


General Counsel for Natural Resources • Office of Habitat Conservation • Office of Response and Restoration

# DARRP


DAMAGE ASSESSMENT, REMEDIATION, & RESTORATION PROGRAM



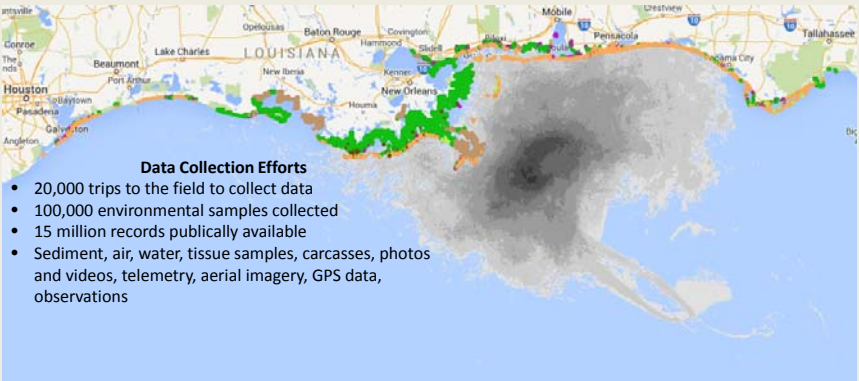
## Overview of Data Generation of the Deepwater Horizon Oil Spill

Michele Jacobi  
Office of Response and Restoration  
June 7<sup>th</sup> 2017

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## A massive spill, a massive response, a massive NRDA, & a massive research opportunity

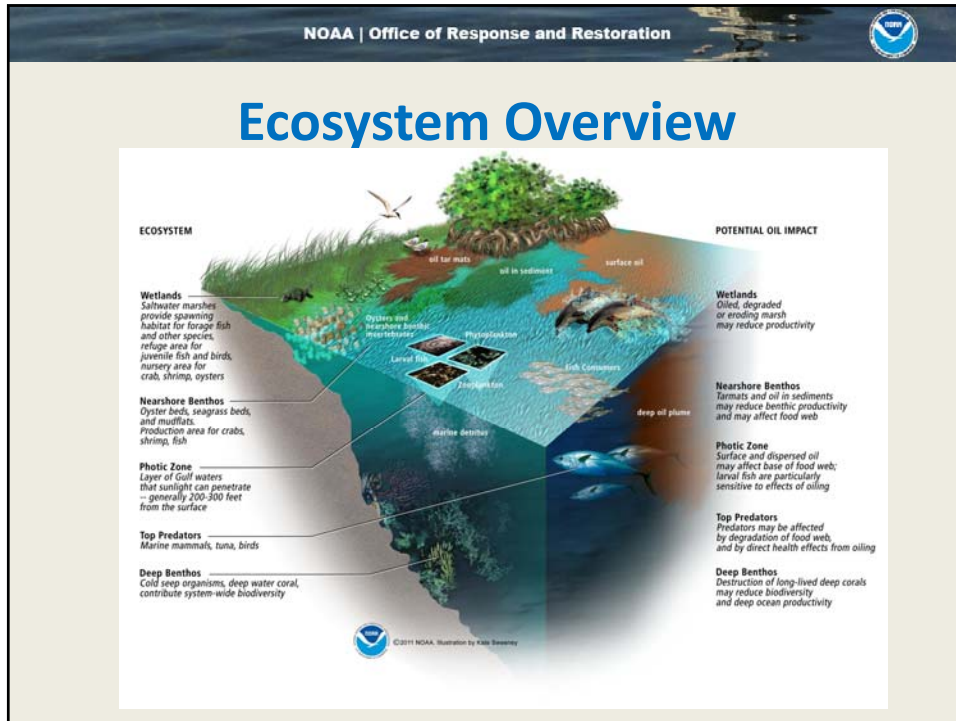


**Data Collection Efforts**

- 20,000 trips to the field to collect data
- 100,000 environmental samples collected
- 15 million records publicly available
- Sediment, air, water, tissue samples, carcasses, photos and videos, telemetry, aerial imagery, GPS data, observations

