Response to Deepwater Horizon oil spill
NOAA Navigation Services
as of May 3, 2010

President Obama told the country on Sunday that we are facing "a massive and potentially unprecedented environmental disaster" from BP's ongoing Deepwater Horizon oil spill. NOAA's Navigation Service is assisting in the response in order to ensure safe and ecologically protective transit of shipping vessels and others. We are also preparing to conduct surveys, if requested, to help coastal communities with economic recovery.

Update on navigation service response:

Coordinating navigation information
Coast Survey navigation managers Tim Osborn, Patrick Fink, and Alan Bunn are working day and night with the ports, shipping industry, and Coast Guard to make sure everyone has the information they need to keep commerce flowing. Tim is in Lafayette working with USCG New Orleans Command Center; Patrick is in Mobile, working with USCG Mobile Command; Alan is now in Houma LA.

Updating special chart products daily
To support the continuation of maritime commerce, and to help ensure safe and efficient navigation, NOAA is producing nautical chart products that display the spill zone based on current spill projections. We are updating the charts daily, using Office of Response & Restoration data.

Coast Survey is updating the the NOAA Electronic Navigational Charts (NOAA ENC®) US3GC04M and US3GC05M, and the NOAA Raster Navigational Chart (NOAA RNC®) and Print on Demand Chart 11360. The raster and electronic charts are available from Coast Survey's chart downloader website. Print-On-Demand charts are available from NOAA's Print-on-Demand agents)

Providing modeling data to build trajectory
Coast Survey is generating oceanographic data with its Northern Gulf of Mexico model, and is sending output daily to Office of Response & Restoration. OR&R uses the information to forecast the oil trajectory. Coast Survey is also assisting the OR&R modeling group.

Supporting mapping integration for environmental response
Coast Survey's nowCoast group and the Joint Hydrographic Center are supporting the operational use of NOAA's Environmental Response Management Application. ERMA® is a web-based GIS tool for both emergency responders and environmental resource managers. The application is accessible to the command post and to assets in the field.

Preparing for aerial photos
National Geodetic Survey is preparing to conduct aerial photo missions to provide updated information about the spill.

Providing essential data
Center for Operational Oceanographic Products and Services is providing data from its extensive network of water-level, meteorological, and near-shore current meters throughout the Gulf.

If supplemental funding is available:

Examining possible use of multibeam for damage assessment
Having highly accurate information on where oil is, and where it is not, could significantly help the response to a spill of this magnitude, where timely and precise placement of limited resources are critical to mitigate spill impacts.

In limited research applications, multibeam echo sounder technology systems have been able to detect oil in the water column and on the seafloor. The Office of Coast Survey is proposing an applied research and development project to implement this capability operationally.

Coast Survey would deploy a mapping vessel to the spill site to map the area, extracting acoustic data and imagery to locate the presence of plumes of oil and oil on the seafloor. Potential partners include OMAO and:

- National Centers for Coastal Ocean Science, with NOAA Ship *Nancy Foster*;
- National Marine Fisheries Service, with ME-70 equipped NOAA vessel;
- Office of Ocean Exploration, with NOAA Ship *Okeanos Explorer* EM302; or
- Contractors with EM302 or EM710 multibeam echo sounders.

Data could be processed aboard ship in near-real time for immediate reaction and containment activities, and in more detail at the Joint Hydrographic Center for response planning and preparation of map products.

Success would depend on the specific physical and acoustic characteristics of this oil in the water and on the seafloor.