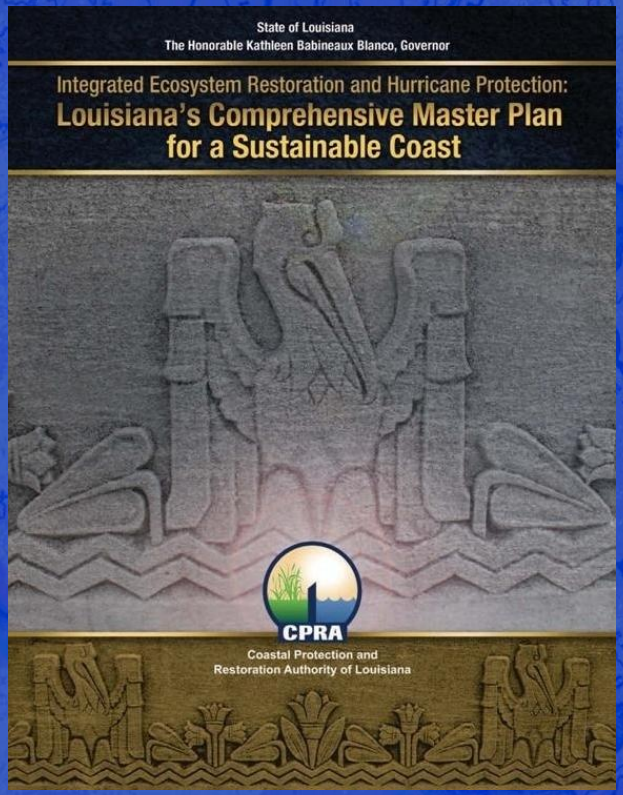
At Risk

- 40% of the coastal marshlands in the continental United States
- 18% of all waterborne commerce in the United States
- USFWS: “fishery supported by this area remains the most productive in North America”
  - 90% of species
  - 98% of commercial fish and shellfish

At Risk

- Five million waterfowl
- 25 million songbirds
- America’s largest wintering habitat for migratory waterfowl and songbirds
- 70 rare, threatened, or endangered species
- Coastal wetlands serve as a buffer and retention area for storm surge
- Wetlands serve as part of the hurricane protection system

Integrated Ecosystem Restoration and Hurricane Protection:
Louisiana's Comprehensive Master Plan for a Sustainable Coast



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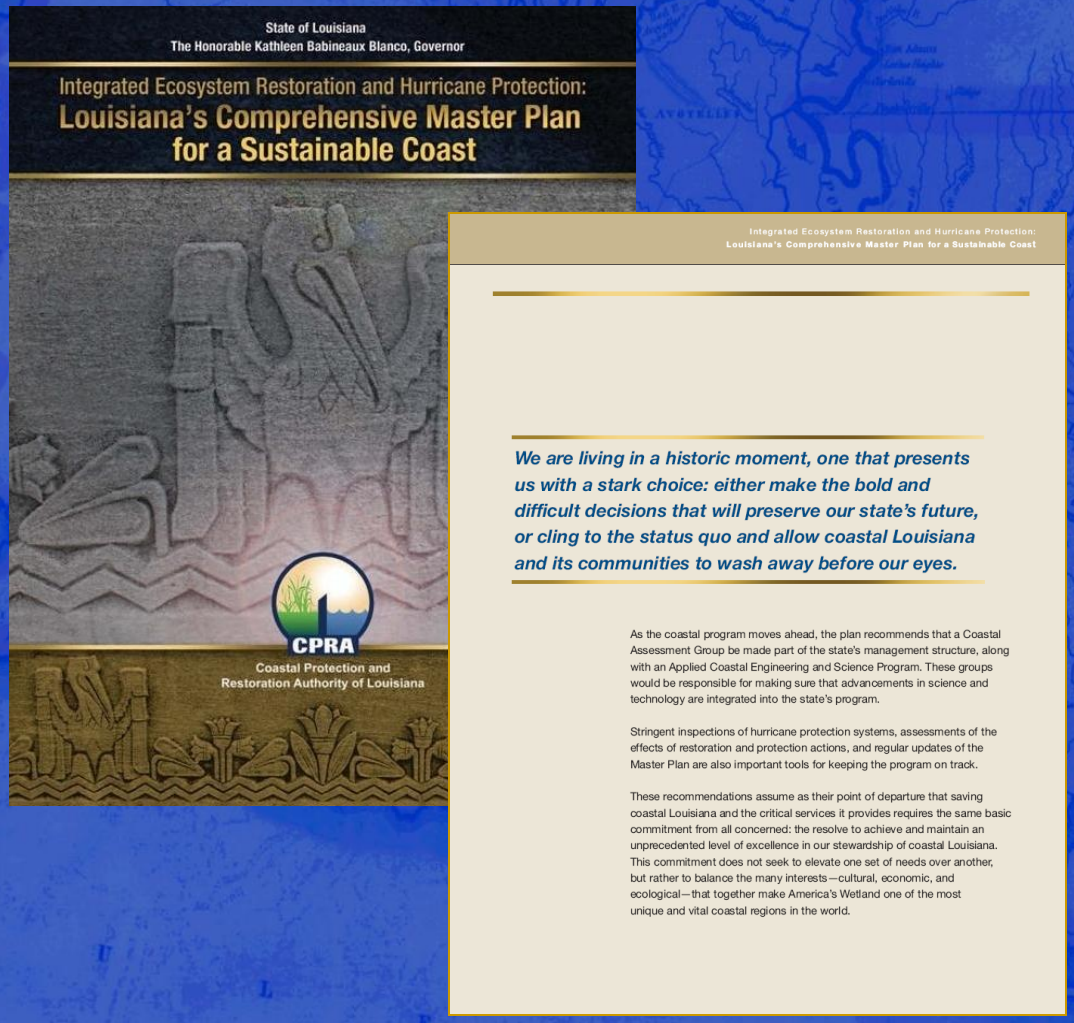
Create a Structure to Support Implementation of the Master Plan



"We are living in a historic moment, one that presents us with a stark choice: either make the bold and difficult decisions that will preserve our state's future, or cling to the status quo and allow coastal Louisiana and its communities to wash away before our eyes."