Shoreline Habitat Categories (Draft; 2014-09-29)

- Other
- Beach
- Mainland Herbaceous Marsh
- Back-barrier Herbaceous Marsh
- Delta Phragmites Marsh
- Mangrove



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## Data being collected everywhere



Marsh Assessment



Shoreline Data



Toxicity Data



Oyster Collections



Water Column



Marine Mammal & Turtle Assessment




Telemetry Data

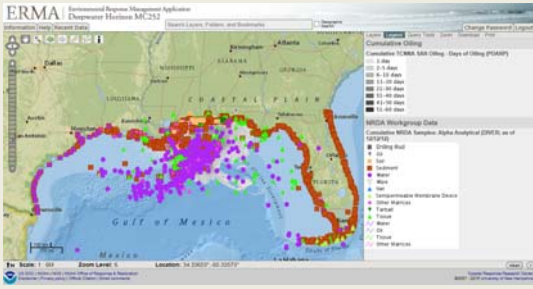



Seafood Safety



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## Data Managed




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## Response Data & NRDA Data

- Source oil
- SCAT data used to estimate shoreline injury from the quantity of affected shoreline
- Wildlife response data used to understand and quantify animal injuries
- Closures and advisories inform recreational affects
- Photos provide evidence of exposure, and document extent of spill




Following the Deepwater Horizon oil spill, numerous dolphins were documented encountering oil, such as those in this photo from July 2010.

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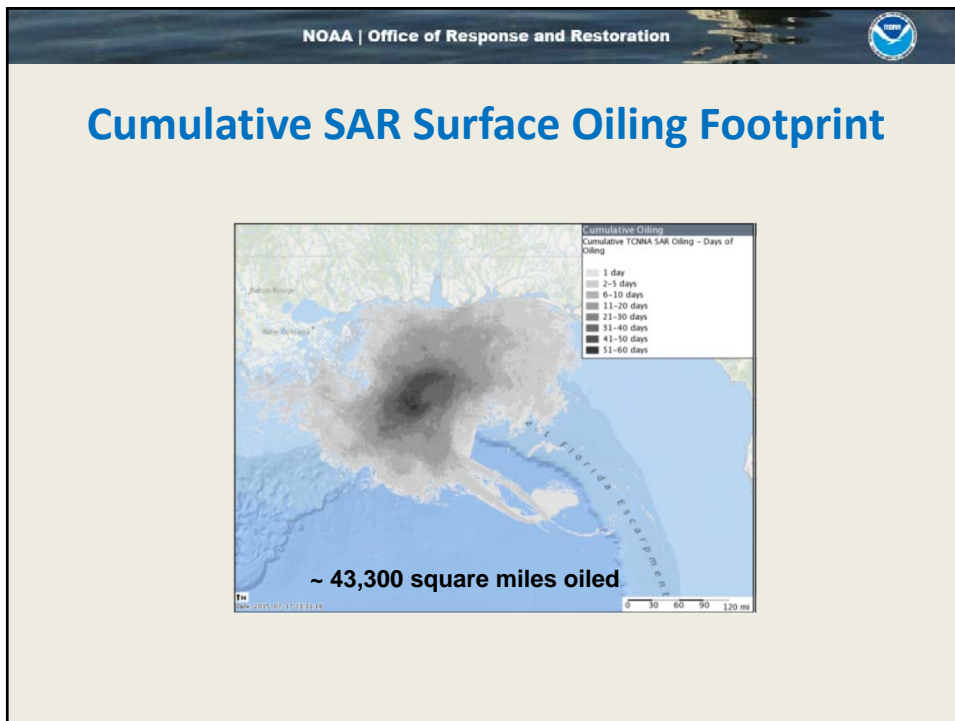
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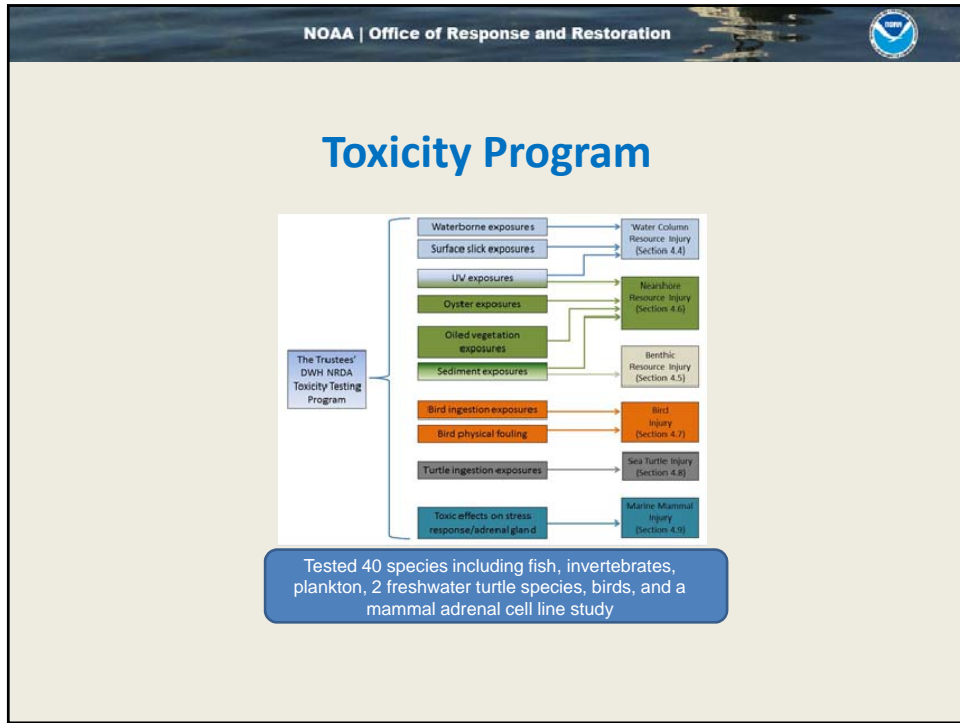
## NRDA Activities During a Response

