



# NATIONAL CENTERS FOR COASTAL OCEAN SCIENCE

[HTTP://COASTALSCIENCE.NOAA.GOV/](http://coastalscience.noaa.gov/)

**Gary Matlock**, Director

**Alicia Jarboe**, Deputy Director

**MISSION:** To provide coastal managers with the scientific information and tools needed to balance society's environmental, social, and economic goals.

## PRODUCTS AND SERVICES

- Integrated assessments
- Ecological forecasting
- Marine forensics
- Scientific information from applied research
- Technology development
- Ecosystem conditions and dynamics assessments
- Identification of the causes and consequences of ecosystem stress

## LEGISLATIVE AND POLICY DRIVERS

### Legislative Drivers:

- Coastal Zone Management Act
- National Marine Sanctuaries Act
- Harmful Algal Bloom and Hypoxia Research and Control Act
- Oceans and Human Health Act
- Coral Reef Conservation Act
- Clean Water Act
- Coastal Ocean Program
- Estuary (Estuarine) Protection Act
- Invasive Species Executive Order
- National Coastal Monitoring Act
- Magnuson-Stevens Fishery Conservation and Management Act
- Marine Mammal Protection Act
- Endangered Species Act
- National Contaminated Sediment Assessment and Management Act
- National Environmental Policy Act

### Policy Drivers:

- Ocean Action Plan
- Ocean Research Priorities Plan
- Gulf of Mexico Regional Alliance
- West Coast Governors' Agreement on Ocean Health
- Coastal Enterprise Report

## BUDGET AND PERSONNEL

- **Budget Line:** National Centers for Coastal Ocean Science Extramural Research, NCCOS Competitive Research
- **FY08 Budget:** \$51.4 million
- **Personnel:** 179 FTE, 143 Contractors

## KEY PARTNERS:

- NOAA Line Offices and NOS Program Offices
- Coastal managers and coastal state environmental agencies
- Federal agencies, including the Food and Drug Administration, National Institute of Standards and Technology, Environmental Protection Agency, U.S. Army Corps of Engineers, U.S. Geological Survey, U.S. Department of Agriculture, National Science Foundation, NASA, U.S. Coast Guard, U.S. Fish and Wildlife Service, U.S. Navy, Department of the Interior, National Institutes of Health, Department of Homeland Security, Department of Education, Department of Justice, Department of Energy, Department of Transportation
- Universities and research grantees

## FISCAL YEAR 2008 HIGHLIGHTS

- Funding research that **predicted that the 2008 hypoxic zone, or “dead zone,”** in the northern Gulf of Mexico would be the largest on record. Later research found that the actual size of this low-oxygen zone was slightly smaller than predicted, but was still the second-largest dead zone on record. The Gulf of Mexico dead zone threatens critical commercial and recreational fisheries. Predictions of the dead zone’s size help determine the relationships between hypoxia and nutrient pollution and provide the scientific foundation for management.
- Releasing a 20-year study that shows that **environmental laws have had a positive effect on reducing overall contaminant levels** in U.S. coastal waters. The report, which presents findings in a quick reference format, nevertheless points to continuing concerns with elevated levels of metals and organic contaminants found near urban and industrial areas of the coasts.
- Funding the first-ever **prediction of a larger-than-normal harmful algal bloom** in the Gulf of Maine in the summer of 2008. The prediction allowed shellfish farmers and fishermen to shift the timing of their harvests and state resource and public health managers to make better decisions regarding closures of shellfish beds. These efforts helped reduce economic losses and prevented people from eating contaminated shellfish.
- Releasing *The State of Coral Reef Ecosystems of the United States and Pacific Freely Associated States: 2008*, a report assessing the condition of coral reef ecosystems in 15 locations ranging from the U.S. Caribbean and Gulf of Mexico to the western Pacific. Research in the report shows that **nearly half of the Nation’s coral reefs are now considered to be in “poor” or “fair” condition.** The report also describes the impacts of 13 major threats in each location and offers recommendations for conservation actions.

## ORGANIZATION

- The **Center for Sponsored Coastal Ocean Research** (Silver Spring, MD) uses a multi-disciplinary approach to understand and predict the impacts of natural and human influences on coastal regional ecosystems, communities, and economies through collaboration with external grantees and other partners.
- The **Center for Coastal Monitoring and Assessment** (Silver Spring, MD) assesses and forecasts coastal and marine ecosystem conditions through research and monitoring; conducts field observations on regional and national scales; and provides scientific information and technical advice to resource managers and researchers.
- The **Center for Coastal Fisheries and Habitat Research** (Beaufort, NC, and Kasitsna Bay, AK) conducts research on estuarine processes, biological productivity of nearshore and ocean ecosystems, dynamics of coastal and reef fishery resources, and the effects of human influences on resource productivity.
- The **Center for Coastal Environmental Health and Biomolecular Research** (Charleston, SC, and Oxford, MD) conducts interdisciplinary research on issues related to coastal ecosystem health, environmental quality, and related public health impacts.
- The **Center for Human Health Risk** (Charleston, SC) conducts collaborative research at the Hollings Marine Laboratory, a NOAA-operated multi-institutional facility, to provide science and biotechnology applications to sustain, protect, and restore coastal ecosystems, emphasizing linkages between environmental and human health.