

NOAA Chesapeake Bay Interpretive Buoy System

York Spit Buoy: Geography

Welcome to NOAA's York Spit CBIBS Buoy, part of the Chesapeake Bay Interpretive Buoy System. Located at 37 degrees 12.51 minutes North latitude, 76 degrees 16.06 minutes West longitude, this buoy sits on the York Spit, a shoal that lies northwest-southeast. It once formed the north side of the York River's mouth, several thousand years ago when sea level was much lower than it is today. To the south and west of the river's ancestral channel lies the other side of the former river mouth, the shoal on the outside of Poquoson's Big Salt Marsh, which forms the Plumtree Island National Wildlife Refuge, the largest salt marsh on the western shore of the Chesapeake. The buoy lies 16 miles north-northwest of the Chesapeake Bay Bridge-Tunnel at the Bay's mouth.

The York Spit buoy sits near the crossroads of the Chesapeake Bay and the Atlantic. Weather and water conditions here reflect the dynamic daily interplay of Earth's third-largest estuary, her second-largest ocean, and the flow of fresh water from the York River, the fifth largest in the Chesapeake system in terms of flow from its large drainage basin in central Virginia.

The Chesapeake here is a little more than 19 miles wide. Over several thousand years, strong winds, tides, the York's flow, and powerful downstream currents from the Chesapeake's main channel have shaped a complex assembly of channel edges and shoals leading down to the Bay Bridge-Tunnel. The shoals have provided both sediments for clams to burrow into and hard attachment surfaces for billions of oysters, hooked mussels, limpets, and barnacles. These in turn have attracted complex living communities of blue and calico swimming crabs, multiple species of mud crabs, grass and sand shrimp, worms of all sizes, anemones, and many other creatures.

This combination of deeper water and shoal habitat occurs at the overlap in range of southern fish species like cobia, red drum, and spadefish with northern species like striped bass (rockfish), tautog, and black sea bass. Wider-ranging species like bluefish add to the mix. The rich waters also attract a broad variety of seabirds, from gannets, large gulls, and brown pelicans to tiny shorebirds and least terns that migrate along the Atlantic coast.

In this location between the Stingray Point Buoy at the Rappahannock River's mouth and the First Landing Buoy, just outside the Bay Bridge-Tunnel, the York Spit CBIBS buoy fills in the lower end of the buoy system. It provides fascinating observations on both water quality and weather conditions, assisting many users from pilots handling large ships on the way up the Chesapeake to Baltimore to cruising sailors, watermen pulling crab pots, and anglers in small boats.