



Environmental Response Management Application: The Next Generation

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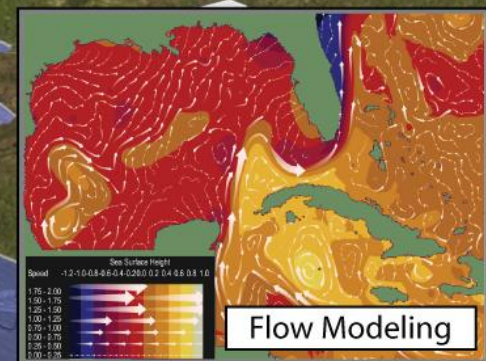
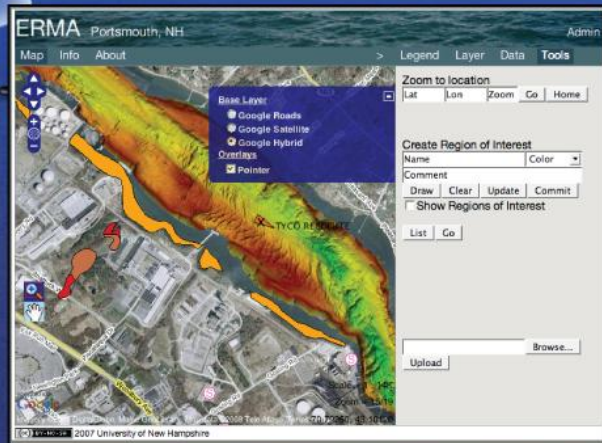
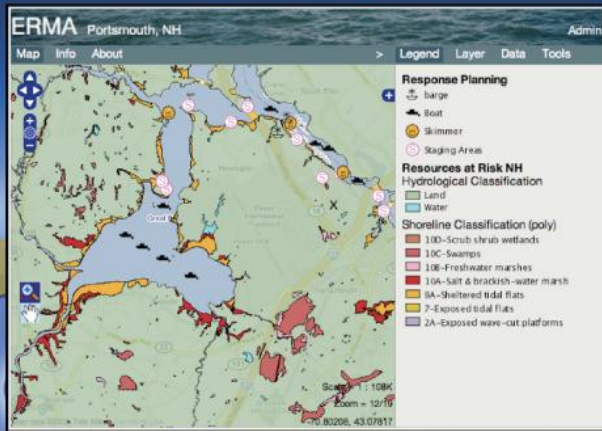


