University of Maryland Center for Environmental Science
90 YEARS OF INNOVATION

We celebrate 90 years of solving problems that face our environment, in the Chesapeake Bay and around the world, while educating the scientists of tomorrow.

In **1925**, **Dr. Reginald Truitt** founded the Chesapeake Biological Laboratory in Solomons, an out-growth of his research into managing the Bay's fisheries to better understand factors causing a significant decline in oyster abundance in the Chesapeake Bay.

Since the **1930s**, UMCES researchers have been tracking changes in **Chesapeake Bay** water quality, including daily measurements from the Chesapeake Biological Laboratory pier in the Patuxent River. This type of long-term data collection, monitoring, and analysis is critical to improving our understanding of our natural world and helping us better understand how our environment is changing.

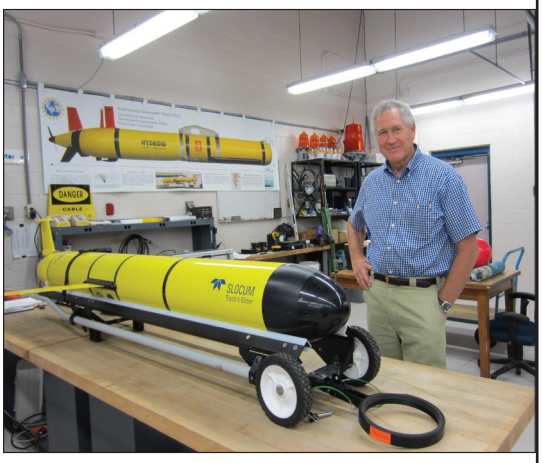
Since the **1940s,** UMCES scientists have been tracking the population of blue crabs and striped bass. **The Chesapeake Biological Laboratory** is recognized for its fundamental research on life cycles and ecology of Chesapeake fish and shellfish populations and for working with state and regional managers ti improve the sustainability of fisheries.

In **1962**, the **Appalachian Laboratory** was founded in the mountains of western Maryland at the headwaters of the Chesapeake Bay watershed. Faculty there study the effects of land-use change on the freshwater and terrestrial ecosystems of the region, how they function in the Chesapeake Bay watershed, and how human activity may influence their health and sustainability.

Since **1972** the **Horn Point Laboratory**, along the Choptank River on the Eastern Shore, has advanced society's understanding of the world's estuarine and ocean ecosystems. Its faculty are widely respected for their interdisciplinary programs in oceanography, water quality, restoration of sea grasses, marshes and shellfish and for expertise in ecosystem modeling.

In **1973** the **University of Maryland Center for Environmental Science** was created to link the mission and operations of the Appalachian Laboratory, the Chesapeake Biological Laboratory, and the Horn Point Laboratory. The new center was charged with a unique statutoray mandate to "conduct a comprehensive program to develop and apply predictive ecology for Maryland to the improvement and preservation of the physical environment."

The **oyster cultivation facility** opened in **1974** at Horn Point. One of the largest oyster hatcheries on the East Coast, it produces oyster larvae for use in research, restoration, and educational projects. State-of-the art advances have led to record-breaking numbers of spat-on-shell being used to help restore the Bay's natural ecosystem.



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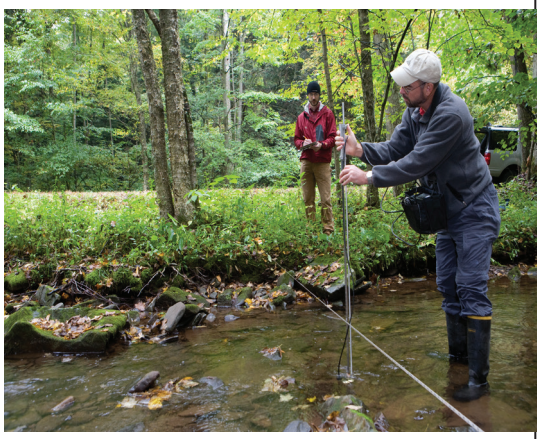
In the **1980s**, UMCES scientists made the initial discovery that the Bay was suffering from an **excess of nutrients,** particularly nitrogen and phosphorus, causing the increase in algae blooms that diminished seagrasses, depleted oxygen levels, and caused 'dead zones.' This led to a multi-state commitment to reduce nutrient inputs and evolved into a cornerstone issue for the Chesapeake Bay Program

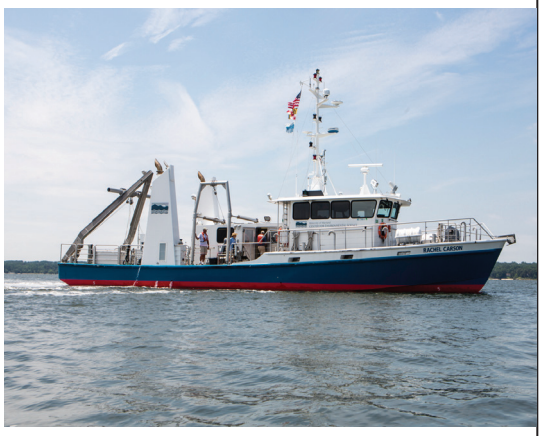
In 1981, UMCES' first student graduated from the **Marine Estuarine Environmental Sciences** program, continuing a long line of master's and doctoral students to be trained side-by-side with renowned scientists to be the next generation of environmental stewards.

Since the **1980s**, UMCES scientists have studying **Maryland's stream ecosystems**, including the impact of mining on stream health and and the sustainability of brook trout.



1999, Maryland Sea Grant, a state-wide program of the University System of Maryland, came under the administration of UMCES. The Congressionally mandated federal and state partnership supports research educaiton and outread that address coastal and marine issues in Maryland, the region, and the world.

In **2002,** the **Integration and Application Network** was formed to assess progress on Chesapeake Bay restoration and update citizens on progress through annual report cards, website, and publications now extending around the world.



In **2009**, UMCES launched a state-of-the-art research vessel Rachel Carson specifically designed to help understand and monitor the health of the Chesapeake Bay and its tidal rivers. It is used by a wide variety of academic, private, and governmental agencies to research pivotal environmental issues and advance new technologies.

In **2010**, UMCES scientists joined researchers from the University of Maryland Baltimore County and the University of Maryland, Baltimore to create the **Institute of Marine and Environmental Technology** (IMET) in Baltimore. Scientists are engaged in cutting-edge research in microbiology, molecular genetic analysis, and biotechnology to better understand humand health, delveop alternative energy, foster sustainable aquaculture, bioremediation, and restore critical coastal environments.

Long involved in teaching and mentoring students, UMCES was authorized to award joint degrees with the University of Maryland College Park in 2014. Graduate students go on to successful careers in government agencies, academic institutions and non-governmental organizations.