What the Master Plan is…

A Strategy for a Sustainable Coast

Four objectives:

- **Reduce risk to communities**
- **Restore sustainability to the coastal ecosystem**
- **Maintain a diverse array of fish and wildlife habitats**
- **Sustain Louisiana's unique heritage and culture**

CPRA

Coastal Protection and Restoration Authority of Louisiana

Single Approach is Not the Solution

USACOE

Prioritization Tool

Tool Kit

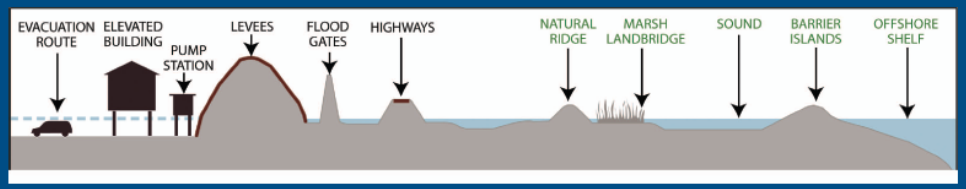
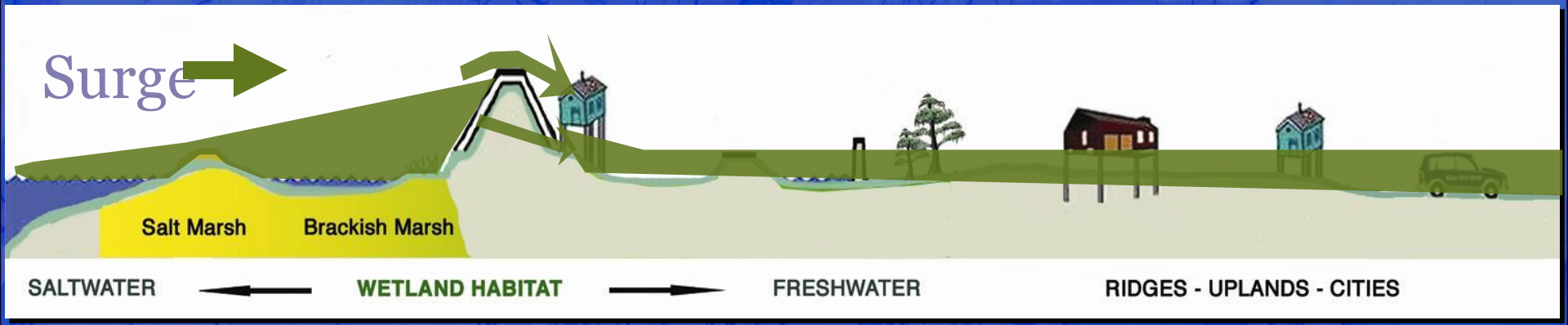


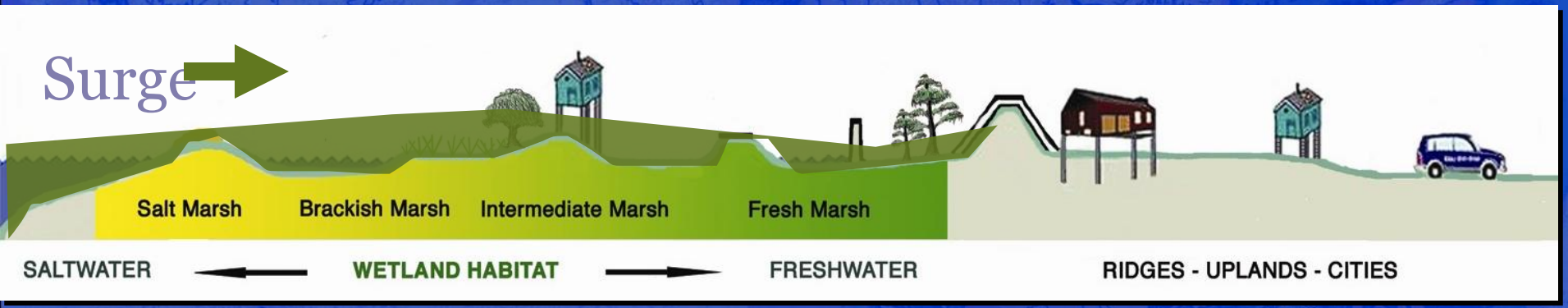
Figure 5: Multiple lines of defense concept (adapted from graphic produced by the Lake Pontchartrain Basin Foundation).

Restoration Authority of Louisiana

Cannot Allow for Wasted Sediment (aka potential land)

Storm Surge Attenuation Benefits Provided by Coastal Wetlands





National Commission on the

BP DEEPWATER HORIZON OIL SPILL AND OFFSHORE DRILLING

Attachment 30

Written Statement of Tom Strickland

Assistant Secretary for Fish and Wildlife and Parks, Department of the Interior

STATEMENT OF THOMAS STRICKLAND
ASSISTANT SECRETARY OF THE INTERIOR FOR
FISH AND WILDLIFE AND PARKS
BEFORE THE
NATIONAL COMMISSION ON THE BP DEEPWATER HORIZON OIL SPILL
AND OFFSHORE DRILLING

SEPTEMBER 28, 2010

Good afternoon Chairman Graham, Chairman Reilly and Members of the Commission. I am Tom Strickland and I am the Assistant Secretary for Fish and Wildlife and Parks at the Department of the Interior. Thank you for the opportunity to appear before you today.

Following Secretary Salazar's appearance before you yesterday, I am pleased to be here to convey the Department of the Interior's views on the importance of a restored Gulf Coast ecosystem to the entire country. We are at an historic moment of opportunity to not only repair the enormous damage inflicted on this ecosystem from the *BP Deepwater Horizon* explosion and oil spill, but to work toward long term restoration. This will require a coordinated effort involving numerous federal agencies, five Gulf Coast states, Native American Tribes, Parishes and other local governments and diverse stakeholders with significant economic and environmental interests.

I grew up on the Gulf Coast of Texas, went to college in Louisiana, worked on an oil rig off the Louisiana Coast and have a deep appreciation for the Gulf Coast and its people and culture. I understand its significant contributions to the nation's commerce, seafood supply, and energy security.

Since the April 20th blowout, I have made sixteen trips to the Gulf to oversee the Department of the Interior response efforts. We had over two thousand Department of the Interior employees engaged in the spill response throughout the five Gulf Coast states. From the air, water and on foot, I saw firsthand the ecological devastation and disruption in livelihood caused by oil from the spill. I also saw and met with hundreds of dedicated federal, state and local government employees working together in an unprecedented response effort. As a result of this response effort, we were able to mitigate the immediate appearance of oil along much of the coast. Nonetheless, oil appeared on approximately one thousand miles of coastline —275 miles of which were Department of the Interior lands. With the successful initial kill of the well on July 15th, new oil stopped flowing into the Gulf, but the millions of gallons of oil already spilled continued to impact the ecosystem. At this point, the appearance of oil on coastline has diminished, but there remains much uncertainty about the longer-term impacts.

