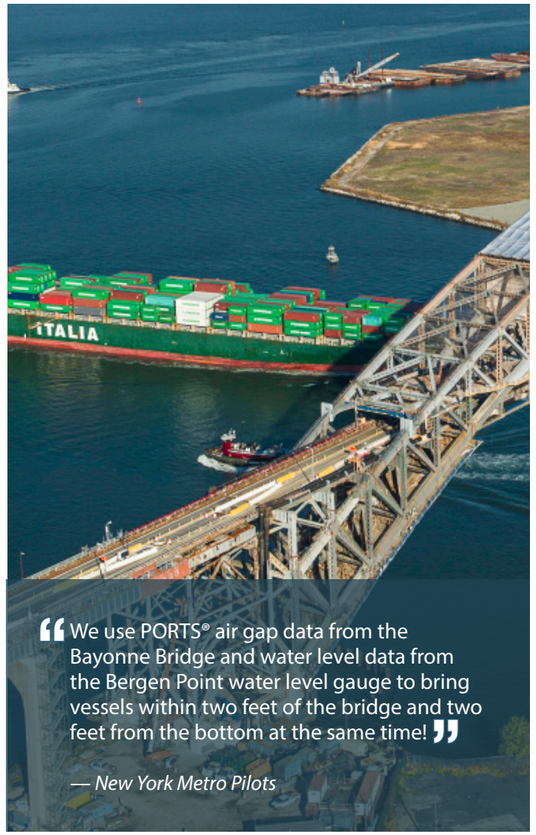
NOS Statutory Authorities

NOS administers and/or supports implementation of more than 20 statutory authorities. To fulfill this diversity of authorities and programs, NOS provides a broad range of scientific, technical, and management expertise. NOS expertise supports holistic and interdisciplinary approaches to coastal issues challenges.

- Clean Water Act
- Coast and Geodetic Survey Act
- Coastal Zone Management Act
- Comprehensive Environmental Response, Compensation, and Liability Act (Superfund)
- Coral Reef Conservation Act
- Harmful Algal Bloom and Hypoxia Research and Control Act
- Hydrographic Services Improvement Act
- Integrated Coastal and Ocean Observation System Act
- Marine Debris Act
- National Coastal Monitoring Act
- National Marine Sanctuaries Act
- Ocean and Coastal Mapping Integration Act
- Oil Pollution Act



"We use PORTS® air gap data from the Bayonne Bridge and water level data from the Bergen Point water level gauge to bring vessels within two feet of the bridge and two feet from the bottom at the same time!"

— New York Metro Pilots

NOS Headquarters

Nicole LeBoeuf, Acting Assistant Administrator
Steven Thur, Ph.D., performing the duties of Deputy Assistant Administrator
Paul M. Scholz, Chief Financial Officer

Navigation, Observations, and Positioning

RDML Shepard Smith, Director, Office of Coast Survey
Juliana Blackwell, Director, National Geodetic Survey
Richard Edwing, Director, Center for Operational Oceanographic Products and Services
Carl Gouldman, Director, U.S. Integrated Ocean Observing System Program

Coastal Science and Assessment

Margo Schulze-Haugen, Acting Director, National Centers for Coastal Ocean Science
Scott Lundgren, Director, Office of Response and Restoration

Ocean and Coastal Management Services

Jeffrey Payne, Ph.D., Director, Office for Coastal Management
John Armor, Director, Office of National Marine Sanctuaries

May 2020

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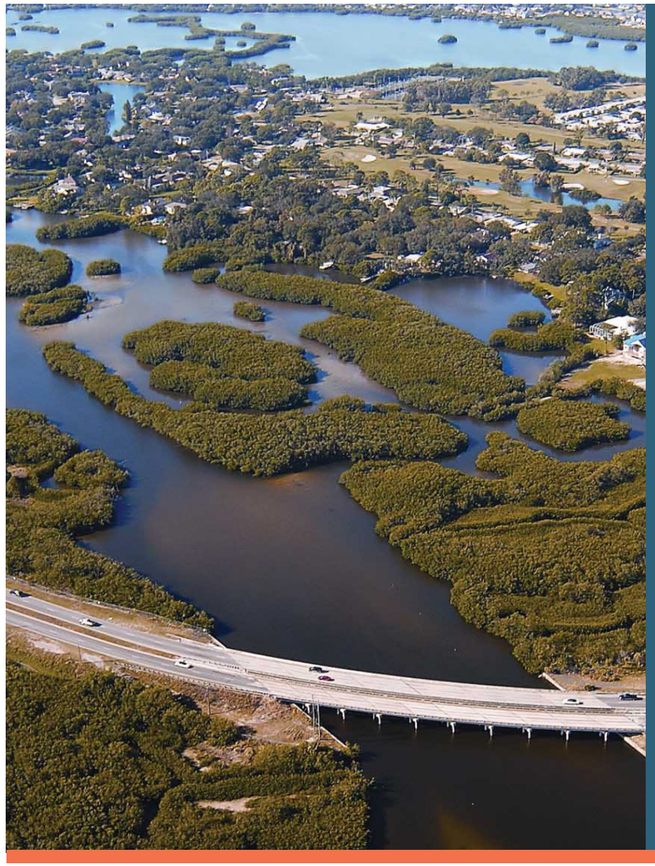
An Introduction to

