

US Presentation on MSDI

IHO MSDIWG4

Maureen Kenny

National Oceanic and Atmospheric Administration

January 31, 2013

ENC Direct to GIS

NOAA *ENC Direct to GIS* Select a Port or Marine Sanctuary to Zoom to: Map Services More Info Send Email

ENC GIS DATA

- Approach/Harbor ENC GIS Data
- Coastal ENC GIS Data
- General ENC GIS Data
- Overview ENC GIS Data
- Base Map

Auto Refresh

Layer List Help:
Click on layer names for definition and metadata.

- A closed group, click to open.
- An open group, click to close.
- A map layer.
- A hidden group/layer, click to make visible.
- A visible group/layer, click to hide.
- A visible layer, but not at this scale.
- A partially visible group, click to make visible.
- An inactive layer, click to make active.
- The active layer.

THIS PRODUCT IS NOT FOR NAVIGATIONAL USE.

<http://nauticalcharts.noaa.gov/Staff/gisintro.htm>

ENC Direct to GIS

NOAA **ENC Direct to GIS** Select a Port or Marine Sanctuary to Zoom to: [Map Services](#) [More Info](#) [Send Email](#)

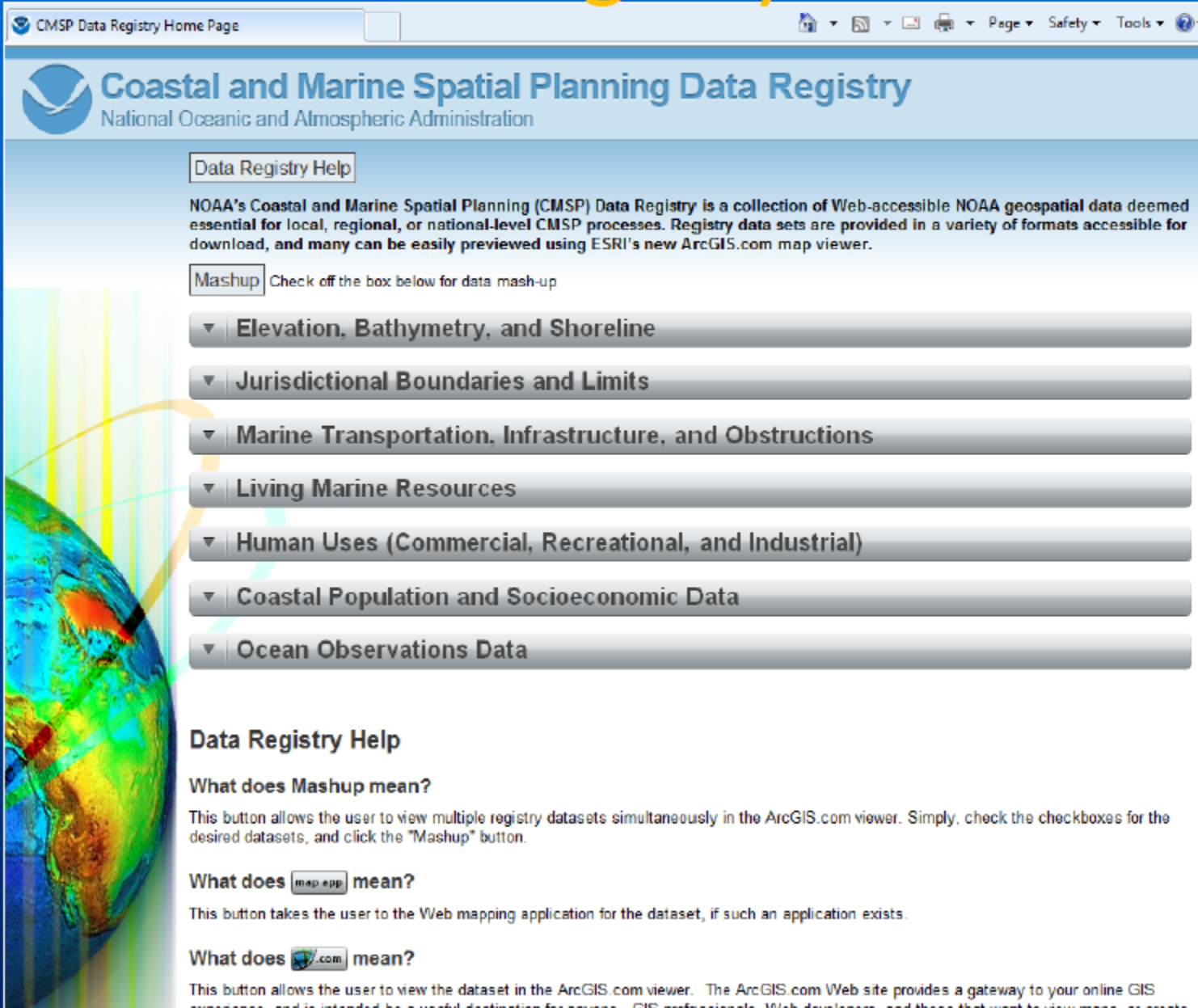
ENC GIS DATA

- Approach/Harbor ENC GIS Data
 - Aids to Navigation
 - Caution
 - Cultural Features
 - Depth
 - Harbor Installations
 - Infrastructure
 - Metadata
 - Natural Features
 - Regulated Area
 - Time Varying Objects
- Coastal ENC GIS Data
- General ENC GIS Data
- Overview ENC GIS Data
- Base Map

Auto Refresh
[Layer List Help](#)

Download all or specified layers in .shp files and other user selectable formats

CMSP Data Registry



CMSP Data Registry Home Page

Coastal and Marine Spatial Planning Data Registry
National Oceanic and Atmospheric Administration

Data Registry Help

NOAA's Coastal and Marine Spatial Planning (CMSP) Data Registry is a collection of Web-accessible NOAA geospatial data deemed essential for local, regional, or national-level CMSP processes. Registry data sets are provided in a variety of formats accessible for download, and many can be easily previewed using ESRI's new ArcGIS.com map viewer.


Mashup Check off the box below for data mash-up

- ▼ Elevation, Bathymetry, and Shoreline
- ▼ Jurisdictional Boundaries and Limits
- ▼ Marine Transportation, Infrastructure, and Obstructions
- ▼ Living Marine Resources
- ▼ Human Uses (Commercial, Recreational, and Industrial)
