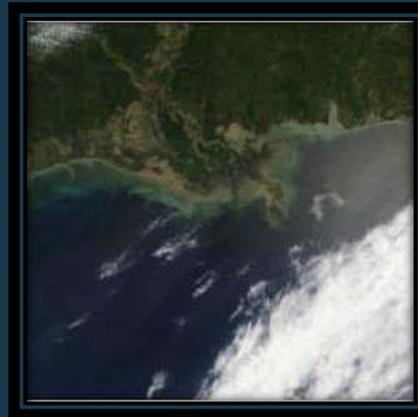
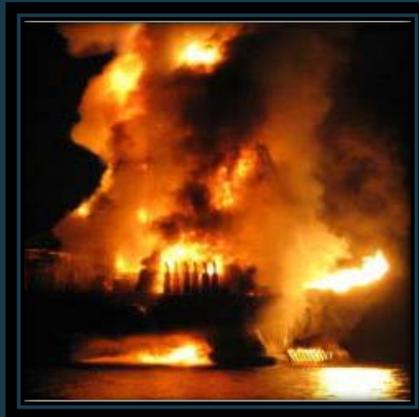


Natural Resource Damage Assessment Overview

Presentation to the FKNMS Science Advisory Council
June 15, 2010

Tom Brosnan, NOAA Office of Response and Restoration



NRDA Topics

- Overview, Process and Roles
- Injuries and Restoration
- Deepwater Horizon Snapshot
- Summary



Tragically, oil spills happen...



Process and Roles

- ◎ Release of oil
- ◎ Response: containment and cleanup of oil
- ◎ Injury Assessment: what was injured/lost?
- ◎ Restoration: to baseline and for interim lost resources or services/use (e.g., improvements to habitat, species, environmental quality, access, etc. -> NEXUS)



NRDA: What is it?

- ◎ A legal process to determine
 - Injuries to or lost use of the public's natural resources
 - Appropriate amount & type of restoration needed to offset losses
- ◎ Goal is to “make public whole” following release of hazardous substances & oil
- ◎ Federal, state and tribal “Trustees” represent public are required to demonstrate causality between release and resource injury and lost use



NRDA Authorities

- ◉ Derived from Public Trust Doctrine
- ◉ Oil Pollution Act (OPA)
- ◉ Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)
- ◉ Clean Water Act (CWA)
- ◉ National Marine Sanctuary Act (NMSA)



Per the National Contingency Plan, Trustees Are...

- ◎ State Governors
- ◎ Tribes
- ◎ Secretaries of Federal Departments
 - Agriculture
 - Commerce (NOAA)
 - Defense
 - Energy
 - Interior
- ◎ Foreign Governments (under OPA)



Co-Trustees for the Deepwater Horizon Oil Spill

◉ Federal Trustees:

U.S. DOC – NOAA

U.S. DOI – FWS

U.S. DOI – NPS

U.S. DOI – BLM



◉ State Trustees:

Alabama



Louisiana



Mississippi



Texas



Florida



OPA NRDA Framework

15 CFR 990

Release



Pathway



Exposure



Injury

PRE-ASSESSMENT SCREEN
Ephemeral Data Collection Activities



Public
Communication
and Involvement

RESTORATION PLANNING

Field Studies
Data Evaluation
Modeling
Injury Quantification



Project Identification
Project Scaling
Draft Restoration Plan
Final Restoration Plan



RESTORATION IMPLEMENTATION

Injury Assessment & Restoration

- ◉ Combines scientific, economic, and legal analyses
- ◉ Claim = cost of assessment + cost of restoration



Injuries/Losses & Restoration

- ◎ Resources: e.g., fish, marine mammals, turtles, birds, wildlife, etc.
- ◎ Habitat: e.g., sub-tidal, inter-tidal, beach, estuarine, marsh, etc.
- ◎ Lost Recreational Use: Fishing, hunting, bird watching, swimming, etc.



- ◎ Focus on Restoration
- ◎ Primary Restoration
 - Actions taken to decrease injury
- ◎ Compensatory Restoration
 - Actions taken to compensate for interim losses of resources, services and human uses

NRDA Restoration Benefits Coastal Communities

Types of Restoration NRDA Creates

- ◎ Habitat creation and enhancement of:
 - Wetlands
 - Coral Reefs and Seagrass
 - Oysters and Other Shellfish
 - Stream Channels and Banks
 - Spawning Beds
 - Beaches
 - Waterfowl Habitat
 - Threatened/Endangered Species
- ◎ Dam removal and fish passage
- ◎ Preservation of sensitive habitats
- ◎ Invasive species removal
- ◎ Recreational projects for fishing, boating swimming, access, education
- ◎ Pollution prevention/reduction

NOAA's DARRP program and co-trustees have recovered ~\$500 million from responsible parties to protect and restore natural resources that have been injured by oil spills, hazardous material releases and vessel groundings.