NOAA's NATIONAL OCEAN SERVICE



Coastal Challenges and Opportunities

Almost 40 percent of the U.S. population lives and works in coastal shoreline counties. Millions more flock to the coast each year for recreation and relaxation, generating a thriving tourist industry. The overall economy of coastal shoreline counties contributes $7.6 trillion to GDP and employs 53.6 million people earning wages of about $3 trillion.

Today, U.S. coastal areas are undergoing significant changes and face a variety of challenges, including port congestion and navigation hazards, recurrent flooding and beach erosion, pollution and algal blooms, habitat loss, and risk of catastrophic impacts from coastal storms and tsunamis.

NOAA's National Ocean Service (NOS) is working across all levels of government and with academic and private-sector partners to prepare America's coastal communities to address these challenges, reduce risks, and ensure thriving coastal communities, economies, and ecosystems now and in the future.

Who We Are and What We Do

NOS is one of six major divisions within the National Oceanic and Atmospheric Administration (NOAA), which is housed within the U.S. Department of Commerce. NOS is the nation's most comprehensive coastal agency with world-class expertise in science, technology, and management. Although NOS delivers a diverse suite of products and programs, the main mission areas are reflected in the three primary sections of its budget: Navigation, Observations, and Positioning; Coastal Science and Assessment; Ocean and Coastal Management and Services.

NOS conducts applied research and employs advanced surveying, observing, modeling, and computing technologies to provide services and tools that inform federal, state, and local decision making. The agency leads national partnerships to address and balance economic and environmental needs and conducts extensive outreach to ensure its services are meeting priorities. NOS is also a trustee for the long-term conservation of coastal resources, including response and restoration for oil and chemical spills and a system of marine sanctuaries and protected areas.

Why We Do It

NOS programs deliver data, tools, and services that support the growth of coastal economies and contribute to the national economy. More specifically, NOS advances the following strategic priorities and outcomes:

Safe and Efficient Transportation and Commerce

All mapping, charting, and transportation activities and infrastructure are founded on a reliable, accurate national coordinate system that NOS provides. NOS has specific missions to support maritime commerce where ships move $1.9 trillion worth of products in and out of U.S. ports every year.

Preparedness and Risk Reduction

Coastal communities represent a major economic engine for the United States, accounting for about 46 percent of GDP. Coastal planners, first responders, and local managers turn to NOS daily for services to prepare for and reduce risk from coastal flooding, storms, oil spills, hazardous waste emergencies, harmful algal blooms, and other disasters.

Stewardship, Recreation, and Tourism

The U.S. boasts some of the world's most important natural, cultural, and historical coastal resources. NOS is entrusted with managing a network of underwater parks encompassing more than 600,000 square miles of coastal, marine, and Great Lakes waters that contribute $8 billion in economic activity annually.

"I would like to extend my gratitude for your unflinching and admirable actions during the Hurricane Matthew response and recovery. Your tireless efforts and scores of flight hours resulted in the collection of over 15,000 high-resolution images of flood and surge damage from Florida to Virginia and continue to serve FEMA Headquarters and FEMA Region IV."

— Glen Russell, Remote Sensing Coordinator, FEMA

A Partnership Approach: Taking Action Where We Live

NOS works closely with many partners, including other federal agencies; regional, state, and local authorities; private sector, academia, and non-governmental organizations; and the public. This is a system that works: national investments drive regional and local implementation of programs and capacities. NOS programs and their coastal partners provide the science, stewardship, and management where decisions are being made.

This strategy emphasizes taking action where people live, providing critical information to partners to ensure that coastal communities receive the right tools, products, and services at the right time. Similarly, NOS engages directly with local communities and businesses in the nomination, designation, and management of national marine sanctuaries.