- ▼ Coastal Population and Socioeconomic Data
- ▼ Ocean Observations Data


Data Registry Help

What does Mashup mean?

This button allows the user to view multiple registry datasets simultaneously in the ArcGIS.com viewer. Simply, check the checkboxes for the desired datasets, and click the "Mashup" button.

What does  mean?

This button takes the user to the Web mapping application for the dataset, if such an application exists.

What does  mean?

This button allows the user to view the dataset in the ArcGIS.com viewer. The ArcGIS.com Web site provides a gateway to your online GIS experience, and is intended to be a useful destination for anyone - GIS professionals, Web developers, and those that want to view maps or create

CMSP Data Registry

Selection from Map (multiple layers)
ESRI's ArcGIS.com Map Viewer
REST Servers
Web Mapping Services
KML
Download Data
View Metadata

The screenshot shows the NOAA CMSP Data Registry website. The browser title is "Spatial Planning Data Registry". The page content includes a description: "Planning (CMSP) Data Registry is a collection of Web-accessible NOAA geospatial data deemed suitable for use in high-level CMSP processes. Registry data sets are provided in a variety of formats accessible for review using ESRI's new ArcGIS.com map viewer." Below this, there is a list of data categories, each with a dropdown arrow and a list of download options. The categories are: "Elevation, Bathymetry, and Shoreline", "Jurisdictional Boundaries and Limits", "Marine Transportation, Infrastructure, and Obstructions", "Living Marine Resources", "Human Uses (Commercial, Recreational, and Industrial)", "Coastal Population and Socioeconomic Data", and "Ocean Observations Data". The "Marine Transportation, Infrastructure, and Obstructions" category is expanded, showing a list of data sets with download options for map app, ArcGIS.com, REST, WMS, KML, data, and metadata. A blue callout box on the right lists the data types: Raster Nautical Charts, Anchorage Areas, Marine Collision Regulation Lines, Precautionary Areas for Navigation, Restricted Areas, Dredge Disposal Areas Affecting Navigation, and Shipping Lanes. A globe image is visible on the left side of the page.

