



NOAA Chesapeake Bay Office

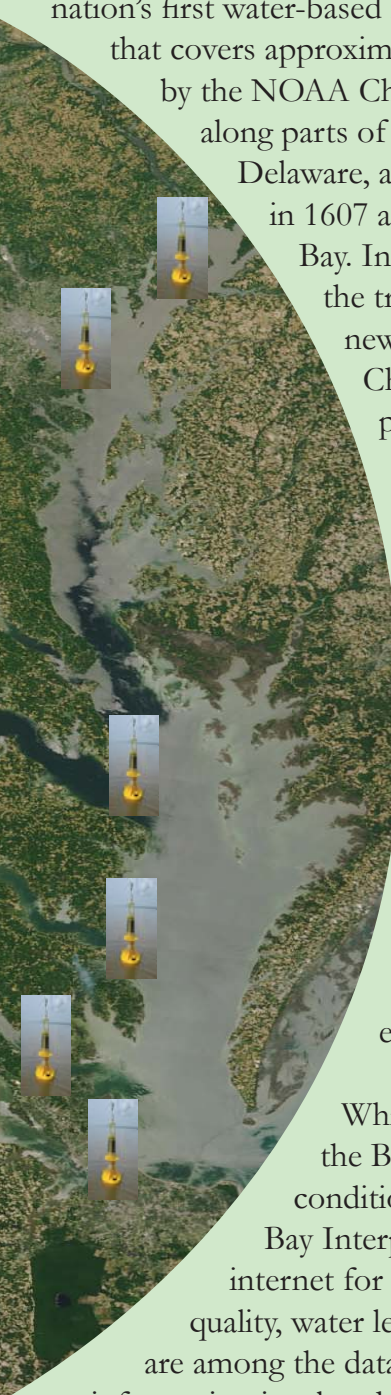
# Chesapeake Bay Interpretive Buoy System

The newly established Captain John Smith Chesapeake National Historic Trail—the nation’s first water-based National Historic Trail—includes a network of water routes that covers approximately 3,000 miles and features innovative buoys being developed by the NOAA Chesapeake Bay Office and its partners. These trails extend along parts of 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. In addition to tracking the routes Captain Smith explored by boat, the trail will highlight the natural history of the Bay and provide new opportunities for recreation, education, and tourism in the Chesapeake Bay region. By providing more opportunities for people to interact with the Bay and its ecosystem, culture, and history, the trail will encourage people to become stewards of the Chesapeake.

## Innovative Trail Markers Are Feature of New Trail

While hikers are familiar with a variety of ways to mark a land-based trail, marking water trails requires new methods. As a partner in the development of the water trail, the NOAA Chesapeake Bay Office is developing innovative buoys to mark a number of locations on the Captain John Smith Chesapeake National Historic Trail. These buoys do much more than just let visitors know where they are—they have many other recreational, commercial, maritime, and educational applications.

While the buoys look similar to others currently deployed around the Bay, they are loaded with sensors to measure environmental conditions and water quality. As part of the developing Chesapeake Bay Interpretive Buoy System, the buoys collect and transmit data via the internet for scientific and educational use. 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. This information is relayed from the buoys to the internet using cutting-edge wireless technology, where it is used by people for a variety of needs.



## 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. By accessing [www.buoybay.org](http://www.buoybay.org) or calling toll-free **877-BUOY-BAY**, visitors can receive current data, hear about conditions in John Smith’s time, and learn about local history.

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” Being Launched Around the Bay

Six CBIBS buoys have been launched. The first buoy was launched in the James River off Jamestown, Virginia, in time for the May 2007 America’s 400th Anniversary celebration. Additional buoys are operating at the mouths of the Susquehanna, Patapsco, Potomac, and Rappahannock Rivers, as well as in the Elizabeth River off Norfolk, Virginia. The data from 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.

Real-time observations and historical and cultural information are available at [www.buoybay.org](http://www.buoybay.org) and **877-BUOY-BAY**.

For more information on other aspects of the Captain John Smith Chesapeake National Historic Trail, visit [www.nps.gov/cajo](http://www.nps.gov/cajo) or [www.baygateways.net](http://www.baygateways.net).



### *NOAA Chesapeake Bay Office Mission*

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