

Gulf Coast Oil Disaster Response, Recovery and Restoration A Status Report

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Presentation Overview

- **Background**- Alabama's watershed, coastal resources
- **The Oil Spill**- A Picture tells a Thousand Words
- **The Law**- Oil Pollution Control Act
- **The Environmental Impacts**
- **The Human Impacts**- A Fisherman's View
- **What's Happening on the Ground**- NEP Partner Actions
- **What the Future Holds** for Philanthropy

The Watershed



- Covers 2/3 of Alabama, & portions of Mississippi, Georgia, and Tennessee
- 6th largest in area = 43,000 square miles
- 4th largest in North America in terms of flow
- 62,000 cubic feet of water per second
- 15-20% of nation's Fresh Water flows through Mobile Bay

Coastal Resources: Commercial Fishing

Value of Commercial Fishing in Gulf States
each Year:

\$662 million

Pounds of fish brought in by commercial
fisheries in Gulf each year:

1.3 Billion

Alabama Shrimp Harvest (2008)

\$38.4 million

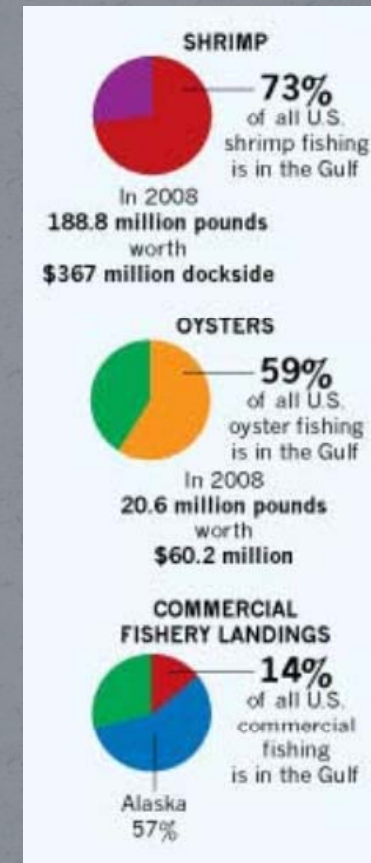
Alabama Blue Crab Harvest (2008)

\$1.5 million

Top Species Landing by Pounds

Menhaden 913.4 million

(average from 2004-2006)



Coastal Resources: Tourism & Sport Fishing

620,000

of Tourism and Recreation Jobs in Gulf Coast Region

25 Million

Marine recreational fishing trips taken in the Gulf in 2006

\$ 9 Billion

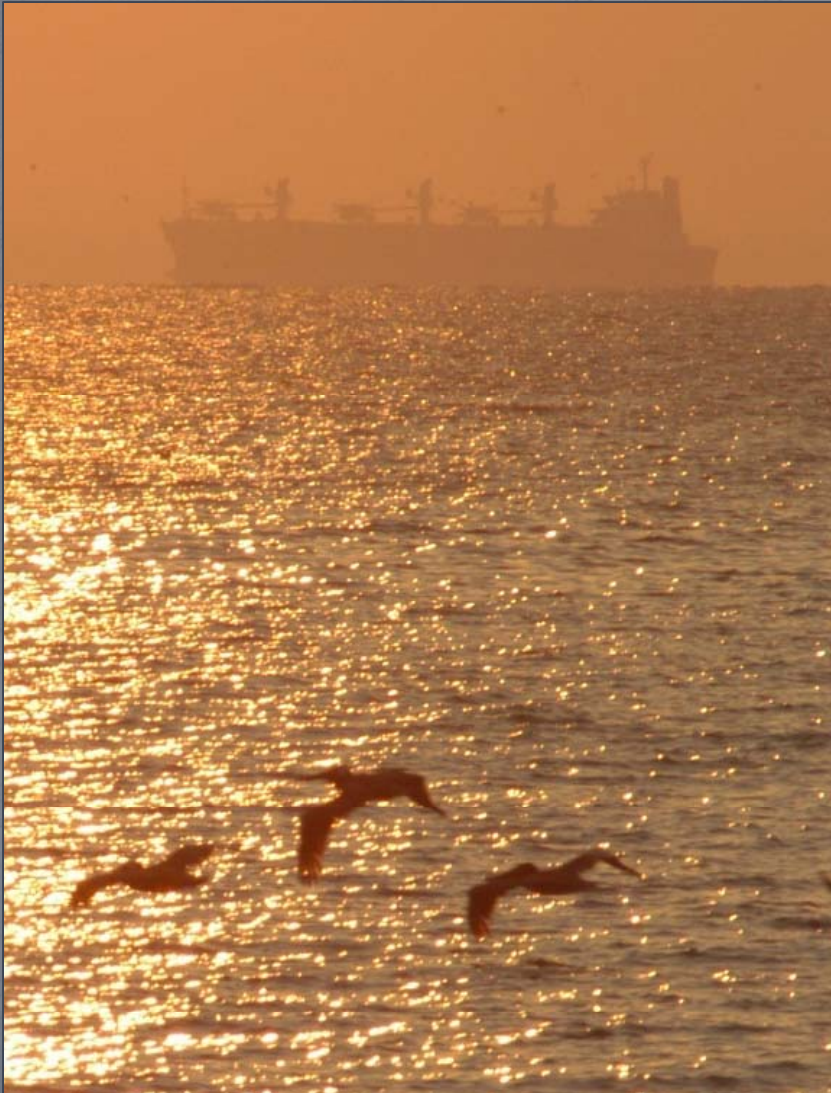
Wages paid each year to tourism and recreation workers in Gulf Region



