

# Welcome Aboard the U.S. EPA Ocean Survey Vessel *Bold*



## ***OSV Bold***

### **Introduction**

The Ocean Survey Vessel *Bold* (OSV *Bold*) is EPA's new ocean and coastal monitoring ship. With plans to operate in the coastal waters of the Atlantic, Pacific and Gulf of Mexico, the OSV *Bold* will provide EPA with valuable monitoring and assessment information on the health of our nation's coastal waters.

### **About EPA**

EPA's mission includes protecting our nation's coastal and marine resources from the degrading effects of pollution. Monitoring and assessment play a crucial role in providing needed information on the physical, chemical and biological status of our coastal resources. EPA will rely on monitoring information taken onboard the OSV *Bold* to observe changes from pollution and to develop management and planning strategies to protect and preserve our ocean and coastal resources.

### **OSV *Bold's* Mission**

The OSV *Bold* supports EPA's efforts to monitor and assess impacts on ocean and coastal waters from land- and ocean-based human activities and naturally occurring ecological disturbances.



**OSV *Bold***

### **Keeping Channels Open for U.S. Ports**

Harbors naturally fill with sediment. Dredging is necessary to maintain navigational passage for ships in our nation's ports and harbors. Once removed, dredged material is often disposed of in coastal waters. Impacts from disposing dredged sediment are generally minimal, but could be



### **Scientists collect organisms at dumping sites**

significant if the placement of sediments alters existing habitat. Under the Marine Protection, Research, and Sanctuaries Act, EPA is responsible for designating and monitoring sites for dredged material disposal. The OSV *Bold* will aid EPA in managing dredged material disposal by identifying new areas suitable for designation as dredged material ocean disposal sites and monitoring existing sites for any negative impacts. Monitoring ensures that U.S. ports remain accessible without causing environmental harm.

### **Assessing Impacts of Pollution**

Over enrichment of waters due to excessive loading of nitrogen is a common problem facing many of our waterways. While there are many sources, two primary contributors are effluent from wastewater treatment plants and runoff from agricultural fields. This overabundance of nutrients can promote harmful algal blooms as well as lead to hypoxia, a condition where waters have extremely low levels of oxygen. The OSV *Bold* helps EPA monitor areas experiencing environmental degradation from over enrichment,

such as the hypoxic zone in the Gulf of Mexico. This major hypoxic event occurs annually in the Gulf of Mexico and degrades habitat for fish and other marine organisms. The OSV *Bold* will help EPA scientists monitor progress towards reducing the size and the ecological impacts of the hypoxic zone.

### Dive Program

Not only will the OSV *Bold* aid in various monitoring efforts, but it will also serve as a platform for the over 60 EPA certified SCUBA divers in EPA's Dive Program. EPA divers will use the OSV *Bold* to support monitoring, enforcement, and survey efforts which require SCUBA diving. The ship has a state-of-the-art system that provides divers with enriched oxygen breathing gas. This specialized breathing gas increases diver safety by reducing the risk of decompression illness.



Photo Courtesy of Leopoldo Miranda

**EPA Divers prepare for a coral reef survey**

### Other Types of OSV *Bold* Surveys

Monitoring and assessment surveys conducted aboard the OSV *Bold* include studying impacts of air deposition, red tides and harmful algal blooms, waste disposal, ocean wastewater outfalls, emergency ocean dumping, and marine debris. Other surveys study vessel discharges, hazardous material spills, and coral reef health.

### Equipment

The OSV *Bold* is equipped to support various monitoring and educational tasks. The vessel carries sophisticated instruments to collect data on the water column, sediments, and marine life. The vessel also maintains underwater video, sidescan sonar, and general sampling instruments such as corers, dredges, and trawls. Onboard laboratories allow scientists to process, analyze, and store samples.



**Water testing equipment collects samples for on-board analysis**

### Education



**Students learn about ocean organisms on ship tours**

The OSV *Bold* will provide opportunities for public education on coastal and marine environments through open houses and demonstration surveys. Other activities include study-on-board student and teacher programs. These popular activities allow interested parties to learn about ocean monitoring and EPA's role in ocean stewardship.

## About the OSV *Bold*

Overall Length: 224 feet

Width: 43 feet

Draft: 15 feet

Displacement: 2300 tons

Speed, Sustained: 11 knots

Ship Operating Crew: 19

Scientists: 20

Launched: May 24, 1989

Commissioned by Navy: October 16, 1989

EPA Initiated Surveys: August 8, 2005

### Background

The OSV *Bold* is the former Navy vessel, United States Naval Ship (USNS) *Bold*. Constructed by the Tacoma Boat Building Company of Tacoma, Washington, as a Tactical Auxiliary General Ocean Survey (T-AGOS) vessel, the ship was first commissioned in 1989 as the USNS *Vigorous*. The vessel was later renamed the USNS *Bold* and has served on many surveillance missions. The Navy decommissioned the USNS *Bold* in 2004, and then transferred the vessel to EPA. EPA converted the vessel to an Ocean Survey Vessel (OSV) to replace EPA's aging OSV *Peter W. Anderson*.

For more information on the OSV *Bold*, contact the Oceans and Coastal Protection Division at (202) 566-1200 or visit <http://www.epa.gov/owow/oceans/>