We are now shifting our attention from oil spill response to recovery and restoration which involves a significant partnership between the federal government and the Gulf Coast states. Along with the Department of Commerce and the States of Alabama, Florida, Louisiana, Mississippi and Texas, we at the Department of the Interior will be formally initiating full damage assessment and long term restoration planning under the Oil Pollution Act's Natural Resource Damage Assessment (NRDA) process this week. This is the second phase of the NRDA process. The initial "preassessment" phase is well underway. The Department of Defense will be joining in the effort soon. Together, the federal agencies and states involved in this effort comprise a Trustee Council which will address recovery and restoration actions under the Oil

Pollution Act (OPA) in response to the oil spill. The U.S. Fish and Wildlife Service, on behalf of the Department of the Interior, serves as the Federal Lead Administrative Trustee for this effort.

The Trustee Council is working to identify injuries to natural resources resulting from the spill, provide for restoration of the injured resources to pre-spill baseline conditions, and obtain compensation from responsible parties for losses that continue until baseline conditions are restored. The Council has commissioned 13 separate technical working groups to develop studies to evaluate the effects of the spill on important, shared resources such as birds, fish, marshlands and marine life, but also to evaluate the impacts from the spill on the overall gulf ecosystem and on human use of those resources, such as hiking, fishing, birding and camping. Even before this formal assessment began, the state and federal trustees were working from day one of the spill to monitor the spill's progression, collect real time data and evaluate baseline conditions.

The Natural Resource Damage Assessment efforts are intended to quantify injuries to natural resources caused by the spill. The cost of those injuries is then sought from responsible parties under OPA. All money obtained from responsible parties as natural resource damages must be used for purposes of assessment and ecosystem restoration. The trustees intend to be strategic about these restoration efforts, so as to ensure that they are coordinated with local and regional planning efforts that are already underway.

The OPA damage assessment and restoration process is also one where public input is required and encouraged. The trustees will draw on the significant expertise of NGOs and the academic

community in selecting sound and supportable restoration projects. The OPA natural resource damage assessment and restoration resulting from *Deepwater Horizon* oil spill can and should serve as the catalyst for real and sustainable Gulf Coast restoration.

Major Restoration and Planning Efforts Underway Prior to the Spill

Even before the devastating effects of the *Deepwater Horizon* oil spill, the Gulf Coast has been, and continues to be, degraded by a combination of human activities, including: various forms of development and changes to the flow of rivers and other water-courses. Water and air pollution, as well as natural forces such as hurricanes and the subsidence of certain coastal lands have also contributed to its degradation.

The challenges to the integrity of Gulf Coast ecosystems include:

- Loss of wetlands habitat, including coastal marshes and wetlands and barrier islands, which undermines protections for coastal communities and has deleterious impacts on fish and wildlife resources;
- Loss and degradation of coastal estuarine habitat by a variety of means, including changes in freshwater inflows, degradation of water quality, and coastal development that negatively affects and imperils fishery resources in the Gulf;
- Hypoxia which is caused by excessive nutrient inputs to the gulf and creates "dead zones" that reduce quality of Gulf habitat for fisheries; and
- Climate change which is altering the physical and biological characteristics of the Gulf, its coasts and adjacent watersheds.

Prior to Deepwater Horizon oil spill there were restoration projects in various stages of planning and implementation in each of the five Gulf Coast states. These ongoing programs include the work of the Army Corps of Engineers in collaboration with the States of Louisiana and Mississippi to implement the Louisiana Coastal Area projects and the Mississippi Coastal Improvement Programs. In addition, there is the Coastal Wetlands Planning, Protection and Restoration Program (Breaux Act) that targets dedicated funds in Louisiana for wetlands restoration. Finally, the Coastal Impact Assistance Program administered by the Bureau of Ocean Energy Management, Regulation and Enforcement provides grants to certain Gulf Coast states for the purpose of addressing coastal impacts from oil and gas production.

There are also other partnership efforts underway to address specific challenges, such as: (1) the Mississippi River/Gulf of Mexico Watershed Nutrient Task Force (known as the Hypoxia Task Force), co-chaired by the Environmental Protection Agency and the State of Mississippi, which coordinates the actions of 12 states and five federal agencies on nutrient reduction strategies to lessen the impacts of nutrients on the Gulf of Mexico; and (2) the Gulf of Mexico Alliance, which is a partnership among the five Gulf Coast states to develop strategies and coordinate implementation on certain priority areas including water quality for healthy beaches and seafood, habitat conservation and restoration, and coastal community resilience.

In recognition of the environmental crisis we faced in the Gulf even before the spill, last year the President directed the establishment of the Louisiana-Mississippi Gulf Coast Ecosystem Working Group, which consists of senior level policy officials from several federal agencies and is led by the Council on Environmental Quality and the Office of Management and Budget.

I represent the Department of the Interior in that effort and on March 4th, 2010, the Working Group released its strategy which provides for a coordinated federal effort to work with the states in pursuing a long term comprehensive restoration program. Because this strategy, known as the *Roadmap for Restoring Ecosystem Resiliency and Sustainability*, is focused on the Mississippi River and deltaic system, it addressed restoration efforts in Louisiana and Mississippi only. Our work was to help support states in gulf restoration through a better coordinated federal approach. It outlined federal actions over an eighteen-month period to address pressing near-term policy, process, and legal hurdles to restoration and laid the foundation for a long-term comprehensive vision to be achieved jointly with the states. Our post-spill restoration efforts will build on priorities articulated in the *Roadmap*, but will include the other three Gulf Coast states—Texas, Alabama and Florida.

The Department of the Interior's Role in Gulf Coast Restoration

As the nation's largest land manager and steward of many of our cultural and natural resources, the Department of the Interior has a major stake in a restored Gulf Coast.

We manage over three million acres of conservation lands in the five Gulf Coast states, including eight units of the National Park System and 36 National Wildlife Refuges. We have stewardship responsibilities for migratory birds, interjurisdictional fish and federally designated species. We have a strong science presence in the region, including the United States Geological Survey National Wetlands Research Center in Lafayette, Louisiana engaged in science and monitoring activities. We also have an extensive network of stream gages and long-term water-quality monitoring sites throughout the Mississippi River Basin and the five Gulf Coast states, through the United States Geological Survey National Water-Quality Assessment Program, National Stream-Quality Accounting

Network, and the Cooperative Water Program. Our estimates of nutrients delivered each spring to the Gulf of Mexico from the Mississippi/Atchafalaya River Basin are used by NOAA to predict the size of the "dead zone" in the northern Gulf of Mexico.

