



News from the National Centers for Coastal Ocean Science

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*The National Oceanic and Atmospheric Administration (NOAA) formed the National Centers for Coastal Ocean Science (NCCOS) in 1999 as the focal point for NOAA's coastal ocean science efforts. We provide 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.*

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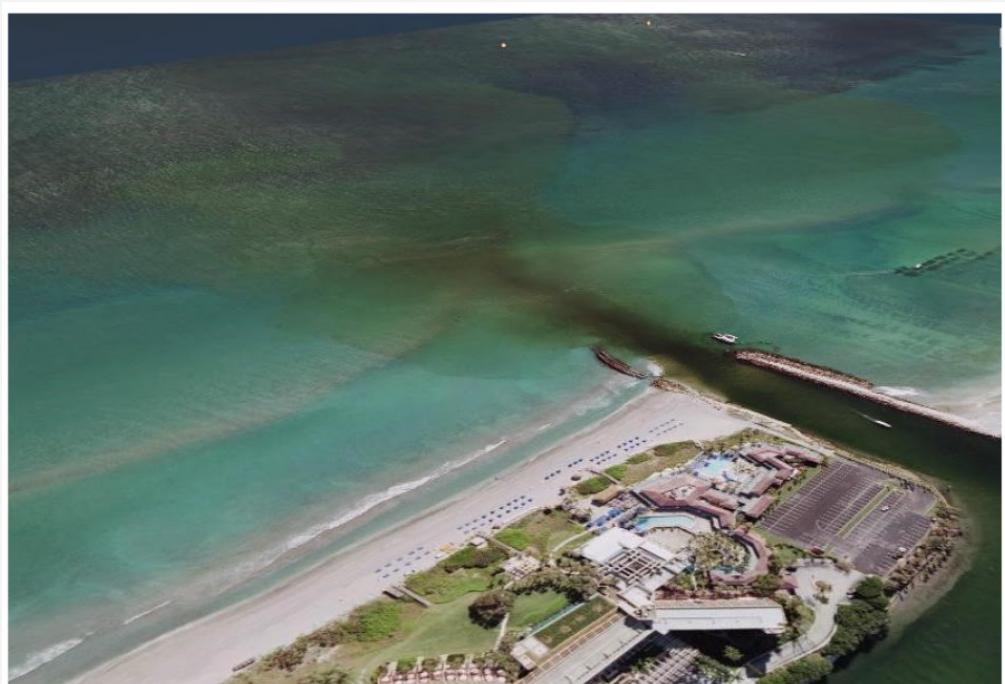
### **Smaller than Average Summer 'Dead Zone' Measured in Gulf of Mexico**

NCCOS-supported scientists have determined that this year's Gulf of Mexico "dead zone"—an area of low oxygen that can kill fish and marine life—is approximately 2,116 square miles, equivalent to 1.4 million acres of habitat potentially unavailable to fish and bottom species. The measured size of the dead zone is the third smallest in the 34-year record of surveys. This measurement brings the five-year average to 5,408-square miles, which is 2.8 times larger than the 2035 target set by the Mississippi River/Gulf of Mexico Hypoxia Task Force (HTF). [Continue reading](#)



### **Scientists Assess Water Quality of Southeast Florida Reef Tract**

NOAA and partners have published a [report](#) that describes water quality along the southeast Florida Reef Tract, which extends from Biscayne Bay National Park in the south to St. Lucie Inlet in the north. The Florida Department of Environmental Protection (FDEP) requested the state–federal partnership project after noting the absence of a state-run offshore water quality monitoring program and the ongoing degradation of Florida reefs due to land-based sediments and pollutants. [Continue reading](#)



### **NOAA Algal Toxin Study Supports U.S. Effort to Restore Shellfish Trade with European Union**

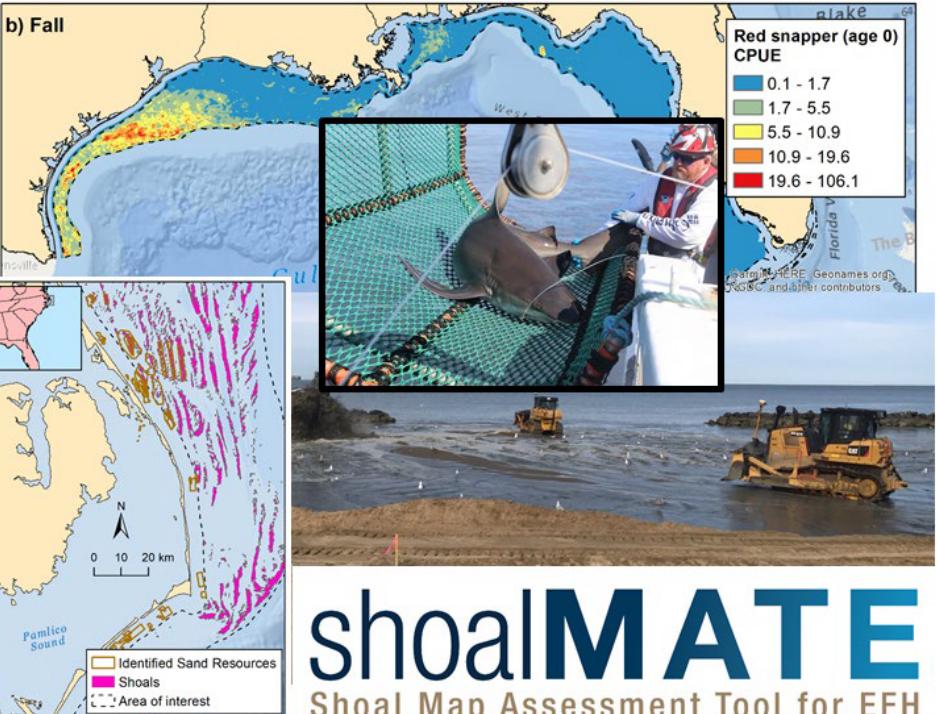
A [collaborative, NOAA-funded study](#) may help resume shellfish trade between the United States and the European Union (E.U.) by answering questions about the prevalence and