NRDA Restoration Benefits Coastal Communities

Benefits to Coastal Communities

- Recreation: fishing, hunting, boating, swimming, diving, wildlife viewing
- Access – reconnect people to our coastal environments
- Tourism
- Protect shorelines and increase coastal resiliency
- Commercial fishing
- Commerce/navigation/ports
- Preservation of open space
- Green jobs (engineering, construction, nurseries, tourism)
- Aesthetic, remove stigma of blighted areas
- Environmental Justice

NOAA's DARRP program and co-trustees have recovered ~\$500 million from responsible parties to protect and restore natural resources that have been injured by oil spills, hazardous material releases and vessel groundings.

An Example of an Oil Spill NRDA in FL: Tampa Bay Oil Spill, 1993

- Over 350,000 gallons spilled
- Oil fouled 13 miles of beaches
- Caused injury to birds, sea turtles, mangroves, seagrasses, salt marshes, shellfish beds, water column resources and bottom sediments.
- Recreational uses of local waterways, beaches and shellfish beds were also disrupted by the spill and necessary response actions.



Ecological Restoration

- Replacing sand on beaches.
- Sea turtle nesting beach survey program
- Increased enforcement of laws designed to prevent mortalities to sea turtles due to fishing
- Sponsoring monofilament clean-up events for birds
- Installing signs at fishing piers demonstrating proper rescue and fishhook removal from seabirds and the importance of proper monofilament disposal.
- Constructing dune walkovers to restore areas where foot traffic has destroyed dune habitat.
- Restoring dune vegetation.
- Restoring wetland habitat.

Recreational Restoration

- Building new and rehabilitating older fishing piers.
- Building new and replacing old public boardwalks and walkways along recreational beaches, shoreline habitats, and within public parks and preserves.
- Reconstructing a deteriorating boat ramp.
- Creating new oyster reef habitat.