The Department of the Interior is also in the process of establishing a Climate Science Center (CSC) and four Landscape Conservation Cooperatives (LCCs) in the gulf area by working in collaboration with the states and other partners. The CSC will provide fundamental scientific information, tools, and techniques that land, water, wildlife, and cultural resource managers and other interested parties can apply to anticipate, monitor, and adapt to climate change impacts. LCCs provide scientific and technical support for landscape-scale conservation planning and design in an adaptive management framework by supporting conservation planning, decision support tools, prioritizing and coordinating research, and identifying inventory and monitoring programs.

Partnering to Achieve Ecosystem Restoration

As we have learned from our twenty year restoration efforts in the Everglades, large scale ecosystem restoration requires a shared vision and coordinated effort. No one entity can do it alone, and this is particularly the case in the Gulf Coast where there are five states, numerous tribes, local governments and federal agencies with important roles. Building on the existing plans that are already in various stages of development, we must focus on solidifying a shared blueprint for Gulf Coast restoration.

Through the NRDA process we will have a vehicle to identify eligible restoration projects which may also go a long way in fostering long term sustainable restoration efforts. In moving from the NRDA process to long term restoration for the Gulf, we need to build on these initial efforts and upon our initial

partnerships within the Trustee Council to develop a broader vision, or shared path, for Gulf Coast restoration.

In addition, we must pursue other funds such as dedicated revenues from statutory penalties resulting from the spill to ensure that we can support projects that go beyond NRDA–funded restoration. Obviously, realization of these other funding sources will require Congressional action and a commitment to place a priority on the long term health of the Gulf region.

A key element in these efforts will be the development of performance benchmarks to measure progress and allow for adaptive management. Long term monitoring informed by the best available science will also be essential, particularly in view of projected sea level rise due to global climate change.

Many stakeholders have urged the creation of a Congressionally-established Gulf Coast restoration council to oversee and coordinate long term restoration efforts. There are strong arguments for such an approach, and Secretary Mabus recommended such a council in his report to the President. Any such authority, however, should work in tandem with the NRDA trustee process, and ongoing partnerships and programs, and respect the strong state and local interests at stake in the region.

Land and Water Conservation Fund

The Land and Water Conservation Fund (LWCF) was established by Congress in 1965 for the purpose of acquiring conservation lands throughout the nation and in assisting states in doing the

same. The LWCF is presently authorized to receive $900 million annually through a portion of motor boat fuel taxes and OCS revenues, with the funds then appropriated by Congress.

The LWCF was created in order to assure that as one generation extracted resources for its benefit, some portion of the royalties would be invested in land and water conservation for the benefit of future generations. The Obama administration has set a goal to fully fund the LWCF by 2014 and has dramatically increased funding in each of its budgets. Full funding of LWCF will provide reliable dollars for land and water conservation efforts nationwide, but are not large enough to pay for a significant part of the costs of large scale ecosystem restoration projects such as the Everglades or the Gulf Coast.

Conclusion

The *BP Deepwater Horizon* explosion and oil spill is viewed by many as one of the worst environmental disaster in American history. The response to the spill was the largest ever and helped to mitigate some of the environmental impacts throughout the Gulf. Now we are embarked in the largest restoration effort ever undertaken in an ecosystem which was already impaired at the time of the spill. The NRDA process is well underway. The Administration is exploring opportunities for early restoration project which can address short term impacts from the spill. These efforts may also help achieve longer term restoration goals. Additional investments will be required, either in the form of directed penalty payments from the responsible parties or other sources, or both. The overall coordination of these efforts will require unprecedented intergovernmental cooperation between state, local, tribal and federal interests and a transparent and inclusive public process, as well as Congressional attention. We

are hopeful that out of this tragedy the rebirth of this extraordinarily important and fragile ecosystem can finally be realized.

National Commission on the

BP DEEPWATER HORIZON OIL SPILL AND OFFSHORE DRILLING

Attachment 31

Written Statement and Supporting Document of Brian McPeek

North American Regional Director, The Nature Conservancy

National Commission on the
BP Deepwater Oil Spill and Offshore Drilling
September 27-28, 2010

Testimony of
Brian McPeek, Regional Managing Director for North America,
The Nature Conservancy

Making a Case for a New Approach to Gulf of Mexico Restoration

Senator Graham, Administrator Reilly and distinguished members of the Commission, thank you for inviting the Nature Conservancy to share our views on environmental restoration across the Gulf of Mexico ecosystem.

The Nature Conservancy is an international, non-profit conservation organization working around the world to protect ecologically important lands and waters for nature and people. Our mission is to preserve the plants, animals and natural communities that represent the diversity of life on Earth by protecting the lands and waters they need to survive. We are best known for our science-based, collaborative approach to developing creative solutions to conservation challenges. Our on-the-ground conservation work is carried out in all 50 states and more than 30 foreign countries and is supported by approximately one million individual members. We have helped conserve nearly 15 million acres of land in the United States and Canada and more than 102 million acres with local partner organizations globally.

The Gulf of Mexico is one of the few places on Earth where the health of the environment is so obviously linked to the health of the economy and community on such a vast scale. And its citizens know this. In a new soon-to-be-released poll conducted by a coalition of Gulf-wide environmental, business, and social justice groups, it is clear that coastal restoration is a high priority for the region – nearly three-fourths of Gulf Coast voters say they would be more likely to vote for federal legislators if they support funding for Gulf Coast restoration. In the Gulf, clean and healthy marshes, beaches, and bays mean abundant fisheries, protection from storm surge and hurricanes for towns and businesses, and a vibrant tourism economy. Indeed, the economy of the United States *as a whole* is tightly linked to the energy, shipping and other industries that operate in the region.

However, decades of damage affect the Gulf's ability to support these needs and the needs of wildlife. The effects of the Gulf oil spill have now added urgency to a problem that was already ingrained, and directly impacts the lives and livelihoods of 24 million Americans from Florida to Texas who rely on a healthy and resilient Gulf of Mexico.

Over the last 90 years, the Gulf and the natural systems that support it have changed dramatically. Coastal prairies and forests have been developed and fragmented, dredging and overharvesting are harming shellfish beds, and coral reefs and sea grass beds have been severely damaged. Rivers have been altered by levees and dams that diminish the flow of fresh water and sediments needed for healthy coastal wetlands. This is especially evident in coastal Louisiana where 40 percent of the nation's coastal wetlands are found—wetlands that are disappearing at rates higher than anywhere else in North America. As a result, across the Gulf millions of acres of marshland and other habitats have been lost, fisheries and shellfish stocks have lost productivity, dozens of species have become threatened or endangered, and the resilience of these systems in the face of natural or man-made disturbances has been compromised.