Gulf Shores National Shrimp Festival

33% , or **\$2.97 Billion**
of Alabama's \$9 Billion travel industry occurs in Mobile and Baldwin Counties

Coastal Resources: The Alabama State Port



66,617

Direct and Indirect Jobs

\$263+ Million

Direct/Indirect Tax Impact

\$7.92+ Billion

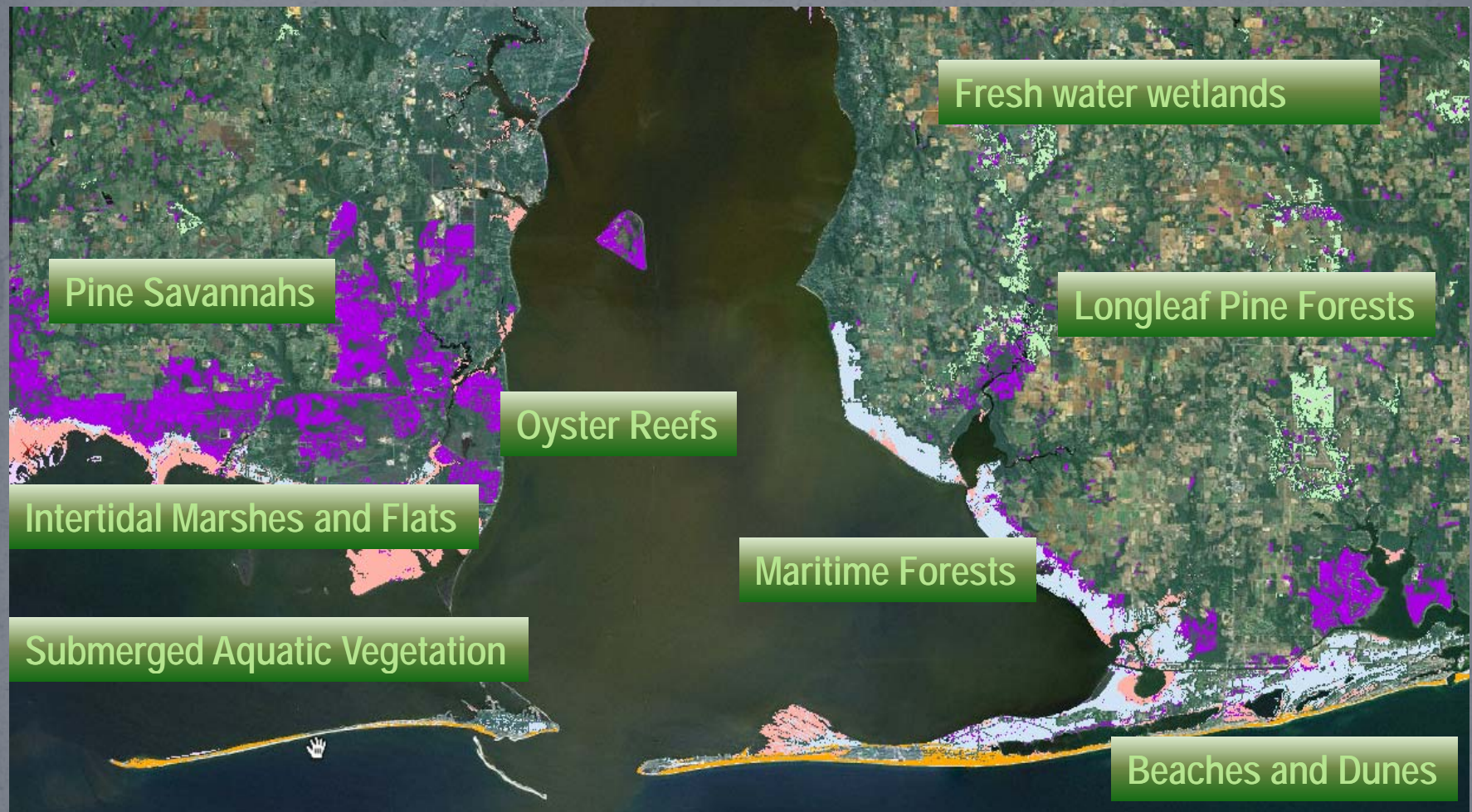
Total Economic Impact

