NOAA Cooperative Oxford Laboratory

About NCCOS

The National Oceanic and Atmospheric Administration (NOAA) formed the National Centers for Coastal Ocean Science (NCCOS) in 1999 as a focal point for NOAA's coastal ocean science efforts. NCCOS helps NOAA meet its coastal stewardship and management responsibilities, and provides coastal managers with the scientific information necessary to decide how best to protect environmental resources and public health, preserve valued habitats, and improve the way communities interact with coastal ecosystems.

About the Cooperative Oxford Laboratory

The Cooperative Oxford Laboratory serves those who earn a living from the Chesapeake Bay and those who manage the resources of the bay and its surrounding watersheds by combining science, response, and management capabilities. Partners from NOAA Fisheries, Maryland Department of Natural Resources, and the U.S. Coast Guard Station Oxford share the space and work side-by-side with NCCOS scientists, leveraging each other's unique expertise.

Staff
50 employees total

Federal
State
Military
NOAA contractors

Facilities & Equipment

Small boats
Dive locker
Sturgeon rearing tanks
Biosafety level 2 laboratory space
Full molecular sequencing capability

Education Center
500 foot research pier
58-foot research vessel
18,000 square-foot main laboratory

Return on Investment for Coastal Science

The research, maps, and tools from NOAA's Cooperative Oxford Lab support commercial and recreational fishing, safe seafood, oyster restoration, and aquaculture. We are also developing options to protect Maryland's shorelines, coastal communities, and tourism from coastal storms and rising seas.

$10.2 B GDP contributed by Maryland's ocean-dependent industries

50 Gal The quantity of water one adult oyster in the Chesapeake Bay filters

$1.5 B The economic value of aquaculture nationwide

SCIENCE SERVING COASTAL COMMUNITIES

Our Science

We grow coastal industry, economies, sustainability, and strengthen national security. Much of the Chesapeake Bay work transfers to the national scale.

- Delivering pathogen forecasts and shellfish harvest tools that help growers and managers improve shellfish quality, price, and safety.
- Mapping commercially important fish and habitat in the Chesapeake Bay to guide conservation and restoration efforts.
- Developing techniques and tools used by shellfish growers and managers to improve oyster settlement and growth.
- Identifying management options and likely outcomes on water quality, fisheries, and oysters in the Chesapeake Bay by synthesizing and integrating science on the health of the bay.
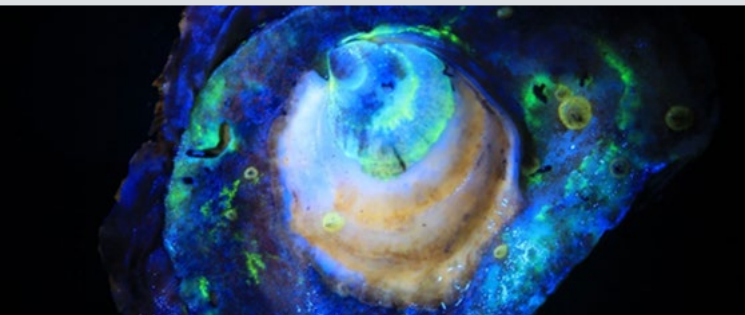
Local Impact with National Relevance
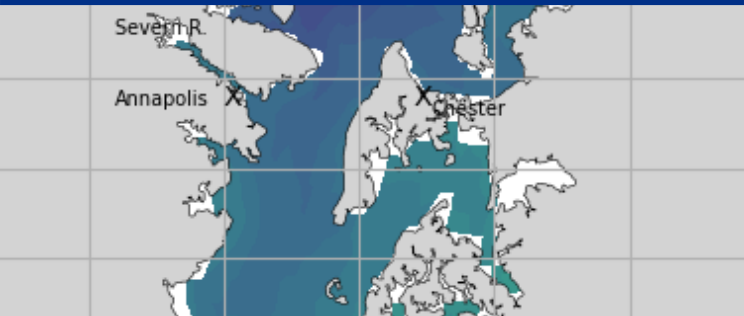
Predicting the occurrence of pathogen Vibrio bacteria | Alerts the public of health concerns and protects coastal economies

Enhancing blue crab resilience in the Chesapeake Bay | Informs management decisions while protecting a economic and iconic food staple for the region.

Developing biomarker to tag oysters | Supports restoration efforts on environmentally and economically important species, while protecting them from poachers.

Investigating effective and efficient oyster restoration techniques | Improves coastal resilience, food security, and the economy.

Using acoustic telemetry to study fish species distribution | Tracks recreationally and commercially important fish while promoting food security and boosting the economy.

Developing a seamless framework for fish habitat mapping | Informs fisheries management decisions and land use planning.