The *Deepwater Horizon* spill presented another significant threat to the Gulf of Mexico region. The full effects of the spill on the environment and economy of the Gulf Coast remain unclear. What is clear is that this accident will have continued and potentially long-term impacts in the region. Thousands of acres of state and federal waters were closed to commercial and recreational fishing, and once pristine beaches were empty for much of the summer. These events sent a rippling effect through the Gulf Coast economy – shucking houses have shut down, coastal tourism industries have suffered, and even charitable giving has declined.

The oil spill provided an acute demonstration of how much money and how many jobs depend on a healthy, functioning Gulf of Mexico. While we aren't certain what the interruption to fishing and tourism income will total, we can look at past years to estimate this impact. In 2008, 3.2 million anglers spent $12.5 billion on recreational fishing, total sales impacts from the commercial fishing sector were at $10.5 billion, and 7.5 million birdwatchers spent almost $7 billion on their hobby. A study by Oxford Economics estimated that the oil spill could affect tourism for three years at a cost of $22.7 billion in lost revenues.

Regardless of the economic impacts caused by the spill, the region remains economically vulnerable to the slower, but longer lasting disappearance of the Gulf Coast ecosystems. Restoration can help to preserve the economic base and make it more resilient to future disasters like hurricanes and sea level rise. The spill, coupled with decades of degradation, make it increasingly vital to continue, expand and accelerate Gulf-wide conservation and restoration work as quickly and at as broad a scale as possible.

As an organization committed to protection and restoration of our Earth's greatest natural places and dedicated to science and partnerships, The Nature Conservancy believes that we must embrace a bold vision for conservation and set ambitious goals for long-term restoration.

The Nature Conservancy recommends that by 2020, restoration agencies and private partners from across the Gulf restore one million acres of a variety of habitats indigenous

to the Gulf of Mexico. These restored habitats will enhance fisheries production, estuarine water quality, coastal protection, recreational and natural resource values, as well as the Gulf's unique biodiversity. This will significantly improve the resilience of the Gulf Coast in the face of manmade and natural disasters and could also contribute to local economies as Gulf Coast residents are employed in restoration industries.

Past Efforts towards Finding a Solution

Historically, a number of federal, state, and local programs and authorities have addressed the decades-long impacts of coastal degradation while striving for the sustainability of the natural, cultural and economic resources of the Gulf region. Some of the larger efforts include the Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA or "Breaux Act") created to restore and protect coastal wetlands primarily in Louisiana; the Gulf of Mexico Program, an EPA-administered, non-regulatory program that seeks to facilitate collaboration among federal and state agencies in order to conserve and protect the health of the Gulf; Task Force Hope, a federally-led organization charged with building the hurricane protection system in New Orleans and Southeast Louisiana and planning for long-term coastal restoration and hurricane damage reduction; the Gulf of Mexico Hypoxia Task Force, the federally-led organization established to reduce and control hypoxia in the Gulf; and the Gulf of Mexico Alliance, the state-led partnership intent on significantly increasing regional collaboration to enhance the ecological and economic health of the Gulf of Mexico. In addition, there are seven EPA-administered National Estuary Programs throughout the Gulf Coast. These programs are designed to improve the water quality and habitats of estuaries of national importance.

Recently, President Obama issued Executive Order 13457 establishing a national policy for the stewardship of the ocean, our coasts, and the Great Lakes, and a National Ocean Council to respond to fragmented ocean management. The E.O. initiates a framework for effective Coastal Marine Spatial Planning (CMSP), a regional planning process that recognizes the interconnectedness of our coastal and marine resources to the continuing prosperity of our economy and communities, and the necessity and benefits attached to coordinated management.

In response to the *Deepwater Horizon* spill, the President charged the Secretary of the Navy to address the decades-long impacts to the Gulf of Mexico through the development of a long-term recovery plan for the people and habitats of the Gulf. Additionally, restoration activities determined by the Natural Resource Damage Assessment process will be most effective at mitigating damages if they are targeted at restoring processes necessary for sustaining and building coastal habitats (e.g., diversions of freshwater and sediment from the Mississippi River into its historic floodplain).

Despite myriad past efforts focused on specific Gulf issues (hypoxia, wetlands conservation, hurricane protection), no one entity is charged with ultimate accountability for Gulf-wide restoration. To change the future and avoid the obstacles of the past, we all

– state and federal governments, NGOs, oil and gas companies, navigation, tourism, local communities, and others who value the Gulf – must come together around a truly comprehensive plan to revitalize and restore it. The nation must commit to an ambitious agenda for restoring the Gulf of Mexico and its adjacent habitats. We must set bold, achievable goals for restoration of these critical habitats which are the source of economic health for so many of its people and this nation.

A New and Bold Approach

A new approach does not mean starting over. Rather, a new approach should build on efforts that are working at the local, state and regional level; however, a new, more accountable system of prioritization, coordination and leadership is needed to truly advance Gulf restoration. A new approach for the Gulf requires four key elements: 1) leadership anchored in collaboration; 2) a comprehensive restoration strategy with clear goals; 3) conflict resolution; and 4) dedicated funding.

Leadership: A Framework for Collaboration

No single entity or agency at any level of government can successfully resolve the complex and pressing issues facing the Gulf of Mexico. A collaborative partnership is required that incorporates, where possible, existing organizations and clear, high-level accountability.

TNC recommends that a "Gulf of Mexico Restoration Task Force" be established. The primary roles of the Restoration Task Force would be to create the agenda and coordinate the implementation of the many environmental restoration and protection programs being carried out by federal agencies, state and local governments, and organizations in the private sector in the Gulf of Mexico. The Restoration Task Force should also serve as the regional planning body under E.O. 13457 "Stewardship of the Ocean, Our Coasts, and the Great Lakes."

Membership should consist of the Secretaries of Interior, Army, Commerce, Agriculture, Homeland Security, Housing and Urban Development; the Administrator of the Environmental Protection Agency; the Chair of the Council on Environmental Quality; the Director of the Gulf of Mexico Program, the Governors of Texas, Louisiana, Mississippi, Alabama, and Florida; and two elected officials of local government from Gulf Coast states to be appointed by the President on a rotating basis. The Restoration Task Force should meet at least twice a year.

The chair of the Restoration Task Force should be a person appointed by the President and confirmed by the Senate who will give full attention to Gulf of Mexico restoration. Ideally, the chair would be a nationally recognized leader from the Gulf of Mexico region. The chair would serve in the Executive Office of the President and coordinate habitat and environmental protection and restoration programs implemented in the Gulf

of Mexico by federal agencies, state and local governments, and entities from the private sector to maximize the combined contribution of programs to the biological productivity and ecosystem functions in the Gulf of Mexico.

