


NOAA's Office of Oceanic and Atmospheric Research

A world leader in observing, understanding, and predicting the Earth system

The Office of Oceanic and Atmospheric Research (OAR) is NOAA's central research line office that integrates research across the agency. Its work is at the core of NOAA's mission to produce the environmental intelligence people need to live well and safely on this dynamic planet. OAR, along with its partners, strengthens the science that underpins NOAA's operational products and services. OAR supports laboratories and programs across the United States and collaborates with both internal and external partners, such as 16 NOAA-funded Cooperative Institutes and 33 Sea Grant Institutions. OAR research contributes to accurate weather forecasts, enables communities to plan for and respond to climate events such as drought, and enhances the protection and management of the nation's coastal and ocean resources.

Climate Research

Individuals, businesses, and communities are turning to NOAA as a trusted source for science and information to help them understand and prepare for changes to our planet's climate. NOAA's regional climate tools, which develop and utilize new information about the impacts of climate on natural and managed resources, infrastructure, and public health, are supported by our global climate observation and monitoring networks, world-renowned scientists, and state-of-the-art climate models.

NOAA Carbon Wave Glider deployed in Alaska to help scientists better understand how melting glaciers affect the chemistry of the Prince William Sound. Credit: Wiley Evans

Weather and Air Chemistry Research

NOAA not only works to improve current weather forecasting, but also works to anticipate and address the needs of the future. For example, OAR is developing innovative techniques for earlier detection of tornadoes and other severe weather to provide more advanced forecasts to the public.

The NOAA P-3 research aircraft is much like a "flying chemical laboratory," containing specialized instrumentation that can help scientists better understand air quality and climate changes. Credit: NOAA

Ocean, Coastal, and Great Lakes Research

NOAA, in collaboration with its research partners, explores and investigates ocean, coastal, and Great Lakes habitats and resources. We provide scientific results to help manage and understand fisheries, conserve and protect our coasts, and build a stronger economy.

Lake Michigan Field Station crew members conduct Whitefish seine at Muskegon State Park. Credit: Catherine Aguilar

For more information, please visit:
www.noaa.gov and www.research.noaa.gov

National Severe Storms Laboratory Mobile Mesonets

FY 2016 Budget Request Highlights

The FY 2016 President's Budget request for NOAA's Office of Oceanic and Atmospheric Research is $507,035,000. The request supports its activities to provide climate products and information to communities, conduct research to enhance severe weather forecast capability, and develop tools and technologies to monitor ocean acidification. The program changes noted below are with respect to the FY 2016 Base (= FY 2015 Enacted + Inflationary Adjustments). Highlights include:

- **High Performance Computing Recapitalization (+ $9.0M)** to begin recapitalization of the Research and Development High-Performance Computing (HPC) systems located at Oak Ridge National Laboratory in Oak Ridge, Tennessee and to establish a permanent source of funding that would allow NOAA to maintain regular refresh and recapitalization of supercomputing resources.

- **Impacts of Climate on Fish Stocks (+$5.50M)** to award competitive grants for research that improves understanding of the impacts of climate variability and change on fish stocks, prey availability, and habitat. This research investment will develop valuable information, decision-support tools, and training to build capacity for the integration of climate information into fisheries management.

- **Improving Airborne Detection and Understanding of Severe Weather (+ $5M)** to research and develop aircraft-based hazardous weather observing systems to generate improved information about severe storms (e.g., hurricanes) for more accurate public warnings and forecasts in order to help strengthen the Nation's climate resiliency. Specifically, this investment will help NOAA and its partners develop an aircraft-based dual-polarization phased array radar system capable of doubling the amount of storm detail that can currently be gathered.

- **Improving Mid-Range Operational Outlook (+3.94M)** to begin a collaborative effort between OAR and NWS to improve the accuracy of weather outlooks out to three to four weeks (i.e., in the "mid-range"), where expertise does not currently exist.

- **Warn-on-Forecast Modeling System (+ $1.73M**) to accelerate implementation of forecasting capabilities to improve the accuracy of warnings, extend lead times, and enhance decision support services for high impact weather, like tornados and flash floods, critical for building a Weather-Ready Nation. The requested funding will accelerate the research, development, and transition into operations of a prototype Warn-on-Forecast modeling system for high-impact weather.

- **Integrated Ocean Acidification (+ $21.42M)** to improve understanding of the impacts of ocean and coastal acidification and to develop tools and adaptive strategies for affected industries and stakeholders, such as the U.S. shellfish industry.

- **Marine Aquaculture Program (+ $2.5M)** to provide competitive grants to support aquaculture research, extension activities, and technology transfer to develop a sustainable aquaculture industry. Domestic marine aquaculture is poised to emerge as a significant provider of seafood and coastal jobs over the next several years.

NATIONAL OCEANIC & ATMOSPHERIC ADMINISTRATION

For more information, please visit: http://www.noaa.gov/budget