Concept for ERMA

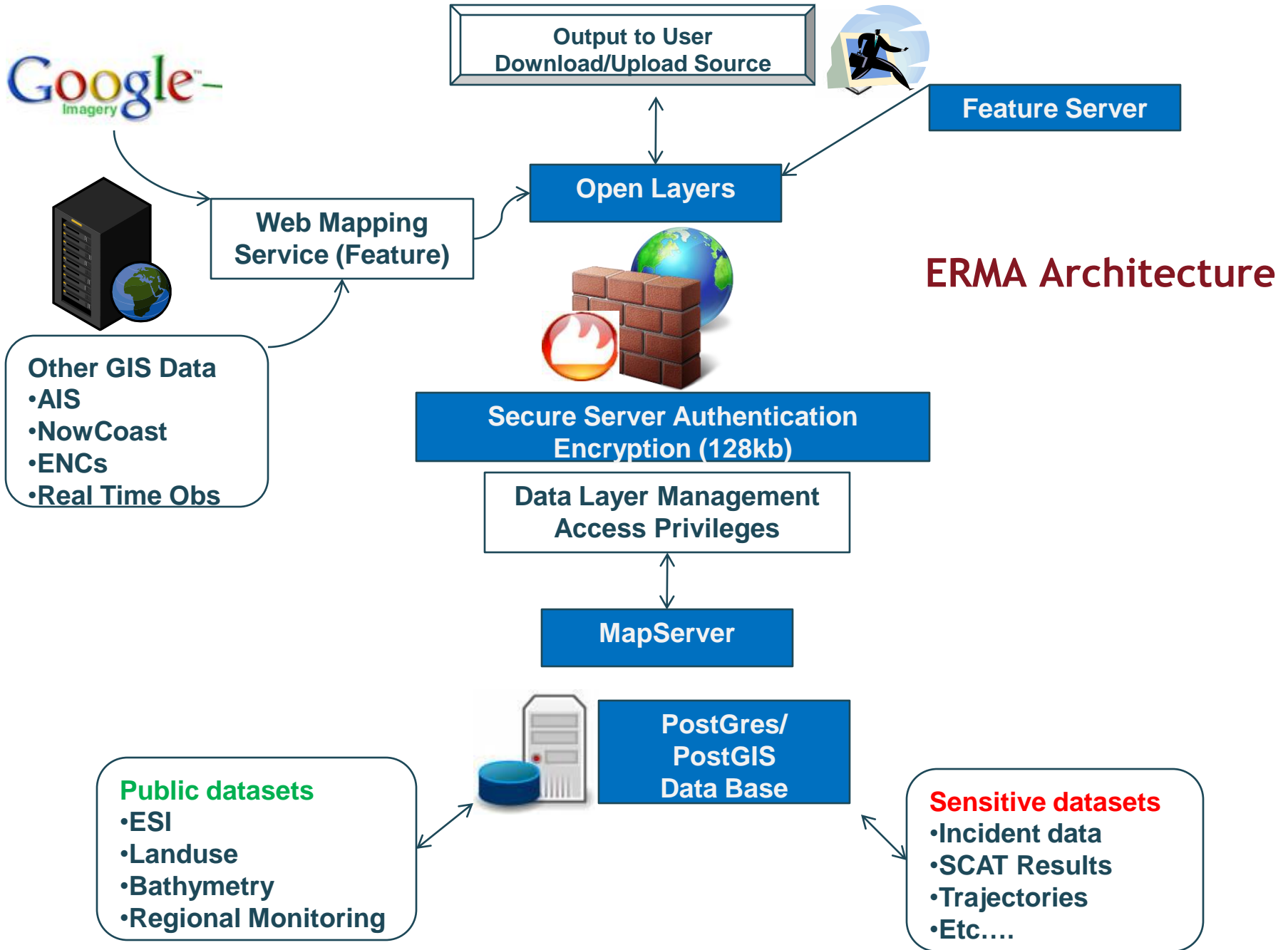
- Take advantage of open-source, web-based mapping tools
- Integrate and synthesize various types of information (static and real-time)
- Provide fast visualization of current information
- Improve communication and coordination among responders and stakeholders
- Provide integrated and timely information to improve decision-making



Environmental Response Management Application (ERMA)



Kurt Schwehr
CCOM/JHC



ERMA Architecture

ArcMap Projects Being Assembled

The screenshot displays the ArcMap interface with the following components:

- Title Bar:** Sector_ERMA_ext.mxd - ArcMap - ArcView
- Menu Bar:** File Edit View Bookmarks Insert Selection Tools Window Help
- Toolbar:** Standard ArcMap tools and a task bar showing 'Create New Feature'.
- Table of Contents:**
 - Booms_NAD_83
 - Sector_Boundary_San_Juan
 - ESI_and_NEW_GRP_Map_Index
 - Sector_San_Juan_GRP_Index_NAD_83
 - Sector_San_Juan_Oil_Spill_Sensitive_Areas
 - Priority for Protection
 - ♦♦♦ A - Highest Priority
 - ♦♦ B - Protect After A Sites
 - ♦ C - Protect After B Sites
 - Turtle_Nesting_Shoreline_NAD_83
 - Merged_Map_Icons_USE_w_Leader_Lines_NAD_83
 - Leader_Lines_NAD_83
 - Mangrove_Shoreline_NAD_83
 - Coral_Reef_Lines_NAD_83
 - management
 - Puerto Rico ESI Lines
 - USVI esi lines
 - PR_GNIS_WGS_84
 - Imagery-USACOE 2007
 - PR_ESI_HYDRO_NAD_83
 - VI_ESI_HYDRO_NAD_83
 - NOAA_BSB_Charts
- Map View:** Aerial imagery of a coastal area with overlaid green and blue lines representing sensitive areas and booms. Yellow diamond symbols are placed along the shoreline.
- Data Table:**