The chair would prepare an annual budget proposal, to be included in the President's budget submission to Congress, of the projects and programs to be implemented by each federal agency under the Restoration Plan (detailed in next section). The Restoration Task Force should be supported by two other bodies: 1) a Science Advisory Committee; and 2) a Working Group. To enhance the integration of science and management, the Science Advisory Committee should include both senior managers and scientists appointed by the Task Force. It will be primarily tasked with continually documenting and supporting the programmatic-level science and other research needed to update and implement the Gulf Restoration Plan. One of the first tasks assigned to the Science Advisory Committee should be the development of a science coordination plan and recommendations for priority research areas.

The Working Group should be led by and include, but not be limited to, the members of the Gulf of Mexico Alliance, and be charged to assist the Restoration Task Force in its efforts to coordinate the development of consistent policies, strategies, plans, programs, projects, activities, and priorities addressing the restoration, preservation, and protection of the Gulf of Mexico ecosystem, as well as respond to specific priority activities assigned by the Restoration Task Force. The EPA Gulf of Mexico Program should support the activities of the Working Group and coordinate with the Task Force in carrying out the responsibilities of the Working Group. The ecological data used in a restoration planning effort needs to be complemented by data on environmental, economic, and demographic trends in order to provide a context for strategic planning.

A Comprehensive Gulf of Mexico Restoration Strategy

It is time to look beyond slowing the damage to the Gulf. We must reverse it and restore the Gulf's resilience by restoring the sources of its strength, health and productivity. It will not be easy or quick, but it can and must be done. To reverse the tide of degradation and restore the Gulf, a comprehensive Gulf of Mexico restoration plan must consist of key actions including restoration of key bays and estuaries and an investment in scientific research and long-term monitoring.

Restore Key Bays and Estuaries

The bounty of the Gulf of Mexico begins in its bays and estuaries. These are the natural foundations of the entire ecosystem and contain the marshes, seagrasses, fish, mangroves, coral reefs, and other plants and animals that make the Gulf one of the most important and productive places on Earth.

A comprehensive restoration strategy should include protection and restoration of:

- Freshwater inflows to estuaries and coastal waters providing freshwater and sediments to rebuild marshes and wetlands;
- Estuarine and coastal habitats including but not limited to oyster reefs, coral reefs, sea grass beds, tidal marshes, tidal flats, and other wetlands, and barrier beaches that provide habitat for migratory birds, nurseries for fisheries, and protection from coastal hazards like storm surge;
- Coastal and marine biodiversity including populations of fish, shellfish, mammals, reptiles and birds that provide ecological and economic values; and
- Water quality and natural salinity regimes in estuarine and coastal areas of the Gulf of Mexico that help maintain healthy and productive commercial and recreational fisheries.

Science shows us where it is possible to start right now. Experts can point to key bays, estuaries and rivers that contribute to the Gulf's health. Investments in even a fraction of these places can contribute to immediate recovery and demonstrate effective largescale restoration that focuses on restoring habitat and reestablishing natural systems. A number of organizations from nonprofit, public and private sectors have been working across the Gulf for many years in these places and others around the Gulf to restore marshes, seagrasses, mangroves, coral reefs and oysters[1].

Investment in Science and Long-term Monitoring
The comprehensive restoration strategy must also include a long-term environmental monitoring and research program to ensure that all of the restoration planned and completed adds up to meaningful improvements in ecological functioning at a Gulf-wide scale. Long-term monitoring should be conducted to improve understanding of the overall physical, chemical and biological conditions of the Gulf of Mexico ecosystem and how restoration is having an impact on these conditions.

The Nature Conservancy recommends that the chair of the Restoration Task Force publish a comprehensive plan, utilizing existing plans where possible, for long-term restoration of the Gulf of Mexico after receiving public comment on a draft plan. The plan should be updated every five years in the same manner.

The Restoration Task Force should consider all information from the long-term environmental monitoring and research program in updating the plan and assure that the plan adapts to new information. Elements of the plan should indicate how funds projected to be available to the Restoration Task Force for the succeeding ten years will be allocated across restoration, monitoring, and research strategies. The plan should include a list of specific projects to be funded and carried out during the subsequent three years. Each project listed should be consistent with the strategies identified in the plan and the environmental benefits of the project should be clearly established and economically

[1] See attachments for map and five large-scale ecosystem restoration case studies.

defensible. The Restoration Task Force should update the three-year list of projects annually.

The Restoration Task Force should base all decisions and prioritization of projects on the best available science and recommendations from the Science Advisory Committee and utilize adaptive management principles. Highest priority should be given to projects that will make the greatest contribution in restoring biological productivity and ecosystem functions in the Gulf of Mexico region, without regard to geographic location. Moreover, in selecting projects under the plan, the Restoration Task Force should give priority to large-scale projects that have not been or are not likely to be funded under other environmental restoration and protection programs authorized for areas in the Gulf of Mexico. To take advantage of existing efforts and to expedite the process, the initial plan should give high priority to funding projects authorized by title VII of the Water Resources Development Act of 2007.

Management of Conflict

Identifying areas of conflict and developing a way forward is vital to progress. Engaging all stakeholders – including landowners, environmental interests, oil and gas companies, navigation, and the fishing and tourism industries – with facilitation can help refine the problem, identify acceptable solutions, and increase collaboration. In the event the conflict is not resolved and consensus does not exist, decisions of the Restoration Task Force should be taken by a majority of the members by vote.

Funding

Sustained, dedicated funding is critical to the long-term conservation of the Gulf. It would be impossible to conduct restoration at the scale required without funding certainty from year to year. Compared to other Great Water Body programs, the Gulf of Mexico has received very little direct federal funding. TNC recommends appropriated funding consistent with the budget prepared by the Restoration Task Force. In addition, potential opportunities for restoration have emerged as the result of the Deepwater Horizon spill. If established, funding from these sources should be used to supplement funding for projects and programs recommended by the Restoration Task Force. These include:

- *Establishment of a Gulf Coast and Estuaries Fund.* In the soon-to-be released poll mentioned early in this testimony, over three-fourths of respondents favor creation of a separate fund for the Gulf region and the Mississippi River Delta that includes penalty payments from BP for violating the Clean Water Act and the Oil Pollution Act. Most of the Clean Water Act fines from the Deepwater Horizon Spill should be used to jump start a Gulf Coast and Estuaries Fund. (The balance of fine money should be used to establish the Gulf of Mexico Endowment described below). Even though spill-related funding may be significant, it will prove insufficient in providing the sustained funding required to achieve system-

wide restoration in the Gulf. For this reason, TNC advocates dedicating a share of the increase in per barrel oil and gas taxes currently under consideration by Congress to long-term, Gulf-wide restoration. Previously estimated costs for large scale Gulf restoration have been roughly approximated at $600 million a year for 30+ years, which could be provided by dedicating $.10 of the proposed increase, should it pass. This dedicated funding will help conserve a resource that provides the nation with a significant portion of our domestic energy supply, along with the natural, cultural and other economic resources upon which we depend.

