

## Susquehanna River Buoy Geography

Welcome to the Susquehanna River Chesapeake Bay Interpretive Buoy. It sits in mid-channel between Havre de Grace and Perryville, right in the mouth of the Chesapeake's Mother River, at 39 degrees 32.437 minutes North latitude, 76 degrees 05.420 minutes West longitude. The Susquehanna River is deceptive. It is only 100 yards across at this point, but all of the fresh water from its giant watershed passes through this narrow slot, including rain that falls on the roof of the Baseball Hall of Fame on the edge of Otsego Lake in Cooperstown, New York. Measured in average freshwater flow, the Susquehanna is the largest river on the Atlantic coast of the United States, slightly larger in fact than #2 and #3 combined. (Those are the Connecticut and the Hudson, respectively.)

It is ironic that Captain John Smith saw the Susquehanna as a tributary of the Chesapeake, because the Bay is actually the tidal portion of the River, just as surely as the Potomac below the Kennedy Center in Washington, DC is the tidal portion of the Potomac between Western Maryland and West Virginia. If you want an index of the Susquehanna's power, look at a chart of the narrow river channel between Garrett Island, just upstream, and Perryville. The depth in that slot varies from 55 to 80'!

That tongue of deep water extends just beyond this buoy, anchored in 40'. It sits at a transition point. If you are in a boat, or if you are in a car crossing the I-95 bridge, look upstream past Garrett Island. You'll see the river flowing at you from a narrow, rocky gorge that looks like the Susquehanna Valley in Pennsylvania. Now look downstream. You'll see broad open water: the Susquehanna Flats, which form the head of the Chesapeake. And on a chart, you'll note that the depth changes abruptly from 40' to less than 5'. The Flats actually have 10-20 foot channels running around either side, and narrow guts locally called ditches braid through them, but most of this vast expanse of sand and mud is very, very shallow.

Underwater grasses make the Susquehanna Flats an important Chesapeake community. Wild celery, sago pondweed, hydrilla, and other plants form a keystone community for small fish, larger fish, crabs, and, in winter, migratory waterfowl like canvasback ducks and Canada geese. Be sure to visit the Havre de Grace Maritime and Decoy Museums to learn more about the Flats ecosystem.

You'll learn there that many fish species move past the site of this buoy each year. Two that are particularly important are American shad and rockfish (striped bass). Until the beginning of the 20th century, the Susquehanna carried a spring spawning run of 4 million fish, which swam upriver beyond Binghamton, NY (over 300 miles above this buoy!), providing fresh fish as winter's end to people throughout the Susquehanna Valley. The commercial shad fishery was very important to the economies of Havre de Grace and Perryville until the fishery collapsed in the 1970's, the result of pollution and power dams that blocked the river for the fish. Today, the runs are partially restored, but much work remains to be done.

Rockfish are a happier story. After a crash in the '70's from overfishing, they have rebounded strongly. The area just south of the Flats forms the species' largest, most important spawning area on the Atlantic Coast. A healthy Flats ecosystem and clean water flowing down the Susquehanna are crucial to maintaining these fish.