Imports: *Coal, Aluminum, Iron, Steel, Copper, Lumber, Plywood, Cement, Chemicals.*

Exports: *Coal, Lumber, Plywood, Laminate, Flooring, Roll and Cut Paper, Iron, Steel, Frozen Poultry, Soybeans, Chemicals.*

Coastal Resources:

Habitats



Coastal Resources:

Birds, Turtles



The Oil Spill:



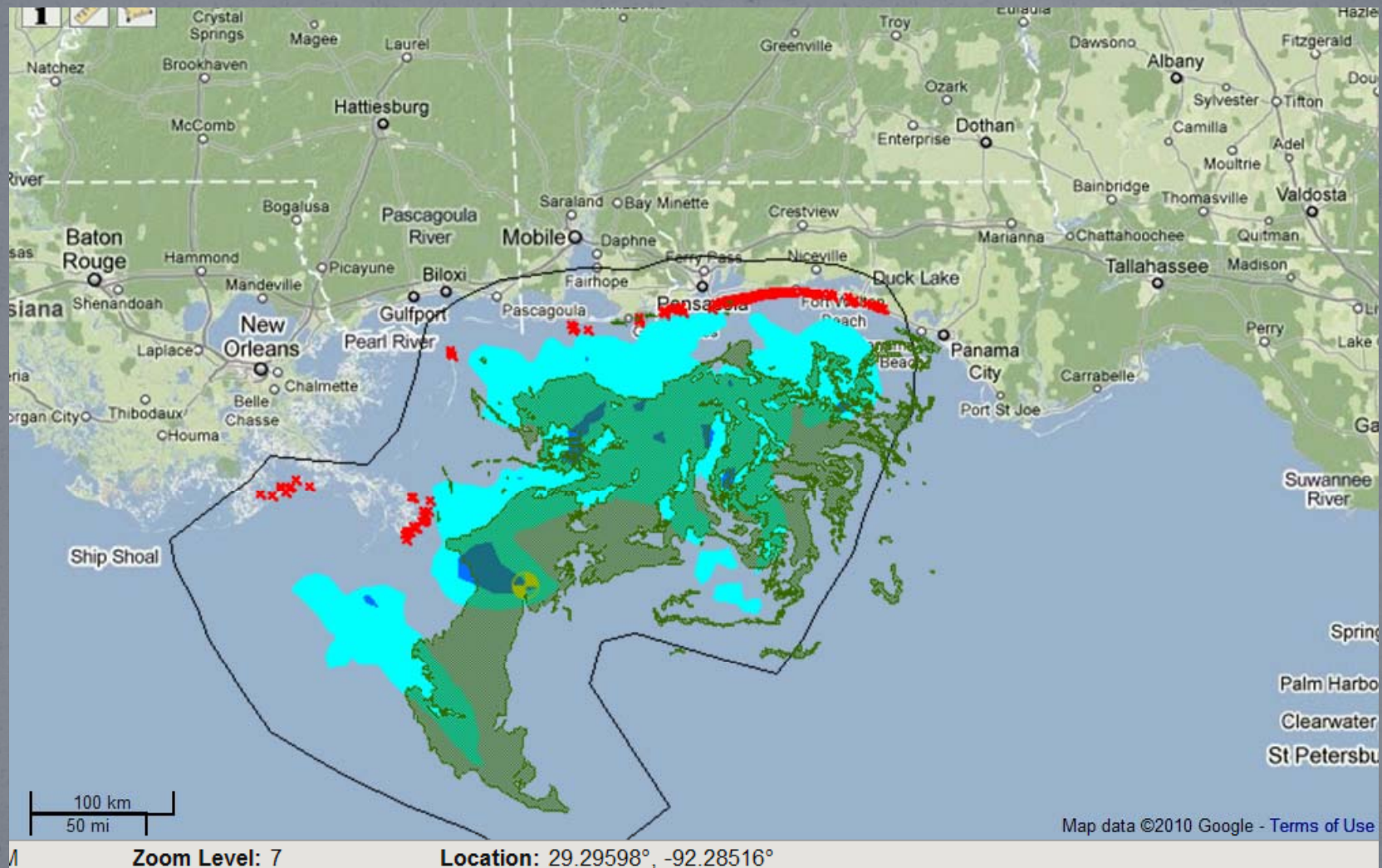
The Oil Spill:

