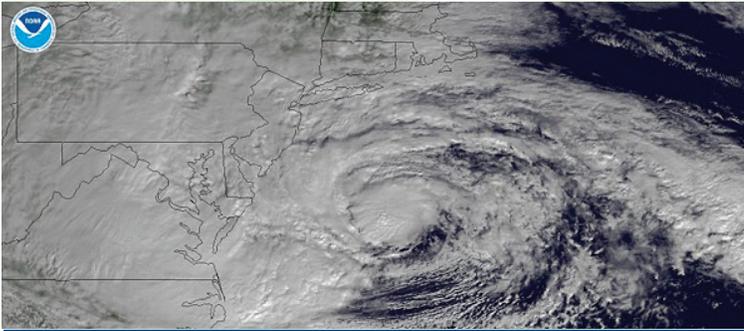


# NOAA in the North Atlantic



## NOAA Response to Super Storm Sandy - Before, During & After

In October of 2012, the hybrid tropical cyclone-nor'easter Sandy roared toward the Mid-Atlantic Coast. As the storm approached landfall, it changed to a post-tropical cyclone whose winds, waves and storm surge caused extensive damage to the states of New York, New Jersey, Connecticut, and Rhode Island, causing more than 125 people to lose their lives and creating an estimated \$62 billion in damages and other losses. The passing of the storm also caused port closures from Norfolk, Va. to New York, halting commerce for a time.

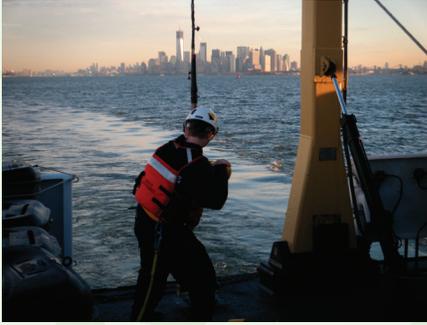
Meteorologists with NOAA's National Weather Service issued timely and accurate storm warnings and engaged with state and local emergency managers, the media, and the public. The NWS created a storm track forecast a full four days before the storm hit the coast that accurately predicted Sandy's eventual landfall in south New Jersey. The forecast included a radical turn to the west a day before landfall, a highly unusual hurricane track.

Hurricane Hunter crews from NOAA's Office of Marine and Aviation Operations and Office of Oceanic and Atmospheric Research flew 10 missions into Sandy with the P-3 and Gulfstream IV (G-IV) aircraft. The crews obtained unprecedented observations of the storm, including inner-core airborne Doppler radar data from the G-IV for the first time. Atmospheric and oceanic data from the flights were incorporated into NOAA models for the first time in 2012, helping forecasters make accurate track and intensity forecasts for the storm.



NOAA forecasters and state and local emergency managers also relied on real-time water level observing network managed and maintained by NOAA's Center for Operational Oceanographic Products and Services. CO-OPS helped to disseminate this data by creating a "Storm Quicklook" synopsis of locations most affected by severe storm surge, allowing coastal authorities to prepare for and respond to coastal flooding. Similarly, the U.S. Integrated Ocean Observing System partners along the East Coast provided significant information to forecasters and emergency managers through a variety of instruments, including high-frequency radar ocean current data and water temperature information from an ocean glider deployed off the Jersey coast.

After the storm, other NOAA offices including the Office of Coast Survey and the National Geodetic Survey rushed to the scene to help assess the aftermath. Coast Survey deployed navigation managers (liaisons to port communities) to the affected communities to coordinate surveys of the **(cont. p. 2)**



(Sandy, cont. from p. 1) critical channels and approaches to the ports of Hampton Roads (Va.), New York and New Jersey, Baltimore, and Delaware Bay. The vessels involved in this important effort to re-open these ports included NOAA Ships *Thomas Jefferson* and *Ferdinand R. Hassler*, the R/V *Bay Hydro II*, two smaller survey vessels operated by Coast Survey's Navigation Response Teams and the NOAA Chesapeake Bay Office vessel R/V *Potawaugh*. These survey efforts sped resumption of maritime traffic and provided a lifeline to recovery efforts.