- *Use of NRDA funding for comprehensive restoration.* The expenditure of Natural Resource Damage Assessment (NRDA) funds should be informed by the comprehensive plan for Gulf of Mexico restoration that is created by the Restoration Task Force recommended herein. Only then will it be possible to couple spill damage compensation for the loss of habitat with long-term, ecosystem-wide restoration for both ecological and human benefits.

- *Creation of an endowment for the Gulf of Mexico from Clean Water Act (CWA) fine money to ensure payments made by BP are not a one-time investment, but instead a sustained source of funding for Gulf recovery.* TNC proposes that up to $1.5 billion of the CWA fine money be used to create an endowment for the Gulf of Mexico to be administered by an agency designated by the President consistent with the plans and activities of the Restoration Task Force. The endowment would maintain the fine money in an account in perpetuity and distribute interest earnings on an annual basis as grants for Gulf Coast recovery and other critical activities. The grants could go to state agencies, local governments, non-profit organizations, and universities on a competitive basis. As a sustained source of funding, this initiative would ensure that the people of the Gulf region are fully involved in its recovery and have a source of funding for environmental and related economic restoration that extends beyond the immediate cleanup of the spill.

  These funds could be placed in a dedicated account managed by the Treasury Department. Each year the Secretary of the Treasury would report on the amount of funds immediately available for expenditure and projected to be available over the next ten years. The comprehensive Gulf Restoration Plan mentioned previously would guide expenditure of these and other Gulf restoration funds to the most strategic and effective locations for people and the environment.

Reinvestment of Funding from Mineral Resource Development

The principle that offshore revenues should be reinvested is not new, but today more than ever we stand witness to the environmental pressure that coastal development creates on our natural resources. To restore, conserve and make these resources more resilient, The Nature Conservancy proposes establishing an Ocean Trust Fund and full funding of the Land and Water Conservation Fund, which by statute is already supported by Outer Continental Shelf revenues.

Ocean Trust Fund

The Nature Conservancy recommends using proceeds from offshore oil and gas leasing to create a $1 billion per year Ocean Trust Fund that would support long-term marine and coastal stewardship. Such a fund could sustain a permanent system of marine governance in the Gulf of Mexico and elsewhere that would bring together federal and state agencies to administer research, monitoring, and improved resource management. It would also provide funding for marine conservation and restoration projects. A few key principles for the fund include:

- *Initial Emphasis on the Gulf.* An Ocean Trust Fund might give initial emphasis to Gulf of Mexico restoration as a pilot project for development of a nationwide Ocean Trust Fund program.

- *Use of Funds.* Offshore revenues should be reinvested in activities that provide lasting habitat and biodiversity value. Potential uses include: acquisition and restoration of coastal areas; science, data collection, mapping and spatial planning; mitigation of damage to fish, wildlife or natural resources; planning assistance and administrative costs; and implementation of federally-approved marine conservation management plans.

- *Funds to Coastal States.* Fifty percent of Americans live near the coasts. This development combined with offshore activities significantly impacts the marine resources which must bear the day-to-day operations, as well as catastrophic events. A significant share of any Ocean Trust Fund must be vested with all coastal and Great Lakes states. Funds should be split between competitive processes and formula allocations.

- *Incentives for New Drilling.* Any formula allocation for revenue sharing should not in itself create incentives for new oil and gas production.

Land and Water Conservation Fund

The Land and Water Conservation Fund (LWCF) was authorized in 1965. It is the principal source of federal funding to acquire land for the U.S. Fish and Wildlife Service,

National Park Service and U.S. Forest Service, each of which have significant holdings adjacent to and benefiting the Gulf. The LWCF also supports state-based conservation investments throughout the nation.
There are numerous National Wildlife Refuges and other Federal, state and local public lands around the Gulf and its estuaries where LWCF funding could acquire inholdings and well planned additions including the freshwater and tidal wetlands so essential to the health of the Gulf.

The Nature Conservancy supports full and dedicated funding of the Land and Water Conservation Fund at $900 million annually; the LWCF would continue to be derived from offshore oil and gas leasing revenue, but this income would be dedicated to the LWCF.

Acting Decisively to Put in Place Multiple Funding Sources

There are now pending in Congress measures to support Gulf of Mexico restoration through bills that would allocate Clean Water Act fines to long term Gulf restoration, create an Ocean Trust Fund and provide full and dedicated funding for the Land and Water Conservation Fund. Legislation accomplishing all of this has already passed the House in the form of H.R. 3534. The Senate could, similarly, bring establishment of a Gulf Coast and Estuaries Fund, creation of an Ocean Trust Fund and full funding of the Land and Water Conservation Fund together in landmark legislation that would not only assure restoration of the Gulf of Mexico but would over time assure conservation and restoration of other estuaries and other exceptional places all across America. We urge this Congress to act on this agenda before adjourning for the year.

Funding Existing Authorized Projects and Programs

In addition, increased funding for components of existing authorizations or programs could contribute to the long-term health of the Gulf. Examples include:

- Water Resource Development Act
- Mississippi Coastal Improvements Plan (MsCIP)
- National Estuary Programs
- Coastal Impact Assistance Program

Partnership Opportunities

Another opportunity for funding is investment by the businesses, industries, and communities that depend upon a healthy Gulf environment. Consideration should be given for the development of opportunities for non-governmental partners to contribute to the sustainability of their region.

The Future of the Gulf Depends on Us

Restoration is, like politics, the art of the possible. Restoring the Gulf of Mexico, then, is not about turning back time, it's about seeing a new way forward. Over the last 100 years, human activities both in the Gulf and in upstream reaches, have altered the natural infrastructure of the Gulf—the marshes and the oyster reefs, the seagrass beds, the mangroves, the barrier islands and the nearshore environments. As these places have been degraded, the overall health of the Gulf has suffered. The suffering shows itself in Dead Zones in the Gulf, in declining fisheries and lost water quality, in disappearing marshes and dying reefs.

In more technical terms, the Gulf has lost much of its resilience—it is no longer robust and strong. It has lost the ability to absorb damage and recover its health and now has many underlying health problems that magnify the damage caused by natural and manmade disasters. The oil spill in the Gulf is adding profound insult to what was already dire injury.