Marine Transportation, Infrastructure, and Obstructions

- map app REST metadata
- map app REST metadata
- map app REST metadata
- map app REST metadata
- map app REST metadata
- map app REST metadata
- map app REST metadata

Living Marine Resources

Human Uses (Commercial, Recreational, and Industrial)

Coastal Population and Socioeconomic Data

Ocean Observations Data

Raster Nautical Charts
Anchorage Areas
Marine Collision Regulation Lines
Precautionary Areas for Navigation
Restricted Areas
Dredge Disposal Areas Affecting Navigation
Shipping Lanes

Coastal Management

Watersheds

NOAA Coastal Protection & Restoration Division
Portland Harbor Watershed Database & Mapping Project

Pick A Location To Zoom To: Zoom to...

Navigation: Zoom In, Zoom Out, Zoom Full Extent, Zoom Active View, Zoom Last Extent, Pan, Analyze, Identify, Query, Find, Measure, Set Units, Buffer, Select Items, Select by Rectangle, Select by Area/Perimeter, Close Selection, Print, Additional Site Help

GIS Layers:

- Planned Reach 2 Sediment and Benthic Data
 - WIS PMP Sediment Locations 20040103
- Query Manager Surface Sediment and Tissue
 - Surface Sediment - Logistic Regression Map
- Query Manager Surface Sediment Metals
 - SO5 Pmp Arsenic PPM TEC-PEC
 - SO5 Pmp Cadmium PPM TEC-PEC
 - SO5 Pmp Chromium - total PPM TEC-PEC
 - SO5 Pmp Copper PPM TEC-PEC
 - SO5 Pmp Lead PPM TEC-PEC
 - SO5 Pmp Mercury PPM TEC-PEC
 - SO5 Pmp Nickel PPM TEC-PEC
 - SO5 Pmp Zinc PPM TEC-PEC
- Query Manager Surface Sediment PAH
- Query Manager Surface Sediment PCB and

Property:

- Druck Structures
- Source Tractlets
- Waterfront Tractlets

Outfalls:

- Creek Outfalls
- City Outfalls

Transportation

Hydrology

Early Action Sites

- T-1 Early Action Site Boundary
- McCormick and Baxter Cap Footprint

Scale: 0 0.2862 0.5724 1.1448 Kilometers

Map: 7626776.1, 698706.2 -- Image: 245, 400 -- Scale Factor: 27.984252142418967

NOAA Restoration Center
Project Mapper

Zoom to State: Zoom to Region or Estuary of Interest: 1: 17930

LayerList Legend

All Layers

- Habitat Conservation
- NOAA Restoration Projects
 - Administrative
 - Management Areas
 - Hydrography
 - Background Imagery
 - USGS LandSat (30m)
 - DOV Imagery DOQQ (1m/10m)
 - USGS Topo Quad (Terrestrial)
 - Urban Areas Imagery (0.3m)
 - Index and Coverage Site

Refresh Map
 Auto Refresh

HD:

- A closed group, click to open.
- An open group, click to close.
- A hidden group layer, click to make visible.
- A visible group layer, click to hide.
- A visible layer, but not at this scale.
- A partially visible group, click to make visible.
- An inactive layer, click to make active.

