Louisiana Coastal Area
Ecosystem Restoration and the
Deepwater Horizon Oil Spill

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Ecosystem Services

- 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
Ecosystem Services

- 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
Tonnage on Domestic Waterway Network

Note: Figure shows door-to-door annual shipment volumes (tonnages) by 4-digit Performance Monitoring System Commodity Class and annual shipment volumes (tonnages, dollar-valued trade) to and from U.S. seaports and foreign countries, broken down by 4-digit Harmonized Schedule Commodity Codes.

Annual Tons of Freight by Water

150000000  75000000  37500000
Data From U.S. Army Corps of Engineers
restoring and protecting Louisiana's coast
Total Combined Truck Flows (1998)

NEW ORLEANS
Total Combined Truck Flows (1998)

LOUISIANA
Gulf of Mexico-Energy
Natural Gas Market Center (Hubs)
[Orange]
Oil Import Sites/Seaports

[Purple/Red]
Offshore oil and gas pipelines in Gulf of Mexico
Wetlands/Land Loss

1900 SQUARE MILES – LOST!
1900 SQUARE MILES OF JURISDICTIONAL WETLANDS

Before Levees/Channelization:

- Entire State of Louisiana is a deltaic plain – a product of the river
- New Orleans was under water less than 5000 years ago
- Louisiana was growing/accreting approximately .75 square miles/year
1900 SQUARE MILES OF JURISDICTIONAL WETLANDS

Rate of Loss:

• Greater than the size of Manhattan annually
• Over one football field an hour since 1985

Cumulative Loss:

• 30 times the size of Washington, DC
• The State of Rhode Island (land area) plus 838 square miles
• The State of Delaware would consist of less than 72 sq. miles of land

Hurricane Impacts:

• Hurricanes Katrina/Rita in 2005: over 150 square miles lost
60 Million Years Ago
Barrier Island Transgression
Major Reforms

• Executive Order enforcing Master Plan for Sustainability

• Integration of coastal stovepipes within state government into one empowered organization – CPRA

• Coordination of over 40 funding sources to advance one common vision

• Improved stakeholder engagement (NGOs, navigation, energy, parishes, regional stakeholder workgroups)

• Improved coastal zone management strategies

• Exponential increases in financial and political support
Efforts to Date (2008-2011) 
[Excluding Oil Spill Injury/Fines]

Funding:

• $1 billion: State Surplus Funds/State Trust Fund
• $490 million: Coastal Impact Assistance Program
• $550 million: other programs

TOTAL: Over $2.0 Billion
United States Geological Survey
Preliminary Land Loss/Gain 1930-2010

1 1932 assumes no change from 1932 to 1958 in 1,115 mi² and no change from 1932 to 1973 in 577 mi² of coastal Louisiana.
2 1958 assumes no change from 1955 to 1973 in 920 mi² of coastal Louisiana.
3 Datasets are based on Landsat Multispectral Scanner System (MSS) data, which are originally at 60-m resolution.
Deepwater Horizon Oil Spill
## Coastline/Shoreline

<table>
<thead>
<tr>
<th>State</th>
<th>Total Coastline (MILES)</th>
<th>Tidal Shoreline (MILES)</th>
<th>Tidal Shoreline (FEET)</th>
<th>Threatened Shoreline Within 350 miles of incident site*</th>
</tr>
</thead>
<tbody>
<tr>
<td>LA</td>
<td>397</td>
<td>7,721</td>
<td>40,766,880</td>
<td>40,766,880</td>
</tr>
<tr>
<td>MS</td>
<td>44</td>
<td>359</td>
<td>1,895,520</td>
<td>1,895,520</td>
</tr>
<tr>
<td>AL</td>
<td>53</td>
<td>607</td>
<td>3,204,960</td>
<td>3,204,960</td>
</tr>
<tr>
<td>TX</td>
<td>367</td>
<td>3,359</td>
<td>17,735,520</td>
<td>n/a*</td>
</tr>
<tr>
<td>FL</td>
<td>770</td>
<td>8402</td>
<td>44,362,560</td>
<td>16,857,773</td>
</tr>
</tbody>
</table>

**NOTE:** Compare coastline miles to shoreline miles. Louisiana has a disproportionate ratio.
Disproportionate Impacts to Louisiana

• In nearly all categories, the impacts to Louisiana’s natural resources have been greater than all other states combined.

• An estimated 92% of the currently heavy to moderately oiled shorelines in the Gulf are Louisiana shorelines.

• Louisiana’s shorelines have consistently represented over 80% of heavy to moderately oiled Gulf shorelines at any given time.
**Disproportionate Impacts to Louisiana**

- Louisiana’s shorelines have consistently represented over 50% of all total shoreline miles oiled, and over 50% of all shoreline miles oiled at any given time.

- Approximately 60% of all birds and 60% of all mammals collected in response to the spill were collected in Louisiana.