Oil Spill Sensitive Area Report - Sector: Jacksonville GRP MAP #: EPL-28			
Map Information			
SITE NAME: Titusville Causeway	SITE ID: A130		
LATITUDE (DMS): 28 37 18	LONGITUDE (DMS): -80 47 50	PRIORITY (SEASON): SPR	SUM AUT WIN
LATITUDE (DD): 28.621667	LONGITUDE (DD): -80.797222	GEN LOC:	
GRP MAP #: EPL-28	NOAA CHART: 11465	ESI MAP: EPL-28	OTHER MAP:
NOAA CHART NAME: TOCOMATO RIVER TO PALM SHORES FLORIDA JJKK			
ESI MAP NAME: TITUSVILLE, FL (1988)	USGS QUAD:		
CONTACT/STAKEHOLDERS: FL State Warning Point (800) 520-0519/Deborah Shelley - FL DEP, Aquatic Preserves (407) 330-6727			
Resources at Risk			
SHORELINE TYPES (MOST SENSITIVE ESI CLASSIFICATION WITH 1 MI. RADIUS):			
HABITAT TO BE PROTECTED: Merrill Island National Wildlife Refuge, Banana River Aquatic Preserve Mangroves, Seagrasses			
WILDLIFE/RESOURCES TO BE PROTECTED: Juvenile turtles, Fish, Manatees, Shore birds, nesting birds, breeding birds, Gulf-fish harvesting area, Atlantic salt marsh spuds			
THREATENED SPECIES: Manatees, Leatherback, Green, and Kemp's Ridley turtles, Scrub jay, gopher tortoise, indigo snake, least tern, Eagle nest in nearby Titusville			
OTHER RESOURCES:			
Resource Considerations			
STAGING AREAS: Boat ramp north of Titusville	COLLECTION POINTS: Base of bridge	PROTECTION STRATEGY: Deploy 2,000' of barrier boom across base of bridge with 1,000' of diversion boom as shown to divert oil to collection point.	
AREA ACCESS: Boat/vehicle			
PHYSICAL DESCRIPTION:			
POTENTIAL SPILL SOURCES:	FT.	MAX CURRENT:	KTS.
TIDAL RANGE:			
MIN. BOOM LENGTH: 3000 FT.			
BOOMING METHOD: Deflect/Protect			
DEGREE OF PROTECTIBILITY: PROTECTION STRATEGY: Deploy 2,000' of barrier boom across base of bridge with 1,000' of diversion boom as shown to divert oil to collection point.			
OTHER RESPONSE RESOURCES:			
NEAREST AVAILABLE RESOURCES:			
PERSONNEL AVAILABLE:			
POINT OF CONTACT/AGENCY: Ph. #			
POINT OF CONTACT/AGENCY: Ph. #			
POINT OF CONTACT/AGENCY: Ph. #			
Booms: Type Length Skimmer: Type Number			
Type Length Type Number			
OTHER RESOURCES AVAILABLE:			
Site report produced by Florida FWC - Fish and Wildlife Research Institute on: Friday, March 11, 2005 2:21:22 PM			
For additional information, please contact the FWC - Fish and Wildlife Research Institute - Center for Spatial Analysis (727) 896-8626			
- Status Bar:** -64.724 17.776 Decimal Degrees

Secure Easy to Access Data Types

ERMA Portsmouth, NH Admin

Map Print Info Help > Legend Layer Data Tools

- ☑ Response Planning (Clear | All) ⬇
- ☑ Public Safety (Clear | All)
- ☑ Incident Information (Clear | All) ⬇
- ☑ Resources at Risk NH (Clear | All) ⬇
- ☑ Resources at Risk ME (Clear | All) ⬇
- ☑ Restoration (Clear | All)
- ☑ Marine Debris (Clear | All)
- ☑ Environmental Quality (Clear | All)
- ☑ Field Photographs (Clear | All)
- ☑ Charts, Surveys, Ships (Clear | All)
- ☑ Environmental Conditions/ Weather
- ☑ Predicted Conditions (Clear | All)
- ☑ Data Buoys & Observations (Clear | All)
- ☑ Uploaded Layers (Clear | All)