The National Geodetic Survey conducted aerial photographic surveys of the battered coast, flying over 3,000 miles of coastline and collecting and processing over 10,000 images documenting coastal damage and impacts to navigation. FEMA and emergency and coastal managers used the images to assess the storm's destruction and to develop recovery strategies.

NOAA is still working with the affected communities to help them recover. In November, the Secretary of Commerce declared a "fisheries disaster" for New York and New Jersey, which allows Congress to appropriate federal relief funds for assistance to region's fishing industry. NOAA's Coastal Zone Management Program is assessing damage to coastal communities and resources to facilitate recovery efforts, and to develop strategies for long-term resiliency in these areas.

## New NOAA Kiosk Debuts at Bass Pro Shops

In December, NOAA's Stellwagen Bank National Marine Sanctuary installed an interactive touch screen kiosk at Bass Pro Shops in Foxborough, Mass. The outdoor retail and lifestyle superstore is the signature tenant for the new Patriot Place development project, adjacent to the New England Patriots stadium. Bass Pro Shops are part museum, art gallery, aquarium, education, conservation, and entertainment center, attracting 1.2 million visitors annually from all over New England.

The kiosk was installed in time to capture the busy holiday shopping season. During one weekend in early December, over 20,000 people visited the store.



The kiosk sits at the store's only exit, next to a free standing publication rack so customers can grab a Stellwagen rack card to learn more about the sanctuary even if they do not explore the kiosk.

The kiosk offers a visual and auditory showcase of the sanctuary's ocean treasures. Through the touchscreen, users learn about sanctuary research, educational and outreach programs, and tourism opportunities. The kiosk also offers real-time weather information through a partnership with NOAA's National Weather Service. The kiosk was funded by the Office of National Marine Sanctuaries, Stellwagen Bank National Marine Sanctuary, and the National Marine Sanctuary Foundation.

## DID YOU KNOW?

In November, **NOAA Corps Cmdr. Ricardo Ramos** assumed command of the 224-ft. NOAA Ship *Okeanos Explorer*, the only federal ship dedicated to systematic exploration of the ocean. The change of command ceremony took place in Davisville, R.I., the ship's homeport.



## B-WET Grants Announced for North Atlantic Region

In October, NOAA announced the winners of its recent competition for education grants that will allow thousands of K-12 students in the North Atlantic region to get outside and participate in hands-on environmental education opportunities. Twelve new projects in the region, spanning from the mountains to the coastal areas, will benefit from almost \$2.4 million in grants from the NOAA Office of Education's Bay Watershed Education and Training (B-WET) program that supports student and teacher field investigations in watershed-related sciences.

All recipients of B-WET grants emphasize meaningful watershed educational experiences — sustained, hands-on activities that are aligned with academic learning standards and responsive to regional education and environmental priorities. B-WET also funds formal K-12 educator training programs. The training helps teachers incorporate meaningful watershed educational experiences, as well as NOAA data and other resources, into their classrooms.

New B-WET grant funds were awarded to:

- Elizabeth River Project (Portsmouth, Va.)
- Virginia Institute of Marine Science - NERRS (Gloucester Point, Va.)
- Boxerwood Education Association (Lexington, Va.)
- Living Classrooms Foundation (Baltimore, Md.)
- Alice Ferguson Foundation (Accokeek, Md.)
- Cecil County Public Schools (Elkton, Md.)
- District of Columbia Environmental Education Consortium
- National Council for Science and the Environment (District of Columbia)
- Hartwick College (Oneonta, N.Y.)
- National Wildlife Federation (Reston, Va.)
- Provincetown Center for Coastal Studies (Mass.)
- Westport River Watershed Alliance (Westport, Mass.)