NOS Budget and Mission Areas

Navigation, Observations, and Positioning

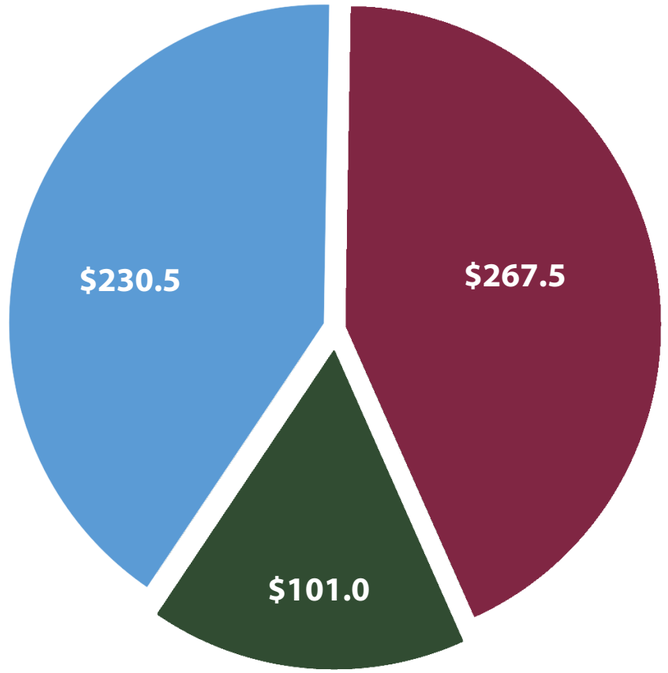
NOS has a longstanding mission to promote safe and efficient transportation and commerce, and is the nation's leading authority on hydrography, shoreline mapping, and nautical charting; water levels, tides, and currents; and geodetic positioning. NOS maintains the National Spatial Reference System, National Water Level Observation Network, and National Current Observation Program. NOS also maintains partnership programs and provides services through the U.S. Integrated Ocean Observing System (IOOS®), the Physical Oceanographic Real-time System (PORTS®), and the Continuously Operating Reference Station (CORS) network.

Coastal Science and Assessment

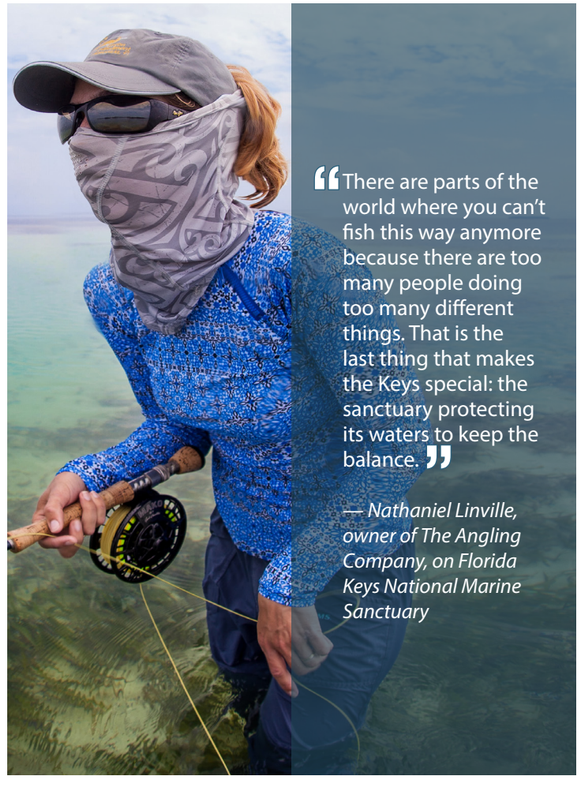
NOS provides expert scientific support and services in response to oil and chemical spills and marine debris. Working with partners, the agency provides the Environmental Response Management Application (ERMA®), an online tool that integrates real-time data with mapping to coordinate emergency response to coastal disasters. ERMA was the common operating platform used to coordinate the national response to the Deepwater Horizon oil spill, and continues to be used in exercises and events nationally and internationally. NOS is also a leader in ecological forecasting, providing long-term monitoring, impact assessments, and risk analysis for marine toxins and threats such as harmful algal blooms and hypoxia.

Ocean and Coastal Management and Services

Through national marine sanctuaries, monuments, and marine protected areas, NOS manages ocean and Great Lakes waters and the coral reef conservation program. NOS also provides coastal planners with the skills, tools, and data needed to manage the nation's coastal resources and communities. This includes the online, interactive Digital Coast, which helps improve coastal decision making in both public and private sectors by transforming vast quantities of data into useful tools and services. NOS also works in partnership with states to promote coastal research, outreach, and education and to address management needs through coastal programs and national estuarine research reserves.



(FY 2020 appropriation for NOS, $ in millions)



"There are parts of the world where you can't fish this way anymore because there are too many people doing too many different things. That is the last thing that makes the Keys special: the sanctuary protecting its waters to keep the balance."

— Nathaniel Linville, owner of The Angling Company, on Florida Keys National Marine Sanctuary