- Collection of ephemeral data
  - Conditions before oil reaches shoreline
  - Fish kills, bird carcasses
  - Fingerprinting of oil on shorelines, in water column
- Studying changes to recreational use & socio economics impacts
- Evaluating older projects and existing monitoring programs-  
*(access, comparability/ corrections)*







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## Restoration Types and Response Data


Habitat	Recreational	Wildlife
SCAT	Closures/Advisories	Wildlife

<http://www.restoration.noaa.gov/dwh/storymap/>

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## Restoration Monitoring Data


- Trustee Implementation Groups (TIGs) generally consist of both State and Federal trustees
- May leverage existing (historical/on-going) monitoring data
- May leverage data integration capabilities developed for assessment data
- Incorporate QA/QC and data validation
- Data can be publicly accessible through existing gulf-wide environmental data infrastructure

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## Where can I find the DWH Response and NRDA data?

<http://gomex.erma.noaa.gov> <https://www.diver.orr.noaa.gov>






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## DWH NRDA publications

**50+ peer reviewed publications and counting.....**

- Deepsea corals and benthos
- Dolphins
- Fish Toxicity
- Sea Turtles
- Oil in the environment
- Forensic chemistry
- Nearshore
- Special theme volume Mar. Ecol. Prog. Ser.

**Publications available to public:**  
<http://response.restoration.noaa.gov/deepwater-horizon-oil-spill/noaa-studies-documenting-impacts-deepwater-horizon-oil-spill.html>

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## Overarching themes to Remember

**Think before you collect!!!**

- Consider the area and contaminant in sampling design
- Integrate design and metrics across disciplines to get to appropriate questions and experimental design
- Combine lab and field techniques
- Clearly define your data objective relative to action or decision
- Have a Data Management Plan & BUDGET so the data can be used effectively
- Keep agency data requirements and standards in mind
- Talk to you partners and friends

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