In Context

Oil Spill	Location	Date	Tons of Crude	US Gallons
Lakeview Gusher	Kern County, California 	March 14, 1910 - 18 months	1,230,000	9,020,000
Gulf War Oil Spill	Iraq, Persian Gulf and Kuwait 	January 23, 1991	750,000 - 1,500,000	5,500,000 - 11,000,000
Ixtoc I	Mexico, Gulf of Mexico 	June 3, 1979 - 9 1/2 months	454,000 - 480,000	3,329,000 - 3,520,000
Deepwater Horizon	United States, Gulf of Mexico 	April 20, 2010 - (64 days)	377,000 - 832,000	2,760,000 - 6,100,000

The Oil Spill:

Shape and Size



The Law: **Oil Pollution Control Act of 1990**

Elements of Liability (sec.1004)

- Removal Costs
- Damages
 - Natural Resources
 - Real or Personal Property
 - Subsistence Use
 - Revenues
 - Profits and Earning Capacity
 - Public Services



Limits on Liability

(Sec.1004(a)(3))

...for an offshore facility except a deepwater port, the total of all removal costs plus \$75,000,000

The Law:

Who and What



Removal Costs- Response Leads

- BP
- Federal- (DHS) US Coast Guard
- State- ADEM
- Local Governments

Actions Being Taken

- Coastal/shoreline booming
- Beach cleaning
- Near shore skimming
- High-volume On-water (offshore) Oil Skimming
- Aerial Chemical Dispersant Application

The Law:

Damages and Trustees

Natural Resource Damages

Federal Lands- US Government

State Lands- State of Alabama

Trustees *are responsible for assessing damages to natural resources*

Federal _____ NOAA, Department of Interior (USFWS)

State _____ Alabama Department of Conservation and Natural Resources



Sarah Rosedahl 2010

The Law:



Why and How?

Natural Resource Damage Assessment and Restoration Program (NRDA)

...to restore natural resources injured
as a result of an oil spill

Legal process to determine the
type and amount of restoration
needed to compensate the public



How?

Collecting, compiling,
and analyzing
pre and post spill data

*If damages aren't documented, it's tough to
get restoration funding later...*

Federal Oversight:

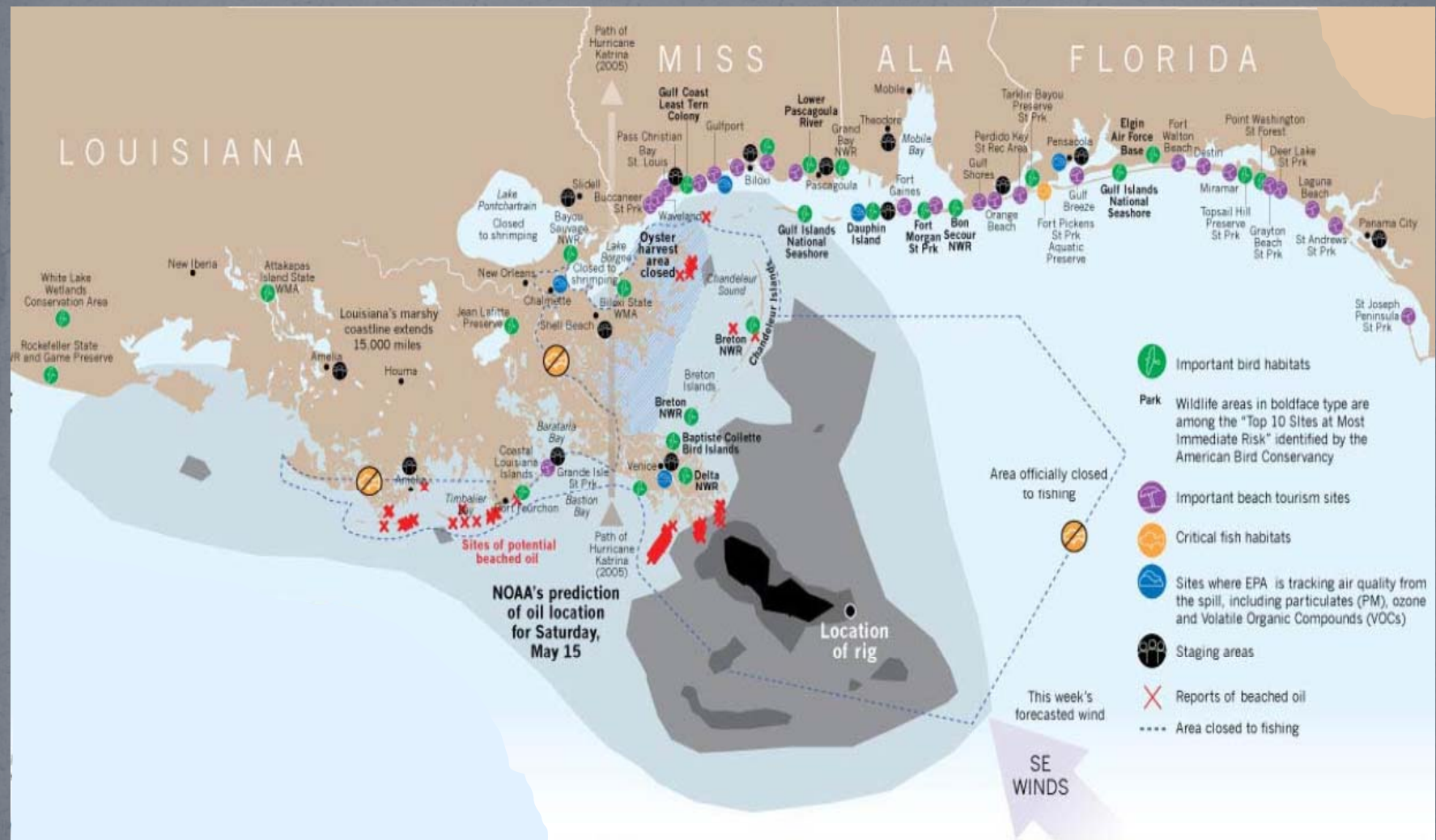
On the Ground

- **Department of Homeland Security/U. S. Coast Guard LEAD**
- **Department of Interior**
 - **US Fish and Wildlife**
 - **National Park Service- 8 Nations Parks throughout Gulf**
- **Environmental Protection Agency**
- **National Oceanic and Atmospheric Administration**
- **Small Business Administration**
- **Department of Defense/National Guard**
- **National Institute for Occupational Safety and Health**



The Oil Spill:

On the Ground



Impacts:

Environmental

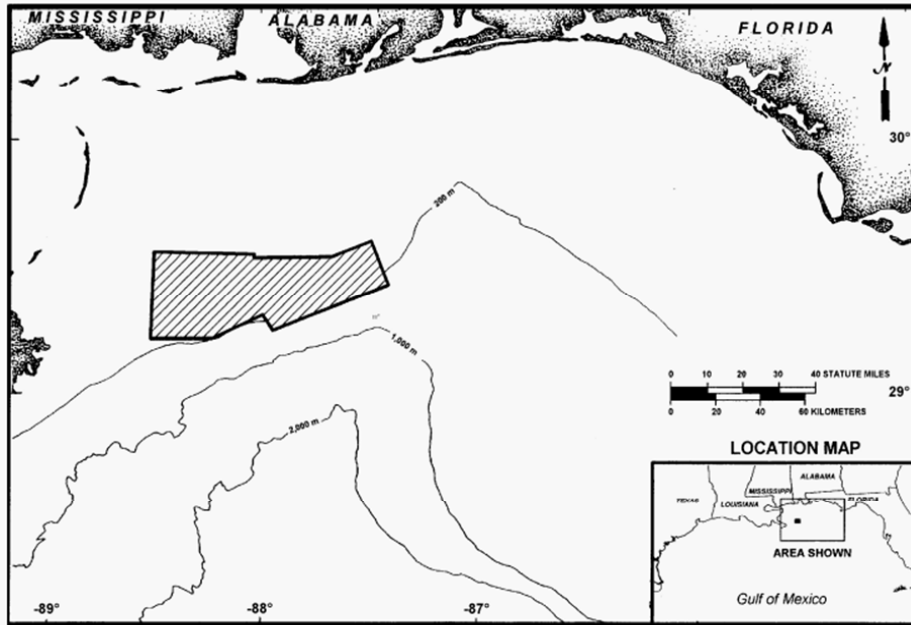


Figure 1.2. Northeastern Gulf of Mexico outer continental shelf with polygon marking the combined MMS MAMES and MASPTHMS study areas, enclosing the Pinnacles Reef Tract, including NEGOM-CMEP and USGS study sites (adapted from CSA and TAMU 2001).

Alabama Alps

- important coral reef fish havens
- Key spawning sites
- Critical early larval and juvenile habitats for economically important sport/food fishes
- Key resource for re-population of already heavily impacted inshore reefs

Potential to be heavily impacted by oil

Impacts:



Environmental

Wetlands

- The marshes, bays, bayous, and sounds are regions that were already **under stress before the oil spill**.
- A majority of the United States' **seafood is harvested from the northwestern Gulf Coast region**.
- The oil threatens the **health of sea life and the microorganisms** that occupy the marsh grasses.

Impacts:

Environmental

THE ENVIRONMENTAL RISKS: It could not come at a worse time

It is now nesting season for many species, such as shorebirds and Brown Pelicans – and for sea turtles that lay their eggs in beach sand. It's also the peak of spring bird migration.

5 million
acres of habitat
in the Gulf

400+
species put
in harm's way



The leaking oil is a heavier blend which contains asphalt-like substances. The oil emulsifies well, which means it does not evaporate as quickly as regular oil, doesn't rinse off as easily, can't be eaten by microbes as easily, and doesn't burn as well.



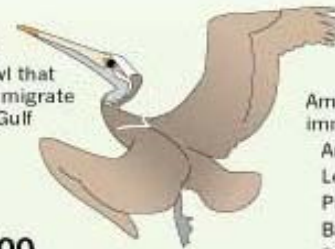
Chemical dispersants used to break up the slicks could be toxic and much is unknown about the full environmental impact of using such chemicals.

75%
of the waterfowl that
traverse the U.S. migrate
through the Gulf



34,000

birds have been counted in the
national refuges most at risk

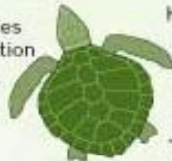


Among the birds nesting in
immediate path of spill:

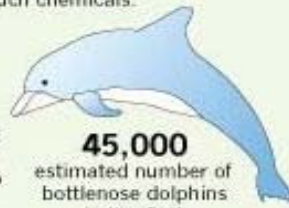
American Oystercatcher
Least Tern
Piping Plover
Brown Pelican
Roseate Spoonbills
Egrets
Blue Herons

5

sea turtle species
at peak of migration
or nesting
on beaches



Highly endangered
Kemp's ridley sea
turtles are migrating
along the Louisiana
coast on their way to
nesting beaches in
Texas and Mexico.



45,000

estimated number of
bottlenose dolphins
in the Gulf



The Gulf down-current from the spill
area contains probably the most important
pupping grounds in the Western hemisphere
for many shark species.



Less visible, but equally concerning, are the countless millions of tiny, planktonic organisms being killed, including larvae of economically important species like fish, shrimp and crabs.



Potentially serious impacts are taking place deep under the surface. The spill zone sits on top of a unique and biologically rich ancient deepwater coral reef, called Viosca Knoll. As the oil breaks up or attaches itself to small bits of ocean detritus, a toxic rain falls from the surface down to the reefs below. The impact on these reefs is an open question right now.