Authentication Required

Enter username and password for "phri" at https://portsmouthresponse.unh.edu

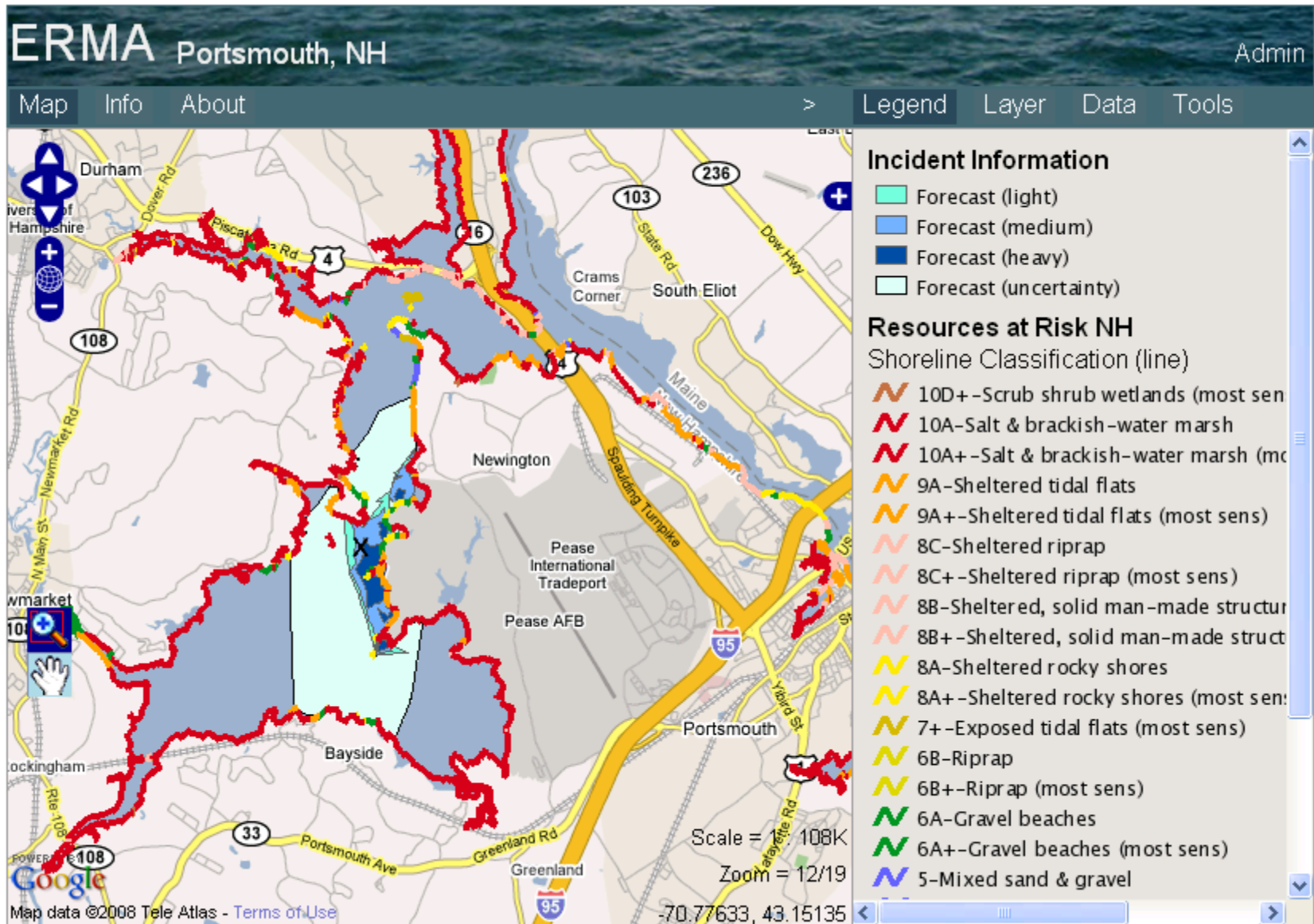
User Name:
Michele.Jacobi

Password:

