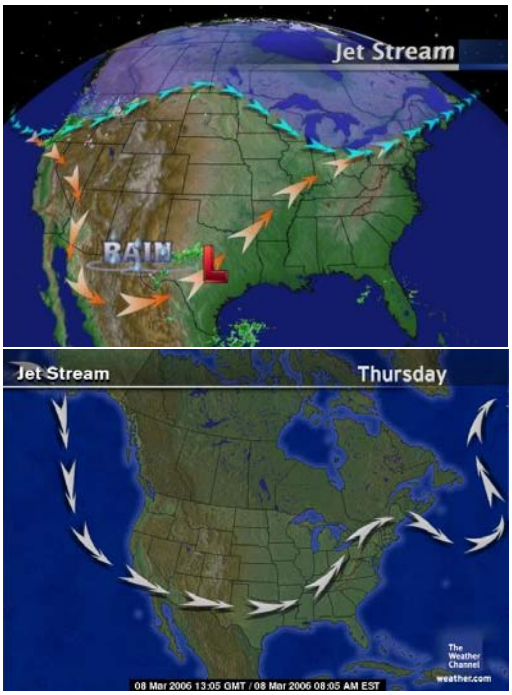
US EPA ARCHIVE DOCUMENT

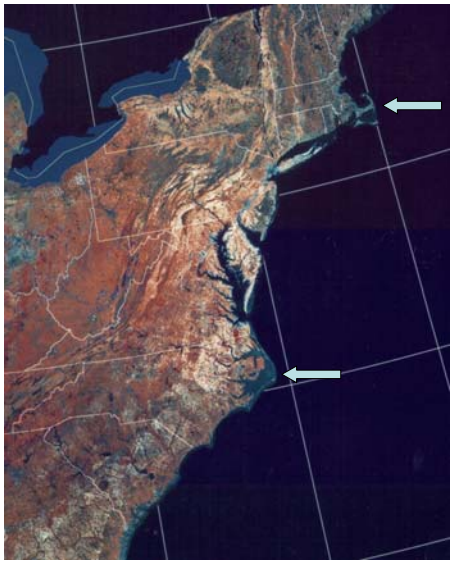
Long-term data sets you may wish to examine… The Chesapeake Bay and its major fisheries.

Roger Mann

Virginia Institute of Marine Science

US EPA ARCHIVE DOCUMENT





The coastal bodies of water in the Mid-Atlantic area have higher temperatures than almost all other bodies of water in the world. There also is enormous variation in landscape in this area. Thus, these are ideal locations to study the effects of climate change.

US EPA ARCHIVE DOCUMENT

Chesapeake Bay facts

- 10,000 years old
- 298 km long
- 8484 sq km area
- 71.5 x 10^9 m^3 volume
- 165,700 km^2 watershed

  The upstream problem
- 15 million people, add 3 million more by 2025
- 90% forested watershed in colonial times, 60% now

map copyright: Chesapeake Bay Foundation

The Chesapeake Bay probably is the most studied watershed in the continental United States. Available data range from river flow data to nutrient data to fisheries data.

US EPA ARCHIVE DOCUMENT

US EPA ARCHIVE DOCUMENT

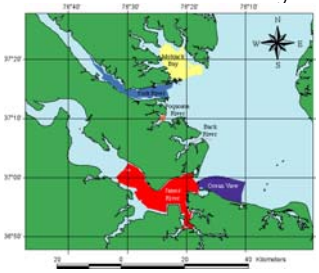
US EPA ARCHIVE DOCUMENT

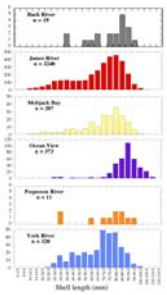
This picture shows oysters outside an oyster shucking house in the 1930s. The man in the picture is 6 feet tall.

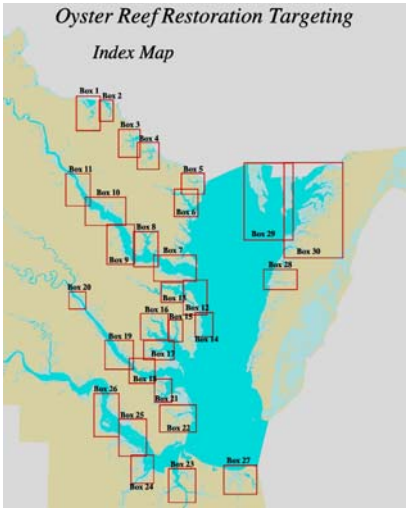
US EPA ARCHIVE DOCUMENT

There is extensive current information of major species and their habitats. These data sets are often decades in length.

Consider clams and oysters as resources, habitat and prey.







www.vims.edu/mollusc/oyrestatlas

US EPA ARCHIVE DOCUMENT

In addition to general descriptions we can quantify suites of physical variables, place them in context of sea level rise, hurricane induced storm surges, and precipitation events in the watershed.

www.vims.edu/physical/WEB/Bay1.htm

QuickTime™ and a
TIFF (Uncompressed) decompressor
are needed to see this picture.

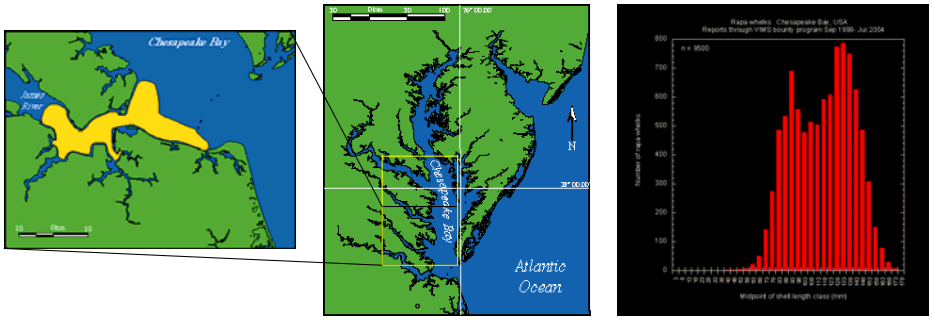
US EPA ARCHIVE DOCUMENT

We have invasive species - *Rapana venosa*

- Arrived 1998
- Documented distribution through a bounty program with 150+ commercial fishermen - equivalent to >100,000 sampling events/yr.
- Well described early life history.
- Working or prospective range extension models for the Chesapeake Bay and subestuaries..

US EPA ARCHIVE DOCUMENT

Where are they now?



- The distribution has changed only a modest amount, approximately 90% remain in the epicenter as recorded in 1998.
- This is a well established population with multiple year classes. Over 9500 are shown in a demographic for 1998-2004 collections. They are breeding, sustained collections are made each year, and current total (spring 2007) is >14,000!

US EPA ARCHIVE DOCUMENT

If you are interested in looking at some of the types of data that are available then go to

www.vims.edu

Visit www.vims.edu for Virginia data.

Contact the Maryland Department of Natural Resources (DNR) for Maryland data.

For Chesapeake Bay data, google Chesapeake Bay.

US EPA ARCHIVE DOCUMENT