Impacts:

Environmental

Oxygen Depletion in the Water

Dissolved Oxygen

- Microbes and algae consume more oxygen than they create
- Results in low levels of oxygen
- Microbes breaking down oil, but lowering the levels of oxygen

Dead Zones

- Occur during the summer months due to the low levels of oxygen
- May last longer and result in massive die-offs in oil affected areas



Elizabeth Gates/[Associated Press](#)

*Low levels of oxygen, called **hypoxia**, already threaten sea life, could be increased to the levels of **anoxia**, where life is not sustainable at all.*

Impacts:

Environmental

Underwater Plumes

Solid Oil (Near site)

Rivers of Oil in the Water Column

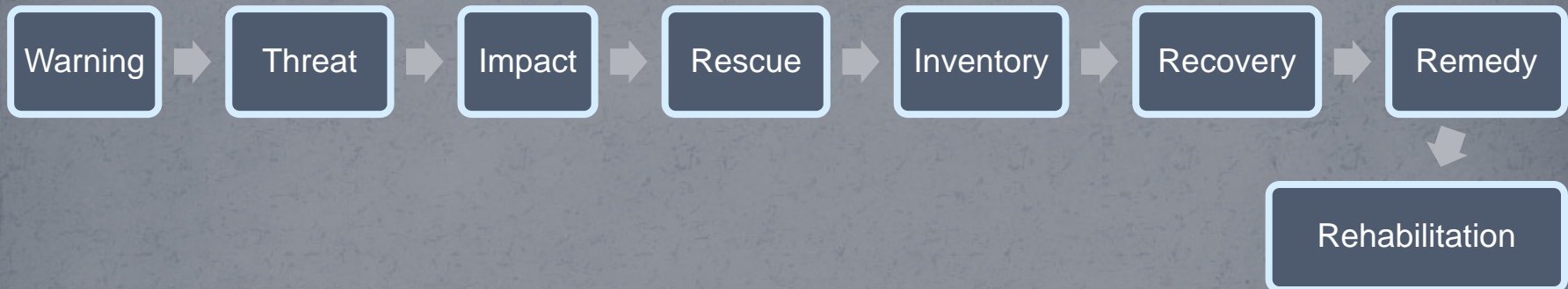
Red Tinted Oil (Chemically dispersed)



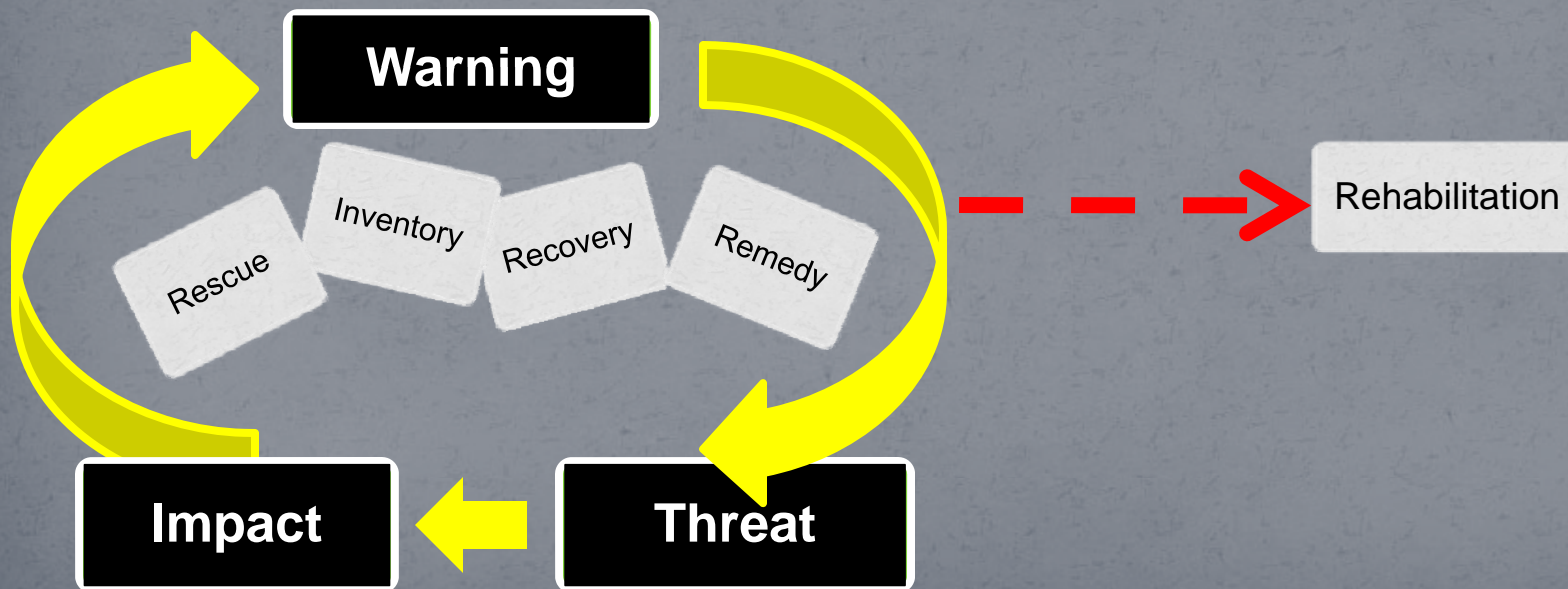
Impacts:

Human

Natural Disasters



Technological or Man-Made Disasters



Impacts:

Human

Secondary Disasters indirect consequences of technological disasters that produce continuing social conflict, disruption and intensify stress



- Constant Media Attention
- Job and career losses
- Attorney “Ambulance Chasers”
- Conflicting Scientists
- Housing shortages
- Government Agency conflicts and Information Control
- Substance Abuse
- Crime

Impacts:

Human

Therapeutic vs. Corrosive Communities

Natural Disasters = **Therapeutic Communities** (Community members support one another)

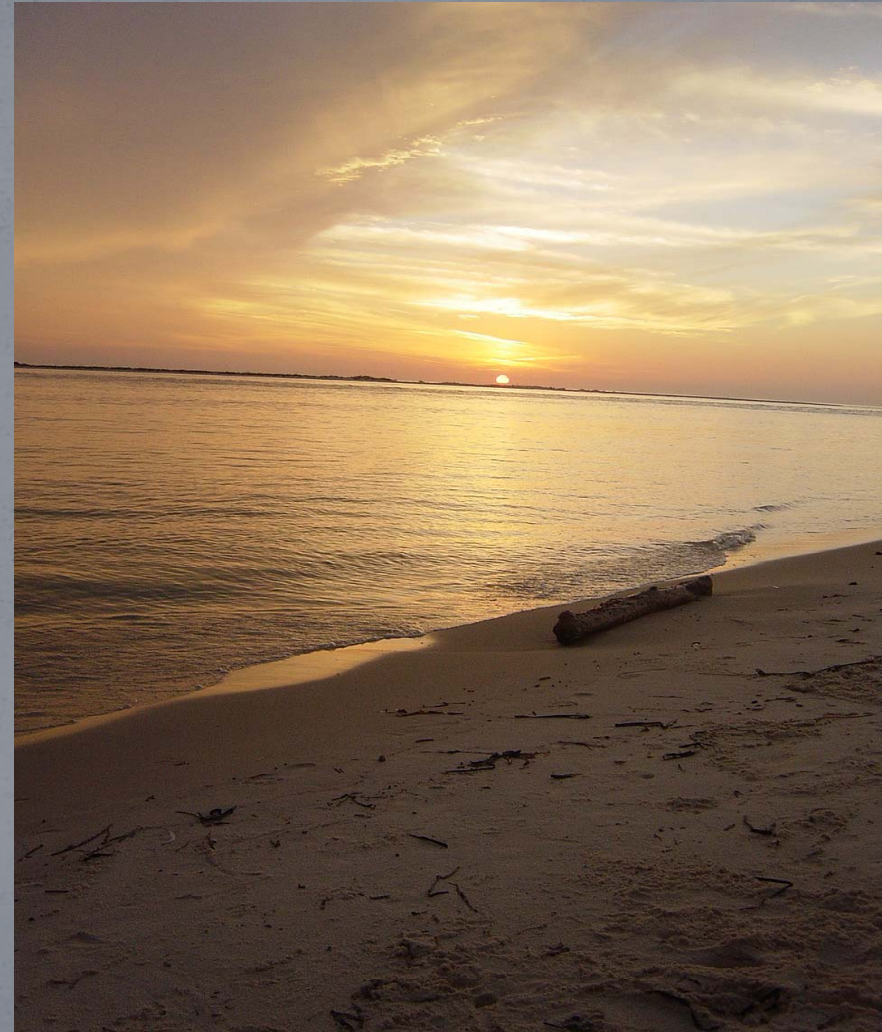
Technological Disasters = **Corrosive Communities** (Community members are divided- “haves” and “have nots” and community breaks down)



What the Future Holds:

Philanthropy

- **Documentation**
 - Oral Histories
 - Natural and Human Impacts
- **Environmental Education**
 - Video
 - Interactive Media
 - Curriculum Development
- **Social Services**
 - Job Retraining (Aquaculture)
 - Mental Health
 - Day Care and Child Services
 - Domestic Violence, etc...





Thank you.