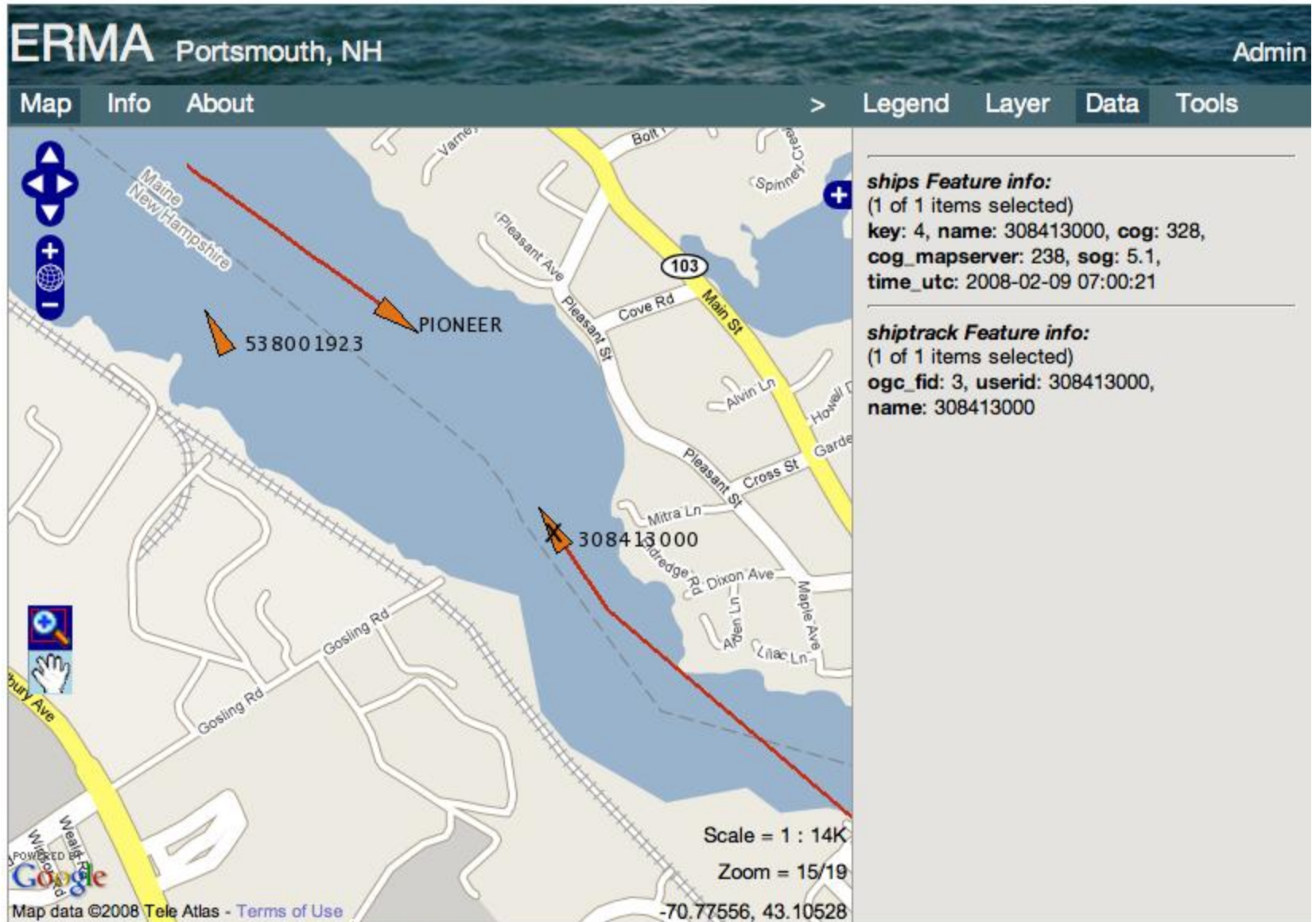
Use Password Manager to remember this password.