- Over 65% of all birds found visibly oiled and dead have been found in Louisiana.
## Current Degree of Oiling Summary

As of July 9, 2011:

<table>
<thead>
<tr>
<th>State</th>
<th>Heavy</th>
<th>Moderate</th>
<th>Light</th>
<th>Very Light</th>
<th>Trace (&lt;1%)</th>
<th>Oiled as of Last Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>LA</td>
<td>12.8</td>
<td>26.3</td>
<td>75.8</td>
<td>64.7</td>
<td>86.2</td>
<td>265.8</td>
</tr>
<tr>
<td>AL, MS, FL</td>
<td>0</td>
<td>0.2</td>
<td>17.9</td>
<td>2.5</td>
<td>204.5</td>
<td>225.1</td>
</tr>
<tr>
<td>Totals</td>
<td>12.8</td>
<td>26.5</td>
<td>93.7</td>
<td>67.2</td>
<td>290.7</td>
<td>490.9</td>
</tr>
<tr>
<td>LA %</td>
<td>100%</td>
<td>99%</td>
<td>81%</td>
<td>96%</td>
<td>30%</td>
<td>54%</td>
</tr>
</tbody>
</table>
BP Deepwater Horizon Oil Spill 2010

Photos taken by Louisiana Department of Wildlife and Fisheries the week of April 11, 2011
Types of Claims Under Oil Pollution Act

- Response and Removal Costs
- Natural Resource Damages
- Clean Water Act Fines
- Lost Revenue
- Increased Cost of Public Services
- Property Damage
- Lost Income
- Subsistence Use
Natural Resource Damage Assessment

• Goal: to make the environment and public whole for injuries to natural resources and services resulting from an incident involving a discharge or substantial threat of a discharge of oil
Clean Water Act

- Penalties authorized per day and per barrel of oil discharged
- Supplemental Environmental Projects
- Congressional Legislation Pending:
  - Current law directs fines to Oil Spill Liability Trust Fund
  - National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling Final Report recommended 80% dedication
  - Gulf Coast Ecosystem Restoration Task Force
NRDA/Oil Spill Down Payment

- April 21, 2011 - Deepwater Horizon Natural Resource Trustees announced $1 billion down payment for early restoration

- Louisiana first made the request July 2010

- Largest early restoration agreement ever reached

- Provides an opportunity to implement restoration projects prior to the completion of the natural resource damage assessment (NRDA) process
NRDA/Oil Spill Down Payment

- $500M will be split equally among the state trustees
  - Each of the Gulf states will receive $100 million

- $200M will be split equally among the federal trustees
  - NOAA and DOI will each receive $100 million

- $300M will be used to fund state sponsored restoration projects based upon impacts.
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<thead>
<tr>
<th>Criteria</th>
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<tbody>
<tr>
<td>Project cost effectiveness</td>
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<tr>
<td>Proximity to affected area</td>
</tr>
<tr>
<td>Scalability</td>
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<tr>
<td>Extent of benefit to injured resources/services</td>
</tr>
<tr>
<td>Technical feasibility and likelihood of success</td>
</tr>
<tr>
<td>Avoidance of future injury resulting from project</td>
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<tr>
<td>Degree to which project addresses multiple injuries</td>
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<tr>
<td>Ability to implement project with minimal delay</td>
</tr>
<tr>
<td>Degree to which project supports existing strategies/plans</td>
</tr>
<tr>
<td>(i.e. State Master Plan)</td>
</tr>
<tr>
<td>Project urgency</td>
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<tr>
<td>Consideration of comments received</td>
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Future Funding for Ecosystem Restoration/Oil Spill Injury

**Water Resources Development Act of 2007**
- authorized approximately 17 ecosystem restoration projects totaling $8 billion

**Natural Resource Damage Assessment**
- quantifies injury of oil spill
- addresses all ecological and human use injury
- estimated damages in Louisiana $10-20 billion

**Clean Water Act**
- civil penalties of approximately $1100/barrel for discharge into environment
- approximately $4300/barrel if due to gross negligence
- National Oil Spill Commission/Secretary Mabus
- legislation filed in Congress
- Supplemental Environmental Programs
- current estimate **Gulf-wide: $22 billion** (80%= $17-18 billion)
- Louisiana commits funding to ecosystem restoration efforts
• Current project delivery mechanism is insufficient to meet urgency of Louisiana’s coastal crisis
  ○ Policy/legal conflicts
  ○ Lack of local, state and federal consistency (i.e. dredging/mitigation)
  ○ Time constraints (40 years or more/WRDA 07 delays)
  ○ Financial resources are insufficient (Corps’ funding decreases)

• Gulf Coast Ecosystem Restoration Task Force
  ○ Comprehensive Gulf coast strategy
  ○ Address fundamental obstacles to ecosystem resilience
  ○ Opportunity to begin improving efficiency of project delivery
Thank You For the Opportunity
Questions?

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