Latitude: 42.714106 DD View Location Submit Cancel
Longitude: 127.830255 DD

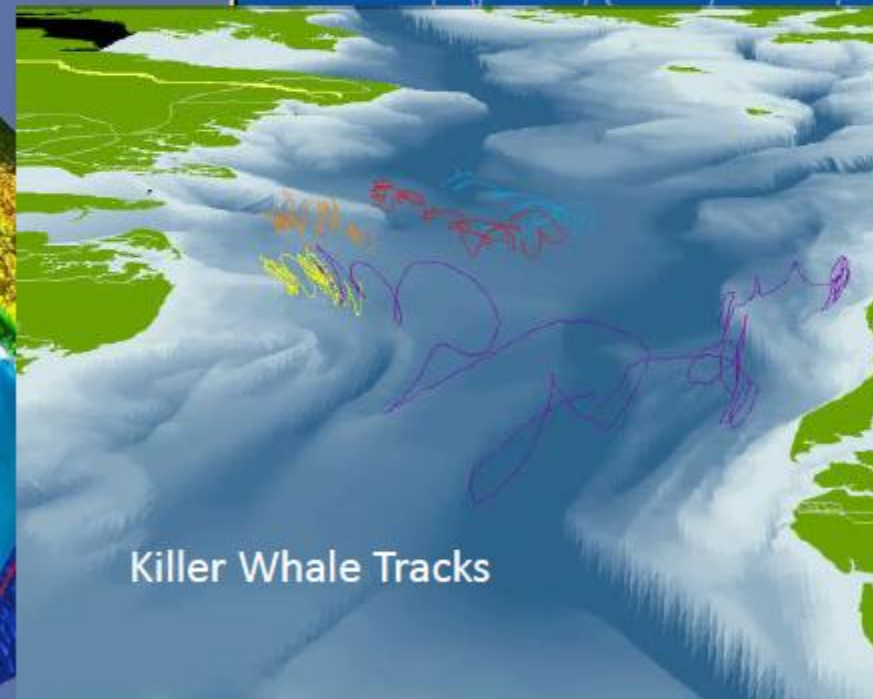