toxicity of lipophilic (fat-soluble) toxins in shellfish. In 2010, the E.U. halted imports of U.S. shellfish after reciprocal reviews of the equivalency of E.U. and U.S. shellfish sanitation programs. [Continue reading](#)



### **[NOAA, BOEM Develop New Tool to Reduce Dredging Impacts to Essential Fish Habitat](#)**

As part of a recently completed two-year [study](#) funded by the Bureau of Ocean Energy Management (BOEM), NOAA's National Centers for Coastal Ocean Science (NCCOS), NOAA's Office for Coastal Management (OCM), and Quantum Spatial, Inc. developed a decision-support tool called ShoalMATE to guide wise use and dredging of offshore sand shoals. [Continue reading](#)



## shoalMATE

Shoal Map Assessment Tool for EFH

### NCCOS Sensor Measures Toxicity of Lake Erie Algal Bloom in Near Real-Time (VIDEO)

Cyanobacteria in Lake Erie can sometimes grow out of control and produce toxins called microcystins that are harmful to people and animals. These harmful algal blooms, or HABs, can have severe impacts on public health, lake resources, and local economies. Losses to the region's Lake Erie-dependent economy are estimated at over \$65 million annually. Uncertainty about a bloom's toxicity makes it difficult for water treatment plant operators and lake authorities to make timely management decisions. In response, scientists with NOAA's National Centers for Coastal Ocean Science, or NCCOS, have developed an autonomous sensor capable of measuring microcystin levels in the water and transmitting results back to shore in near real-time. [Continue reading](#)



### Tred Avon River Coastal Ecological Assessment: A Story of Land Use (Story Map)

The [Tred Avon River Story Map](#) highlights the results of an [ecosystem assessment](#) conducted by NCCOS to determine how different land uses have affected the Tred Avon River. The Tred Avon is an important tributary of Maryland's Choptank River complex,

which NOAA designated a [Habitat Focus Area](#) in 2014. The Story Map and the assessment will help coastal managers better understand the effects of land use on the adjacent estuary and develop management strategies to protect the health of the aquatic ecosystem. [Continue reading](#)



#### **[Marine Shellfish Populations Estimated to be at Risk from Ocean Acidification](#)**

A new NCCOS-funded [study](#) shows that ocean acidification has the potential to harm wild populations of scallops and clams along the U.S. northeast coast. The rise in atmospheric carbon dioxide (CO<sub>2</sub>) is leading to more CO<sub>2</sub> being absorbed by the oceans, causing ocean acidification and associated shifts in carbonate chemistry that impair shell development in marine bivalves, such as scallops, clams, and oysters. [Continue reading](#)



#### **[Online Tool Visualizes Impacts of Sea Level Rise on Coastal Fishponds in Hawaii](#)**

The west coast of the island of Hawaii has several anchialine pools—inland fish ponds with underground connections to the ocean—that support endangered and indigenous plants and animals. Sea level rise and land development are threatening the wildlife in these pools, including shrimp that are a culturally important bait for native Hawaiians. NCCOS-funded researchers, led by The Nature Conservancy (TNC), have developed a [sea level rise projection app](#) for coastal managers to visualize the impacts of rising sea levels and future development on the pools and to prioritize restoration and conservation of the pools over time. [Continue reading](#)



**[Are You Familiar with ACUNE? Consistent Communication Leads to Tool Adoption](#)**

Southwest Florida contains the largest area of tidally influenced public lands in the Gulf of Mexico and the fastest growing urban landscape in Florida. Both the human and naturally-occurring components of the ecosystem are under increasing risk due to the threats of a growing human population, sea level rise, and tropical cyclones. With support from the NOAA RESTORE Science Program, a team, led by Dr. Peter Sheng, developed a decision-support tool to aid resource managers in adapting to future saltwater intrusion in estuaries and their associated habitats. The tool, entitled Adaptation of Coastal Urban and Natural Ecosystems (ACUNE), is a web-based interactive decision-support tool that will be used to inform decisions in coastal planning, zoning, land acquisition, and restoration.

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