

Physical Oceanographic Real-Time System (PORTS)TM

NOAA/National Ocean Service

Upper and Lower Chesapeake Bay

Project Characteristics

- *Physical Oceanography Real-Time System (PORTS)TM*
- *Installation, Maintenance and Troubleshooting of:*
 - *Acoustic Current Meters*
 - *Meteorological Sensors*
 - *Water Quality Sensors*
 - *Water Level (Tide) Sensors*
- *Data Quality Checking and Reporting*
- *Federal Contract Management*

NOAA implements real-time systems for the collection and dissemination of marine and meteorological data in domestic ports and harbors. The Physical Oceanographic Real-Time System (PORTS)TM installed in the Upper Chesapeake Bay became fully operational in 2004. Woods Hole Group assumed operation and maintenance duties for Lower Chesapeake in 2006.

The Chesapeake Bay PORTS integrates real-time current profile, water level, salinity, meteorological and bridge air gap data taken from stations located throughout the Chesapeake Bay. Data are telemetered to centralized relay stations, then forwarded to NOAA for real-time evaluation and dissemination to the public.

The Woods Hole Group is responsible for the operation and maintenance of eight USCG buoy mounted ADCP systems, one bottom-mounted ADCP, and another three horizontally mounted ADCPs. The Woods Hole Group has also installed and maintains air gap sensors to provide vertical clearance data at three bridges over the C&D Canal.

Woods Hole Group is responsible for the continuing maintenance of fourteen primary and backup water level stations, eighteen meteorological stations (wind, barometric pressure, and air temperature), eleven water temperature sensors and six conductivity/temperature sensor. We also maintain line of sight radios, IP modems, telephone lines and GOES data transmission systems.

Other Woods Hole Group maintenance responsibilities include equipment testing and preparation, daily



Woods Hole Group technicians installing a buoy-mounted current meter – Bay Bridge, Annapolis, MD

monitoring of PORTS display information for QA purposes, and monthly service visits to stations.

In addition, Woods Hole Group is responsible for providing monthly system status reports, and is on call to perform emergency service visits to maintain continuous system operation, and dissemination of real-time data.

Real-time data collected by the Upper Chesapeake Bay PORTS are available to the public at <http://tidesandcurrents.noaa.gov/cbports/cbports.shtml?port=cb>