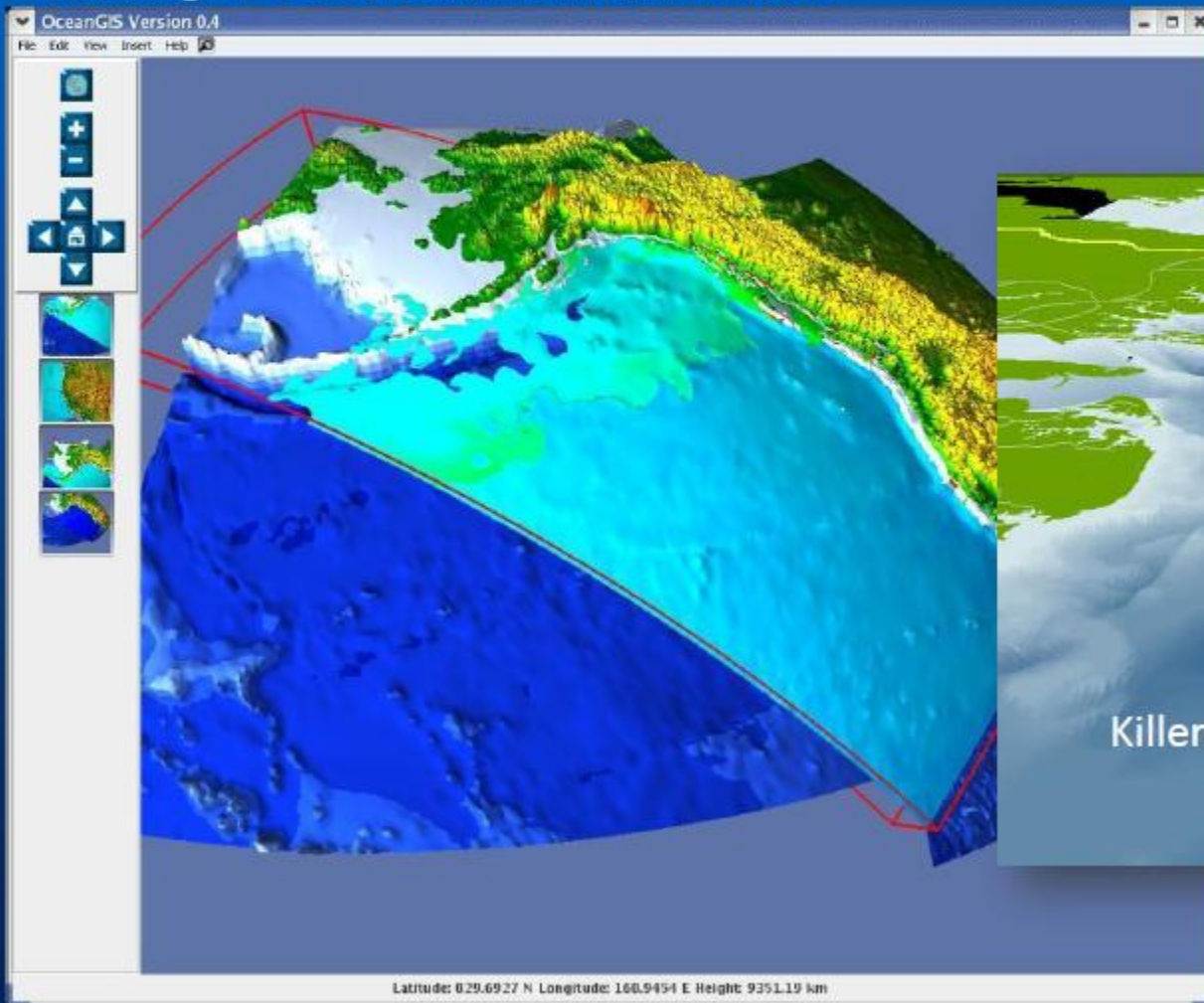
Home | Help | Contact Us
Privacy Statement | Disclaimer

