



NOAA Chesapeake Bay Office

Chesapeake Bay Interpretive Buoy System

The “smart buoys” of the Chesapeake Bay Interpretive Buoy System provide information that scientists, boaters, students, and others need. All the data is relayed from the buoys via wireless technology and is available on the web at www.buoybay.org; via mobile devices at www.buoybay.org/m, and by toll-free phone at 877-BUOY-BAY.

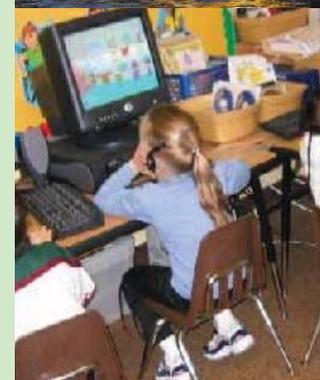


Scientists use the data to protect, restore, and manage the Chesapeake Bay. Boaters—including commercial and recreational fishermen, sailors, and kayakers—can plan a safer day by knowing the conditions on the Bay before they leave harbor. And students can learn about the Chesapeake and their environment by exploring the data. Buoys also mark points along the Captain John Smith Chesapeake National Historic Trail, a network of water routes that covers approximately 3,000 miles in the Chesapeake Bay and its tributaries in Virginia, Maryland, Delaware, and Washington, D.C., along routes taken by Captain John Smith in 1607 and 1608 to chart the land and waterways of the Chesapeake Bay.

Innovative Buoys Mark the Trail

While hikers are familiar with a variety of ways to mark a land-based trail, marking water trails requires new methods. But these buoys do much more than just let visitors know where they are—they have many recreational, commercial, maritime, scientific, and educational applications.

Buoys in NOAA’s Chesapeake Bay Interpretive Buoy System (CBIBS) look similar to others currently deployed around the Bay, but they are loaded with sensors to measure weather and water conditions and water quality. The buoys collect and transmit data via wireless technology for scientific and educational use, as well as to support boating safety.



Meteorological, physical, water quality, water level, chemical, biological, optical, and acoustic measurements are among the data that are collected and transmitted in near-real time. CBIBS is an integral part of the Chesapeake Bay Observing System and also is a component of the U.S. Integrated Ocean Observing System.

Buoys Reach Many Audiences

In addition, these “smart buoys” serve as interpretive guide posts, linking trail visitors—whether they be right next to the buoy in a kayak with a cell phone or at home on their computer—with information about the buoy location.

To interpret the data available from the buoys, the NOAA Chesapeake Bay Office is developing educational and interpretive components including a web-based classroom curriculum that uses data to teach students about the Bay and its resources. Working with partners, the NOAA Chesapeake Bay Office is creating multidisciplinary lessons that weave science and math together with history and culture. John Smith’s historical observations can be compared to real-time data collected by the buoy, giving students a picture of the Chesapeake Bay—then and now. Comparing the historical and present day ecological conditions of the Bay can motivate students to undertake restoration and conservation efforts.

“Smart Buoys” Are Deployed around the Bay

Eight CBIBS buoys have been launched—at the mouths of the Susquehanna, Patapsco, Severn, Potomac, and Rappahannock Rivers, as well as in the Potomac River near Washington, D.C., the Elizabeth River off Norfolk, and in the James River off Jamestown, Virginia. The data from each of these buoys, displayed with information from other observational platforms around the Bay including those that comprise the Chesapeake Bay Observing System, is available on line.

In spring 2010, the Dominion Gooses Reef buoy will be deployed off the mouth of the Little Choptank River.

CBIBS is on Facebook—become a fan of CBIBS for updates on buoy deployments and more information about observations and the Chesapeake. For more information on other aspects of the Captain John Smith Chesapeake National Historic Trail, visit www.smithtrail.net.

NOAA Chesapeake Bay Office Mission

Focusing NOAA’s capabilities in science, service, and stewardship to protect and restore the Chesapeake Bay.



<http://chesapeakebay.noaa.gov>