

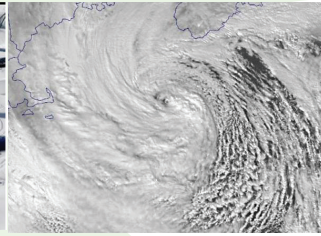
# NOAA in the North Atlantic



Photo Credit: Jason Burtner, MA CZM



AP Photo, Jessica Hill



## NOAA Improves Coastal Flooding Forecasts in New England

On February 8-9, 2013, New England experienced a blizzard that ranked among the top five worst ever to hit the region. The storm produced record-setting snow totals, high winds, and almost lost in all the attention – significant coastal flooding.

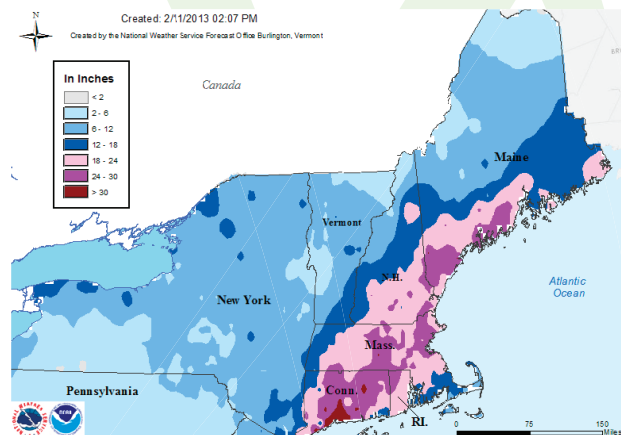
The storm included very strong northeasterly winds which created 30-35 foot waves offshore and drove water ashore from New York to Maine. The Massachusetts and New Hampshire coastlines were hardest hit with many roads and some neighborhoods inundated with several feet of water. This storm caused severe erosion and some damage to shoreline structures by the large waves. As bad as the February 2013 Blizzard was, it could have been even worse. Had the storm been only about six hours slower, the storm surge would have been nearly 2 feet higher and the impact more comparable to the infamous Blizzard of 1978.

The 1978 blizzard established the modern day high water mark for downtown Boston and generated a combination of storm surge and waves that decimated many shore-side homes.

One of the reasons NOAA can so accurately predict coastal inundation is by verifying past predictions against real-world observations. Often obtaining these quantitative measurements is as simple as having strategically placed tools near the shoreline and someone to read them.

In 2010, the NOAA North Atlantic Regional Team (NART) leveraged NOAA partnerships to obtain more of these data at a modest cost. NART pulled together several NOAA and external entities including the National Weather Service, the Center for Operational Oceanographic Products and Services (CO-OPS), the National Geodetic Survey, Massachusetts's Coastal Zone Management program, and the Town of Scituate, Mass., to obtain and install ten staff gages in locations prone to coastal flooding. This effort followed another successful NART project that engaged the National Weather Service, Stellwagen Bank National Marine Sanctuary, and cutting edge technological expertise from the University of Massachusetts at Boston for installation of a real-time tide gage at Scituate Harbor.

These new gages complement the existing CO-OPS water level network to provide real-time measurements of moderate and major coastal flood events like this past February's blizzard. More broadly, these data are used to improve storm surge models and reference inundation visualization maps. This ensures that future storm predictions are more accurate and our coastal communities are better prepared and more resilient to extreme weather.





## Message From . . .

### Peyton Robertson, NOAA in the North Atlantic Regional Team Leader

In reflecting on the value of regional collaboration, I offer a new acronym used in recent briefings on the subject – “IIE.” It stands for Integrate, Innovate, and Engage.

In light of trends in our world (rapidly advancing technology, challenging and complex problems, and “open source” communication), the ability to integrate information and knowledge, innovate through developing new tools, and applications, and engage the public in completely different ways is critical for NOAA to achieve its mission.

NOAA’s regional teams afford a unique means for collaboration across line offices and programs. The cross-disciplinary nature of these interactions leads to new ideas by sharing knowledge, learning about our respective skill sets, and building consensus. The application of these ideas to complex, ecosystem-based problems can produce better solutions, more efficient practices, and greater chances for success.

This newsletter abounds with examples of such improvement – and the sharing of these highlights is just one way to raise the level of engagement. I hope you will consider how you can (or do) play a role in “IIE.”

## NOAA Offices Collaborate on Post Super Storm Sandy Mapping & Surveying

Recently, NOAA received approximately \$50 million in funding from the Sandy supplemental legislation to support mapping, charting, geodesy, and marine debris survey work in areas in the North Atlantic region affected by SuperStorm Sandy.

This work will be carried out under an approach coordinated by NOAA’s Integrated Ocean and Coastal Mapping (IOCM) initiative, an effort designed to maximize collaboration and return on federal investment in surveying and mapping activities. The IOCM principle is “map once, use many times.”

In the case of the post-Sandy work, for example, surveyors will be using a GIS planning tool called SeaSketch as a basis to show where NOAA programs, other federal and state agencies want data in the New York-New Jersey coastal areas and how they plan to acquire it. SeaSketch also covers the larger Sandy Impact Area (Maine to North Carolina). Marine debris mapping needs of the NOAA Office of Response and Restoration are being factored into survey plans that will be carried out by NOAA’s Office of Coast Survey. LiDAR shoreline mapping conducted by NOAA’s National Geodetic Survey will consider near shore charting requirements identified in SeaSketch. The information gathered from these surveys will ultimately be incorporated into topobathy (land and sea) digital elevation models by NOAA’s National Geophysical Data Center and U.S. Geological Survey. These improved models can then be used by forecasters to provide more precise predictions of storm surge for coastal areas in the northeast.