Latitude: 42.70259

Restoration Sites

Fisheries Management

Tracking of Fish Stocks/Marine Mammals

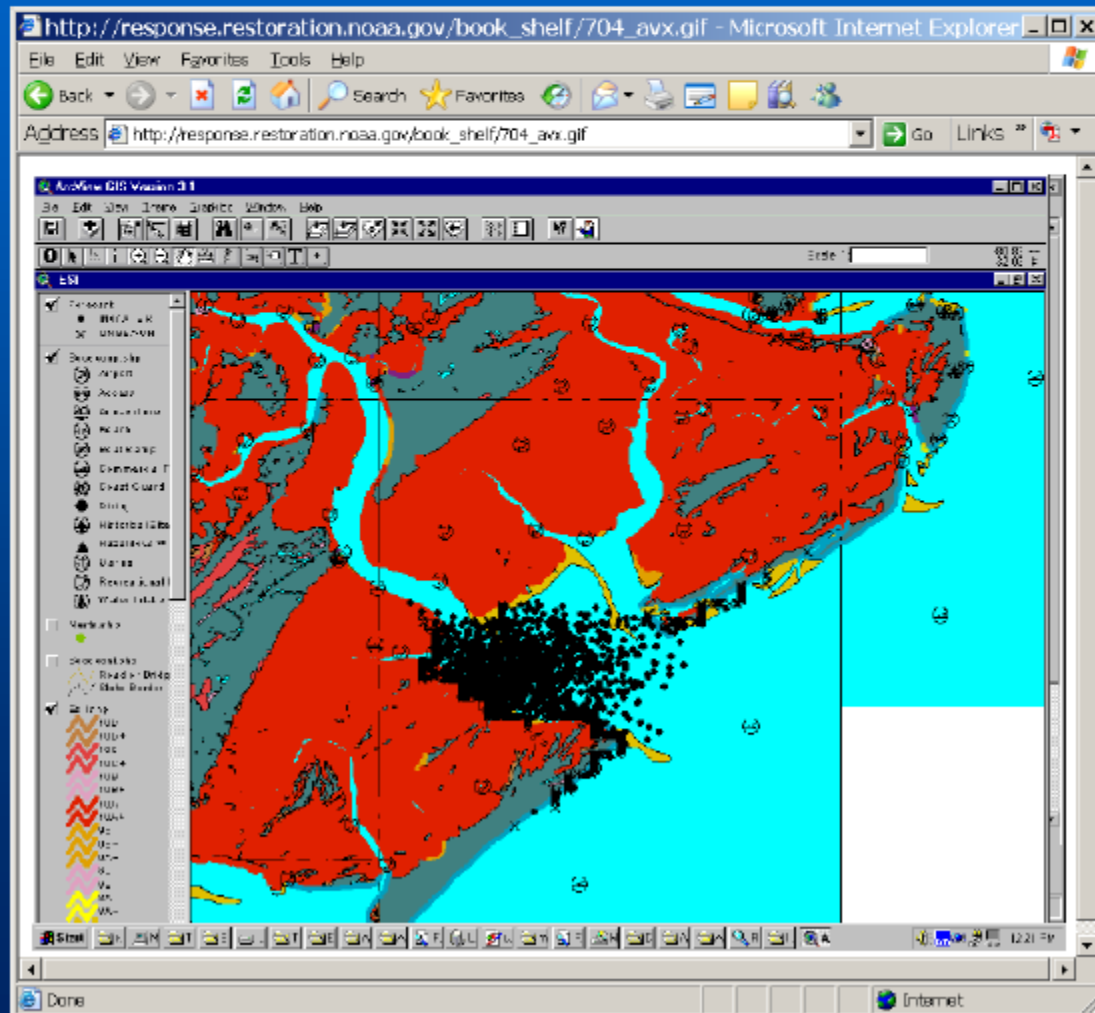


Alternative Energy Development on the Outer Continental Shelf

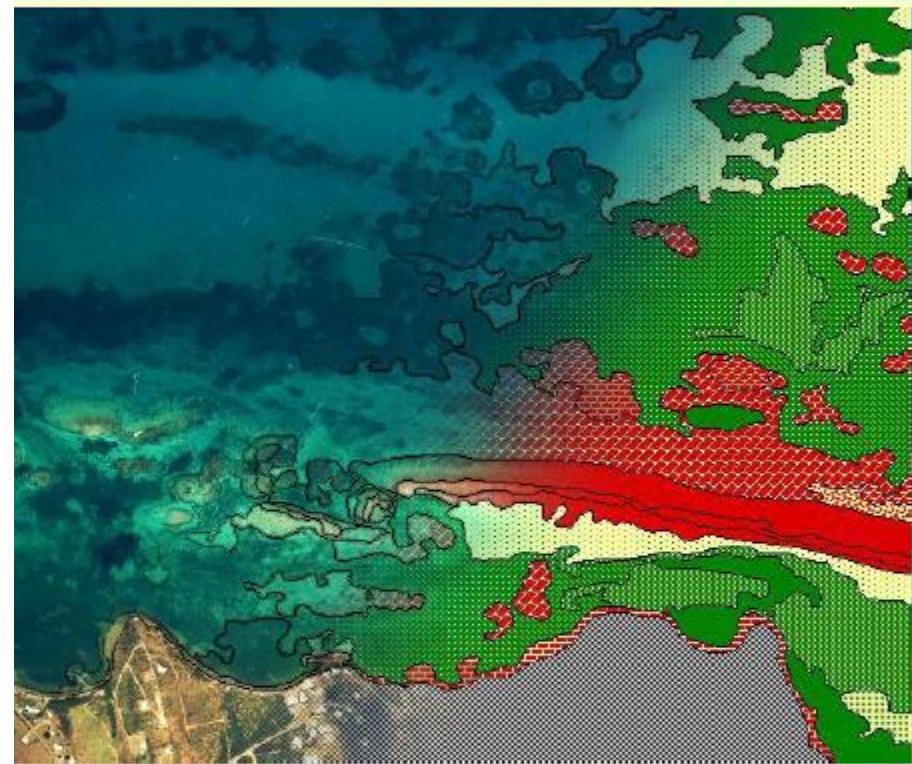


Marine Cadastre

Oil Spill Tracking



Mapping Benthic Habitats



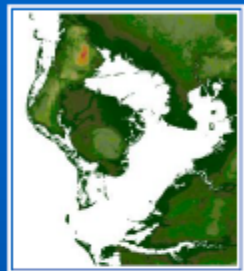
Habitat Maps



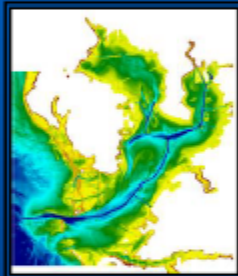
Ecosystem Monitoring

Digital Elevation Models

*Possible because of bathymetric/topographic datasets
on consistent datums*



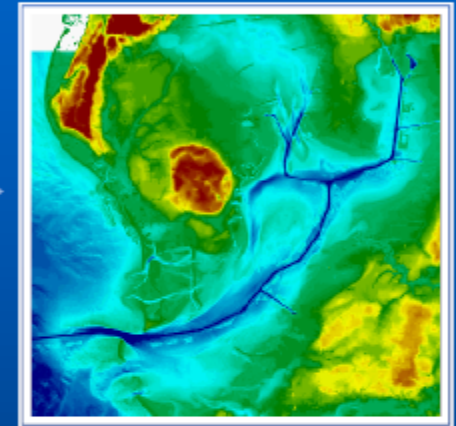
Topography



Bathymetry

**Method to transform
datasets to common
datum**

**Bathy/Topo
Digital Elevation Model**



DEM APPLICATIONS

- Inundation modeling for storm surge, tsunamis, and sea level rise
- Erosion, accretion, re-nourishment
- Analyzing storm impacts
- Determining setback lines
- Determining local, state, and national boundaries
- Navigation products and services
- Habitat restoration
- Shoreline change analysis
- Analyzing environmental and natural resources
- Permitting



Environmental Response Management Application (ERMA)

*Web-based GIS system supporting environmental
response efforts and operations*

- developed by NOAA as pilot project in 2008
- expanded for use in Haiti after earthquake
- full operations for Gulf Oil Spill



Site Basics

Readily accessible via web browsers
Initially secure access, then expanded to public
Data from multiple federal agencies & academia

Incident Information

- Trajectories
- Asset tracking
- Field team locations
- Shoreline cleanup and assessment data
- Sample collection & results

Real-Time Feed

- Weather, buoys, ship tracking, etc.

Background Layers

- Nautical charts
- Aerial, terrain, roads

Resources at Risk

- Shoreline information
- Local habitat and species datasets
- Fisheries Closures

Document & Photo Links

- Field Photos
- External links

Newly acquired imagery printed with shoreline impacts

ERMA | Environmental Response Management Application
Gulf of Mexico

Deepwater Horizon MC 252 Incident

2010-06-02 (Telascience)

8-11-10 Shoreline SCAT Oiling Ground
Observations

-  Heavy Oiling
-  Moderate Oiling
-  Light Oiling
-  Very Light Oiling
-  Heavy Tarballs
-  Moderate Tarballs
-  Light Tarballs
-  Negligible Tarballs
-  No Oil Observed