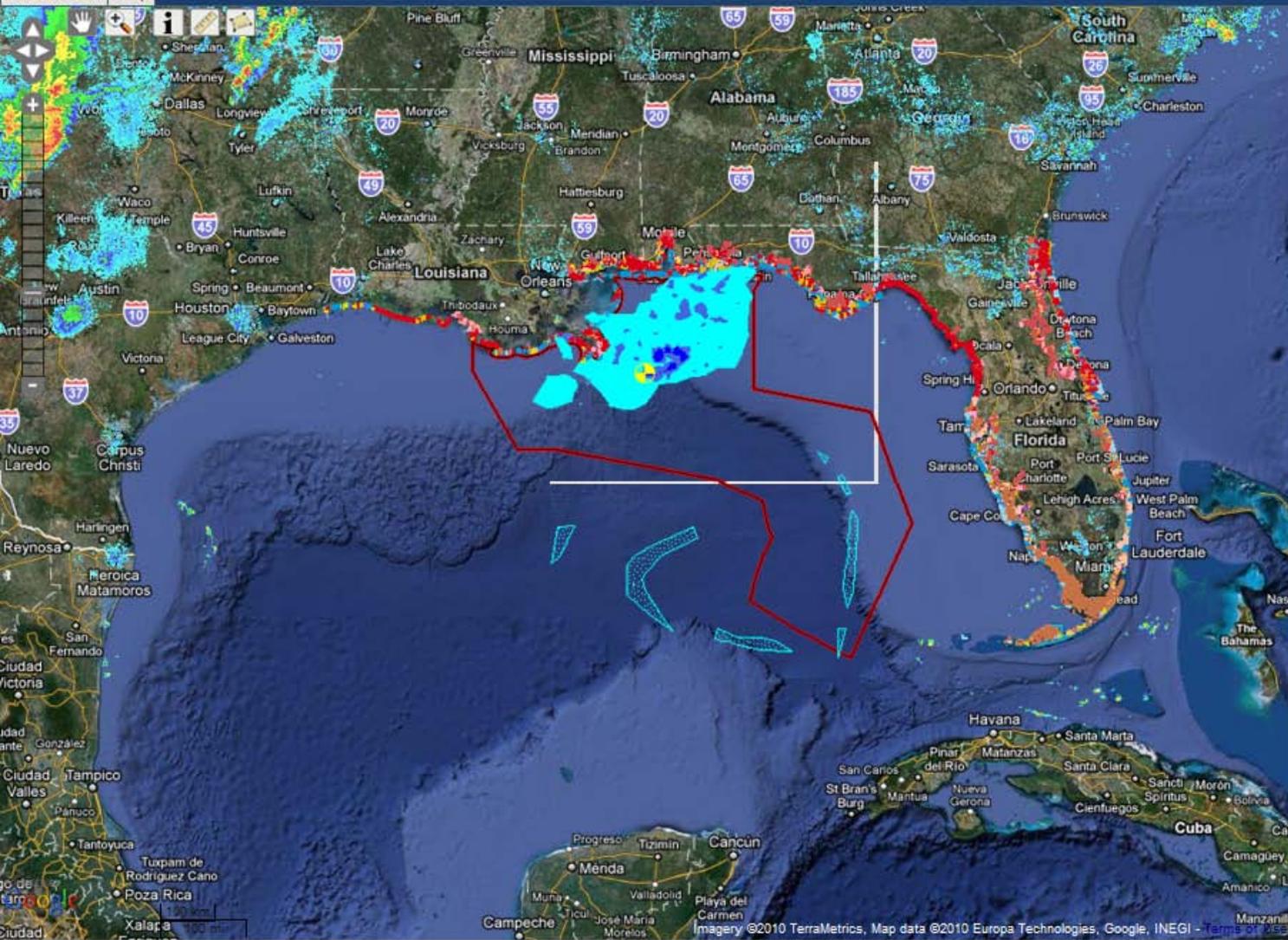
Current NRDA Activities for DWH

- In this Pre-assessment Phase, several technical working groups (TWGS) have formed, composed of State and Federal natural resource trustees and the RP .
- The TWGs continue to develop and implement baseline and post-impact field studies for multiple resource categories:
 - Water Column –fate and transport
 - Fisheries and Plankton
 - Submerged Aquatic Vegetation
 - Shoreline habitats (beaches, wetlands, mudflats, mangroves)
 - Subtidal habitats
 - Shallow and Deepwater Corals
 - Birds
 - Marine Mammals and Turtles
 - Terrestrial Wildlife
 - Human Uses : for example, fishing, hunting, and beach recreational closures.
- Sample collection includes water, sediment and tissues for chemical analyses
- Data are being collected via land and ship-based sampling and aerial surveys
- The trustees may also assess potential impacts from the response, including dispersant use at the surface and at depth.



Information Help

Find



Layers Legend Zoom

- Layers [clear all](#)
- Background
 - Response Planning
 - BP Deepwater Horizon Oil Spill
 - Bioresources
 - Habitat Areas [Coastal Resources]
 - Critical Habitat Areas
 - Managed Areas
 - Environmental Sensitivity Index (ESI) LA
 - Environmental Sensitivity Index (ESI) AL
 - Environmental Sensitivity Index (ESI) MS
 - Environmental Sensitivity Index (ESI) FL
 - Environmental Sensitivity Index (ESI) TX
 - Environmental Quality Baseline Data
 - Charts, Surveys, Ships
 - Restoration
 - Current Weather
 - Weather Forecasts
 - Wind
 - Wave
 - Precipitation
 - Currents (NWS-NCEP)
 - Data Buoys & Observations
 - Sea Floor Maps [Bathymetry]
 - Base
 - Public Safety/Infrastructure

Scale: 1: 7M Zoom Level: 6 Location: 24.88644°, -82.55127°

National Oceanic and Atmospheric Administration | Environmental Protection Agency
U.S. Department of the Interior | U.S. Department of Homeland Security | University of New Hampshire | Privacy policy | Email Comments

Pre-oil/baseline Data Collection

NOAA | National Ocean Service | National Centers for Coastal Ocean Science

Deepwater Horizon Spill Response - Mussel Watch

Kilometers
0 25 50 100 150 200 250



Legend

- NOAA | Mussel Watch Sites Collected for DWH Response
- ★ NOAA | Mussel Watch Sites

A partnership response between
NOAA's National Ocean Service
NOAA's National Marine Fisheries Service,
and Louisiana State University, Louisiana
Department of Fish & Wildlife, and the
MOTE Marine Laboratory



In Summary, Three Things...

- ◎ NRDA is Restoration-focused
 - Purpose is to determine type and amount of restoration needed to compensate the public for injuries to and lost use of their natural resources
 - Restoration is considered early and throughout the process
 - Injuries and losses are balanced against, and directly scaled to restoration
- ◎ NRDA is a Legal Process
 - Guided by Oil Pollution Act and NOAA Regulations
 - Trustees are required to demonstrate causality between release and resource injury and lost use
 - The polluter pays for assessment and restoration
- ◎ Getting to restoration requires a common vision and coordination with the response, co-trustees, the Responsible Party and the public

For More Information...

- ◉ www.darrp.noaa.gov
- ◉ www.darrp.noaa.gov/economics/index.html
- ◉ www.response.restoration.noaa.gov/DeepwaterHorizon
- ◉ www.geoplatform.gov/gulfresponse/
- ◉ www.fws.gov/contaminants

DAMAGE ASSESSMENT, REMEDIATION, & RESTORATION PROGRAM

DARRP