## Inaugural Regional Ocean Planning Meeting Held in New England

In November, the Northeast Regional Planning Body (RPB) convened for the first time in response to the President's National Ocean Policy. This group is comprised of representatives from tribal, federal, state, and Fishery Management Council entities and will determine how the Northeast can better plan as a region for comprehensive ocean management decisions. As part of their deliberations, they will consider the current and predicted future state of the oceans as well as traditional and emerging ocean uses.

This meeting provided the RPB members and interested public with an understanding of the body's charge and provided context for existing science, information and management efforts. The members of the RPB elected a leadership team which included NOAA as federal lead, the Rhode Island Coastal Resources Management Council as the state lead, and the Micmac Indians as the tribal lead.

The next meeting will be held in Narragansett, R.I. on April 11-12 and will feature the New England ocean data portal, and discuss a timeline for developing a regional ocean plan. Contact [Betsy.Nicholson@noaa.gov](mailto:Betsy.Nicholson@noaa.gov) for more information or go to [northeastoceancouncil.org](http://northeastoceancouncil.org).



Northeast Regional Planning Body members (left to right) Tim Konnert, Federal Energy Regulatory Commission; Tom Burack, NH Dept. Environmental Services; Doug Harris, Narragansett tribe

## NOAA People in the North Atlantic Region

### NART Member

**Catalina Martinez** joined NOAA's Office of Ocean Exploration and Research (OER) as a Sea Grant Fellow in 2002 after completing graduate school at the University of Rhode Island's (URI) Graduate School of Oceanography (GSO). After her Fellowship year, Catalina was hired by NOAA OER and spent several years in the Silver Spring office working on ship operations and logistics, as well as education and outreach initiatives.



In 2004, Catalina moved back to Rhode Island to implement a collaboration between NOAA OER, URI GSO, and the Sea Research Foundation's Institute for Exploration to help develop a program in systematic telepresence-enabled ocean exploration. Catalina has sailed extensively on various research vessels as expedition coordinator for NOAA OER, and currently spends most of her time managing joint efforts associated with the collaboration at URI.

She is a key member of the NOAA Ship *Okeanos Explorer* operations team, and works on a variety of regional and national efforts focused on increasing opportunities for underrepresented and underserved individuals in scientific and technical fields. Catalina was recently selected for the 2013 NOAA Research Graduate Studies Program.

#### NART Background

The NART is one of eight regional teams created by NOAA's Regional Collaboration effort. It is composed of 17 members from five line offices and is currently led by Peyton Robertson. Nicole Bartlett is the NART Regional Coordinator. For more information on team members and activities visit: [http://www.regions.noaa.gov/north\\_atlantic](http://www.regions.noaa.gov/north_atlantic)

## NOAA Places in the North Atlantic Region

### Center for Weather and Climate Prediction

In October, the **NOAA Center for Weather and Climate Prediction** officially opened on the campus of the University of Maryland in College Park, Md. This 268,000 square-foot building is home to more than 800 employees from NOAA's National Centers for Environmental Prediction, Satellite and Information Service, and Air Resources Laboratory who provide the nation with a broad range of environmental services – from predicting the hurricane season and El Niño/La Niña to forecasting ocean currents and large-scale rain and snow storms. Billions of earth observations from around the world flow through environmental models, developed and managed in the new building, that support the nation's weather forecasts.

Scientists at the center also predict how hazardous materials move in the atmosphere, conduct air quality modeling, study climate variability, monitor and predict movement of volcanic ash, and research new ways to use satellite information to safeguard the environment. Center scientists also monitor hurricane and tropical cyclones worldwide and analyze fire and smoke plumes from wildfires, which NOAA satellites track.

Architects designed the energy-efficient building, equipped with a green roof and rainwater bio-retention, to reflect NOAA's environment and science mission and the important public work carried out within its walls. The work environment encourages scientific interaction by co-locating scientists from across disciplines and creating an open concept design to promote greater communication and collaboration.

For more information [click here](#).