OK Cancel

Critical Datasets for Environmental Response



Real-time vessel traffic from AIS



Weather and Buoy Observations

ERMA Portsmouth, NH Admin

Map Print Info Help > Legend Layer Data Tools

The main map displays a satellite-style view of the Portsmouth, NH area, overlaid with various data layers. A legend on the right side of the interface lists the following layers:

- Response Planning (Clear | All)
- Public Safety (Clear | All)
- Incident Information (Clear | All)
- Field Photographs (Clear | All)
- Resources at Risk NH (Clear | All)
- Resources at Risk ME (Clear | All)
- Restoration (Clear | All)
- Marine Debris (Clear | All)
- Environmental Quality (Clear | All)
- Charts, Surveys, Ships (Clear | All)
- Environmental Conditions/ Weather
 - NOAA Weather Forecast ME/NH
 - Sfc Wind & Weather Obs
 - Weather Radar Mosaic (NWS)
 - Sea Surface Temp Anal (NWS)
 - Visibility (mi)
- Data Buoys & Observations (Clear | All)
- Predicted Conditions (Clear | All)
- Uploaded Layers (Clear | All)
- ERMA Tools (Clear | All)

A pop-up window titled "Tide Level" is displayed over the map. It contains the following information:

NORA/NOS/CO-OPS
 Preliminary Water Level (M) vs. Predicted Plot
 8423898 Fort Point, NH
 from 2008/06/10 - 2008/06/11

The graph plots "Height relative to MLLD (Feet relative to MLLD)" on the y-axis (ranging from 0.000 to 10.000) against "Date/Time (GMT)" on the x-axis (ranging from 06/10 00:00 to 06/11 00:00). Two data series are shown: "Predicted HL" (red line) and "Observed HL" (green line). The predicted line shows a regular tidal cycle with peaks around 9.5 feet and troughs around 1.5 feet. The observed line follows the predicted line closely, with a slight lag and lower amplitude.

Scale: 1 : 433K Zoom Level: 10 Location: -70.49652°, 43.34216°

Imagery ©2008 TerraMetrics, Map data ©2008 Tele Atlas - Terms of Use

Interactive Tools

ERMA Portsmouth, NH Admin

Map Print Info Help Legend Layer Data Tools

Zoom to location:
-70.82 43.13 12 Go
Home

Create Region of Interest: Off
Name Color
Comment
Update Delete Commit
 Show Regions of Interest

List

- 143 Fishery Closure 6-18-08 Comment r
- 146 Exclusion zone described 15HRS r
- 168 sheen sept.18th black P/W
- 214 Overflight sheen update 10/23 cyar

Go

There are uncommitted changes.

Manage Map Labels On

Scale: 1 : 108K Zoom Level: 12 Location: -70.74371°, 43.16788°

Map data ©2008 Tele Atlas - Terms of Use

Map features include: Durham, Dover Rd, Piscataqua Rd, State Rd, Harold L Dow Hwy, Rosemary, Eliot, East Elliot, Goodwin Rd, Crams Corner, South Eliot, Newington, Portsmouth Int'l Airport, Pease AFB, Portsmouth, Bayside, Foyes Corner, and various roads like Route 16, 103, 236, 101, 4, 1, 95, and 236.

Interactive Tools

The screenshot displays the ERMA Portsmouth, NH web application interface. At the top left, the text "ERMA Portsmouth, NH" is visible, and at the top right, there is an "Admin" link. Below the header, a navigation bar contains "Map", "Print", "Info", "Help", "Legend", "Layer", "Data", and "Tools".

The main map area shows a geographic map of Portsmouth, NH, with various features like roads, water bodies, and a red star marking the location of the Portsmouth International Airport at Pease. A coordinate "366909530" is displayed on the map. A dialog box titled "ERMA: Upload Shapefiles - Mozilla Firefox" is open, showing the "Upload New Shapefile" form. The form includes the following fields and options:

- Layer Name: lobster_102008
- Used on data tab as well:
- Text for Legend: Oiled Lobster Pots
- Projection: NAD 83 / UTM zone 19N
- Color: black
- Symbol (point-only): -- select a symbol --
- Shapefile (zipped): Browse...

Buttons for "Save" and "Close and reload map" are located at the bottom of the dialog box. On the right side of the interface, there are several interactive tools and controls:

- Zoom to location:** Fields for "Lon" and "Lat" with a dropdown set to "10" and a "Go" button. A "Home" button is also present.
- Create Region of Interest:** A toggle switch set to "On".
- Manage Map Labels:** A toggle switch set to "On".
- Manage Uploads:** A link in purple text.
- Download:** A link in purple text.