Contact: [Ashley.Chappell@noaa.gov](mailto:Ashley.Chappell@noaa.gov), NOAA IOCM.

## DID YOU KNOW?

On January 4, 2013, NOAA announced that **Dr. Jason Tuell** was named the new Director of the National Weather Service Eastern region, which stretches from Maine to northern Georgia and westward to Ohio. Dr. Tuell will oversee operations that provide weather, water, aviation, and climate services to more than 93 million people. He previously served NOAA as the chief of Meteorological Services Division at the National Weather Service.





## Regional Collaboration Snapshots

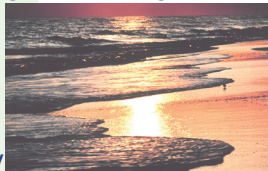
### Refining Stakeholder Needs for Climate Change Products and Services

One of NART's five ongoing collaborations in direct support of the Agency's climate adaptation and mitigation goal, NOAA recently completed a survey of regional stakeholders to identify gaps and unmet needs for climate products and services. Later this spring, the NART will tap into its broad network of climate expertise and engage in a series of in-person regional workshops. Contact: Ellen.L.Mecray@noaa.gov, NESDIS.



### Building New Partnerships with Coastal States

In February, NOAA hosted the last in a series of workshops with state coastal zone management programs to identify collaborations based around state specific needs and gaps. The NART network enabled interagency participation from NMFS, NOS, NERRS, and NWS by contributing funding and coordination to these workshops. Contact: Adrienne.Harrison@noaa.gov, NOS Coastal Services Center.



### Sharing Data Visualization Best Practices

Data visualization is about how best to communicate complex scientific information to a range of people. NOAA has many people working on discrete tools, but they do not often have a working knowledge of capabilities beyond their line office. NART supported a workshop in February to facilitate the exchange of knowledge and best practices on data visualization among NOAA,

other state and federal agencies and academia. Contact: Kevin.Friedland@noaa.gov, NOAA Fisheries.

### Connecting Weather Ready Nation to Coastal Stakeholders

The National Weather Service and Sea Grant both work to enhance the resilience of communities to extreme weather, but have tended to operate in parallel with limited collaboration. The NART is bringing together the two groups. In January, NWS staff from the Caribou and Gray Weather Forecast Offices presented information at Maine Sea Grant's policy advisory committee meeting. This single interaction – which will be repeated up and down that North Atlantic coast – already facilitated connections and raised awareness that will ultimately result in better information being put in the hands of coastal residents and decision-makers. Contact: Robert.Thompson@noaa.gov, National Weather Service.



### Ensuring Representation in Water Resource Planning Efforts

To ensure that the Federal government's adaptive water-related planning, preparedness and response activities are in line with local stakeholders needs, NOAA, the U.S. Army Corps of Engineers and U.S. Geological Survey are working together to engage these stakeholders in a watershed level needs assessment. In January and February, three workshops were held throughout the North Atlantic region. The NART tapped into our network to ensure that the right people were invited to the workshops and had the opportunity to have their voices heard. Contact: George.Mckillop@noaa.gov, National Weather Service.

## NOAA People in the North Atlantic Region

### NART Member

#### Who are you and what do you do?

I'm Paul Ticco and I serve as the Northeast and Mid-Atlantic Regional Coordinator for NOAA's Office of National Marine Sanctuaries, directly supporting the Stellwagen Bank and Monitor national marine sanctuaries, and working closely with many governmental and non-governmental partners on issues of marine protected area management, biodiversity and deep-sea coral reef protection, climate change adaptation, and ocean planning. My office is located in Newport News, VA at the Monitor sanctuary site, but I travel often to ONMS headquarters in Silver Spring, MD and to many coastal locations along the east coast.



#### What do you like best about working at NOAA?

At NOAA I enjoy being part of teams of very talented professionals who together bring a multi-faceted expertise to bear on solving problems.

#### How does collaboration help you do your job?

Collaboration across NOAA and with many other partners is a key to my efforts, as the management of marine protected areas and the advancement of science to policy-making requires strong teamwork.

#### 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. Forbes Darby is Acting 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

### NOAA Corps Officer Training Center

This past summer, NOAA Corps moved their officer training center from the U.S. Merchant Marine Academy at Kings Point, N.Y., to the U.S. Coast Guard Academy in New London, Conn. The first full class of relocated candidates will graduate the program May 31st.

Cmdr. G. Mark Miller, Chief, NOAA Corps Officer Training Center (NCOTC), oversees a staff of 3 officers, 2 contract instructors, and one civilian staff. The Academy provides NOAA a suite of offices, barracks for up to 30 officer candidates, a classroom, access to ship's bridge simulators, small boats, and dockage for several NOAA training vessels.

More than just sharing space, the benefit of the collaboration also comes from new joint training opportunities. Cmdr. Miller said the two services work together so often at sea; it only makes sense to train together on land. NOAA and Coast Guard officer candidates share the barracks and integrate into one company. Academics progressively diverge through the program, but they live and work together until graduation.

This embedding of the NCOTC at a USCG facility will allow NOAA to continue to grow and leverage our already strong partnership. Cmdr. Miller works side-by-side with Coast Guard officers of all ranks and disciplines and connects NOAA with Coast Guard and their operations. The NCOTC has already introduced experts from the NOAA Fisheries, National Weather Service, and Office of Coast Survey to the officer candidates and will continue working with the NART to bring to bear all of NOAA's resources.



Members of the NOAA Commissioned Officer Corps (khaki uniforms) pose with U.S. Coast Guard classmates.