Something was needed for the general public

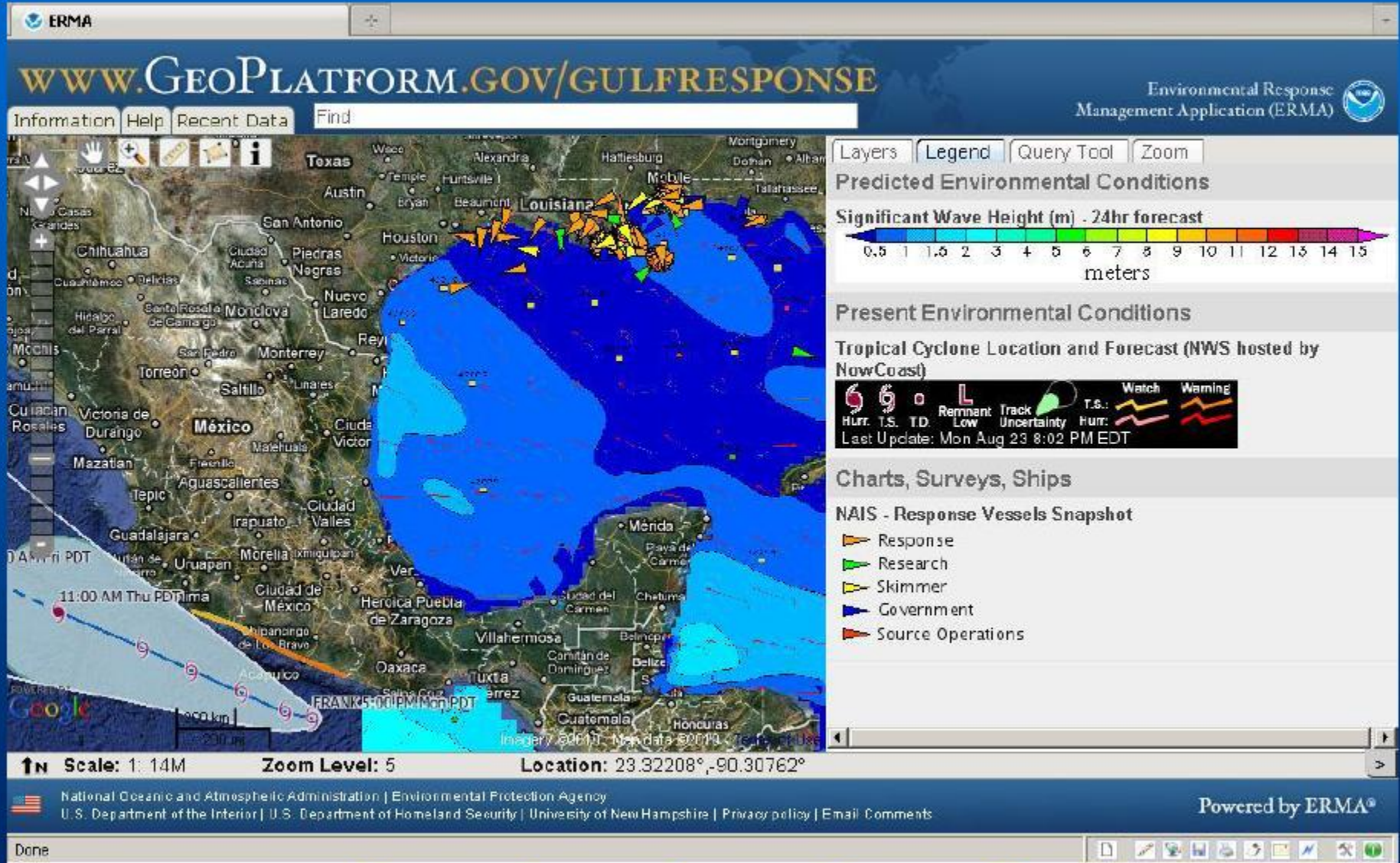
Printed by: Michele Jacobi
Date: Sunday, August 15, 2010 3:35:00 PM



US DOC | NOAA | NOS | NOAA Office of Response & Restoration
Disclaimer | Privacy policy | Email comments

Coastal Response Research Center
©2007 - 2010 University of New Hampshire

Public display of response asset locations and weather feeds



3.4 million hits first day of release

Challenges

- Developing joint policy approaches with other organizations
- Investing in improved business processes/ information management
- Difficulty by non-marine community to understand marine SDI components
- Resources
- Gathering support for SDI activities from decision makers and budget managers
- Ensuring correct knowledge, skills, and training