The effects of the BP spill on the communities and ecosystems of the Gulf are tragic and still unfolding. But the crisis of the spill is bringing renewed focus on the need for a new future for the Gulf of Mexico, one that begins to restore and reverse decades of degradation and decline that have affected the region. The people and the ecosystems of the Gulf are incredibly resilient, but they need our help. We owe it to them to do everything we can to help restore this valuable ecosystem for the benefit of the Gulf of Mexico region and the nation.

This is a moment of decision for the Gulf of Mexico region and the nation. Without decisive action now, it is certain that we will continue to witness the decline of one of the world's most productive seas, an erosion of the economy of the region and nation, and increased and profound damages to human communities.

Attachments

Five Gulf case studies to illustrate large-scale restoration

The Mississippi River Delta, Louisiana: The Delta of the Mississippi River, is a 3-million-acre ecosystem containing extraordinary biodiversity. It provides habitat for an array of plant and animal species, including 79 that are rare, threatened or endangered. It contains 25 percent of the world's population of Piping Plover, 75 percent of Mississippi and the Central Flyway's wintering waterfowl. From the Delta comes 34 percent of the nation's oysters and one-third of its total fisheries.

In 1928, levees were constructed along the Mississippi River to prevent flooding and facilitate navigation, ending the natural process of spring flooding that provides regular replenishment of sediments and freshwater to the coast of Louisiana. In addition, thousands of miles of canals were dug to support oil and gas exploration, allowing saltwater deep into the Delta. These events, coupled with natural and man-induced subsidence, has resulted in the rapid loss of marshes and the disappearance of Louisiana's coast at the rate of 25 square miles per year.

The most rapidly disappearing place on the continent, the Mississippi River Delta has also been hardest hit by the oil spill. But the region was struggling even before oil came ashore and made an already urgent situation more challenging.

Returning fresh water and sediment to the Delta has long been recognized as key to restoring coastal wetlands and sustaining this ecosystem. It is also an important step in helping the estuary recover from the losses caused by the spill. Restoring key habitats, such as oyster reefs, will directly benefit the species — both recreational and commercial — that are important to the economy of the region.

Mississippi Sound, Mississippi: The Mississippi Sound represents the entire Mississippi coastal area, and its health is critical to everything that happens on the Coast. The Sound is set off from the open Gulf by the pristine barrier islands of Gulf Islands National Seashore, creating a large and highly productive brackish water estuary, home to important commercial and sport fisheries. All Mississippi coastal rivers and bays empty into the Sound—each of these bays are home to large expanses of productive salt marshes.

Like all North American coastal areas, Mississippi has undergone rapid population growth, with the accompanying conversion of marshes, savannahs and coastal forests to commercial and residential use. Habitat loss and degradation has reduced marsh areas, damaged oyster reefs and seagrass habitats and exposed Coast residents to increasing risk

from tropical weather. The newest challenge to the Mississippi Coast and all of its neighbors is the massive Deepwater Horizon oil spill.

Habitats critical to Mississippi Sound—seagrasses, coastal marshes, oyster reefs—have already been identified and work is ongoing. The restoration of the Mississippi Sound is the key to environmental, economic, and aesthetic future of the Gulf Coast.

Apalachicola Bay, Florida: Located along Florida's Panhandle, the Apalachicola Bay is the ultimate destination of many of the South's most important rivers—rivers that supply drinking water, waste management, hydropower, irrigation, and navigation to one of the fastest growing regions of the nation. Given the high demand for the water that eventually flows into the Apalachicola River, maintaining fresh water flow into the bay is an ongoing challenge.

But without this water, the Apalachicola River basin would lose much of its biodiversity and Apalachicola Bay would lose its productive oyster reefs, reefs that supply approximately 10 percent of the nation's entire oyster harvest each year. However, most of the reefs in Apalachicola Bay are worked and harvested within a short timeframe. Natural oyster reef structures are nearly completely gone.

This is significant because natural oyster reefs are not flat, but rather have significant three-dimensional structure provide important habitat for numerous species of fish and invertebrates. While it is important to maintain the vibrant oyster fishery in Apalachicola Bay, the resilience of the fishery as well as the health of the entire Bay would benefit greatly from expanded restoration and protection of core natural oyster reefs.

Matagorda/San Antonio Bays, Texas: The marshes, coastal prairies and islands of the Matagorda and San Antonio Bays lie at the end of the Central Flyway, one of four primary routes for migratory birds in North America. And while the Gulf of Mexico is a very large system, its parts are connected—by ocean currents, by the annual migration of marine life and birds, and by the economic, cultural and historical relationships among its communities. And, increasingly, its parts are linked by common problems. The natural and human communities around the Gulf face rising threats that include polluted water, over-fishing, and loss of natural habitat, including marshes, oyster reefs and seagrass.

The seagrasses that grow in the shallows of coastal bays and estuaries are the foundation of life in the Gulf of Mexico. Underwater meadows of shoalgrass, turtlegrass, manateegrass and other seagrasses protect water quality and clarity, and serve as a nursery for the shrimp, shellfish and the sport fish prized by anglers, including redfish, drum and sea trout. Yet, conservationists, anglers and concerned citizens are becoming increasingly aware that seagrasses are in decline.

Over the past 20 years, studies show that shoalgrass, for example, has decreased by 60 percent. At the same time, underwater areas that lack vegetation entirely have increased

by nearly 300 percent. The declining quantity and quality of these seagrass habitats now represent a major threat to shrimp, fish and other species depending on them. Ducks and other birds, sea turtles and crabs need seagrass to thrive.

Mobile Bay, Alabama: Adding a distinctive notch to Alabama's Gulf Coast shoreline, Mobile Bay—with an average depth of 10 feet—is one of the shallowest bays of its kind. It is also the fourth largest estuary in the United States and plays an important role in sheltering and nurturing many species, including the finfish, shrimp and oysters, that are vital to Gulf communities.

Over the last decades, Mobile Bay has seen significant loss of marsh, seagrass and oyster reef habitats through dredge-and-fill activities, sea walls and jetties, erosion, storm events and other causes, thus offering one of the largest potential areas for outright restoration, replacement and enhancement of these lost habitats on the Northern Gulf Coast.

This type of habitat replacement/restoration has long-term benefits in helping to improve on-going problems in Mobile Bay, from stormwater to the "free-floating bottom sediment" issue to shoreline erosion. While the marsh component is critical to rebuilding habitat for quick fish stock recovery, it will also aid in stormwater remediation, including nitrogen capture. This effort will also make the coastline more resilient to any impacts from hurricanes, oil spills or climate change.

Bays, Estuaries and Rivers of the Gulf of Mexico