

SCIENCE ADVISORY BOARD

Jane Lubchenco, Ph.D.

Under Secretary of Commerce for Oceans & Atmosphere
NOAA Administrator

National Oceanic and Atmospheric Administration

November 14, 2012



THANK YOU

SAB AGENDA & CCOMPLISHMENTS

Report on the Cooperative Institute for North
Atlantic Research

Review of the Ocean Exploration Program

Portfolio Review Task Force

EISWG's Terms of Reference

National Sea Grant Advisory Board Annual Report

Climate Working Group

NOAA LEADERSHIP CHANGES



**Rear Admiral
Michael S. Devany**
Director, Office of
Marine &
Aviation Operations &
NOAA Corps



**Rear Admiral
David A. Score**
Deputy Director for
Operations & the
NOAA Corps



**Amanda
Hallberg**
Acting Director of
Legislative Affairs



Maryjean Buhler
Chief Financial Officer

Seeking CPO Director
Dr. Rick Rosen (A)

RECENT ACCOMPLISHMENTS

Hurricane Sandy

GoM Disaster Response
Center & NCWCP

Draft National Climate
Assessment

Fisheries of the U.S. 2011

Fisheries Disasters

NOAA Habitat Blueprint

Note: The cone contains the probable path of the storm center but does not show

NOAA HABITAT BLUEPRINT

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

A framework to improve habitat for fisheries, marine life, and coastal communities

- Home
- Fact Sheets
- Healthy Habitat Objective
- Regional Habitat Initiatives
- Frequently Asked Questions
- Habitat Blueprint Intranet (NOAA only)
- NOAA Habitat—Beyond the Blueprint
- Feature Stories

Test Your Habitat IQ
www.habitat.noaa.gov

NOAA Habitat

NOAAHabitat

NOAAHabitat: We're accepting nominations for the 2012 Nancy Foster Habitat Conservation Awards. Nominations due January 18, 2013. 1.usa.gov/2mQV3Z
2 hours ago · reply · retweet · favorite

NOAAHabitat: For Restore America's Estuaries view on the right way to respond to hurricane Sandy: washingtonpost.com/opinion/... [@RAEstuaries](https://twitter.com/RAEstuaries)
2 hours ago · reply · retweet · favorite

PacificCouncil Volunteer

WHY DO WE NEED THE NOAA HABITAT BLUEPRINT?

Protecting our natural infrastructure—our global life support systems—is vital to protecting our communities and their economies as well as fisheries and recreational opportunities along our coasts. With continued widespread loss and deterioration of coastal and marine habitats, we are in danger of losing this infrastructure. Congress has charged the National Oceanic and Atmospheric Administration (NOAA) with protecting habitat for fish, threatened and endangered species, marine mammals, and other natural resources within the coastal zone.

Now that we are turning the corner on ending overfishing, we need to increase the sustainability and productivity of our fisheries by focusing on the habitat that fish need to spawn and grow, as well as protecting the coastal resources on which our communities depend. Recognizing the need for more concerted efforts to conserve (protect and restore) habitat, we developed the NOAA Habitat Blueprint to build on existing programs, prioritize our activities, and guide our future actions. Simply put—we are improving the way we do business.

"As we end overfishing and rebuild stocks, we must look forward to ensure healthy habitats support sustainable fisheries, protected resources, and coastal economies. The Habitat Blueprint provides a basis for NOAA to advance the understanding of habitat's contribution to ecosystems and to integrate habitat science and conservation into our management efforts."

Eric C. Schwaab, Assistant Administrator for NOAA Fisheries,
Performing the duties and functions of the Assistant Secretary of
Conservation and Management Deputy Administrator

National Marine Fisheries Service
U.S. Department of Commerce
Assistant Administrator for Fisheries

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RETROSPECTIVE

Integrating Framework

Next Generation Strategic Plan

1. Climate Science, Services, Adaptation
2. Weather Ready Nation
3. Healthy Oceans
4. Resilient Coastal Communities

***Sine Qua Non:* Strong Science**

**SCIENTIFIC
INTEGRITY
POLICY**

**AAAS
FELLOWS**

**DOUBLE #
SENIOR SCIENCE
POSITIONS**

**CHIEF
SCIENTIST
POSITION**

**SAB R&D
PORTFOLIO
ANALYSIS**

**FOCUS ON
RESEARCH PRIORITIES
USE-INSPIRED SCIENCE**



SCIENTIFIC LEADERSHIP

**OCEAN
ACIDIFICATION**

GLOBAL CHANGE RESEARCH

CLIMATE ADAPTATION

ARCTIC RESEARCH

ECOSYSTEM-BASED MANAGEMENT

STEWARDSHIP



NATIONAL OCEAN POLICY

STEWARDSHIP: ENDING OVERFISHING

U.S EEZ

catch limits and accountability measures
catch shares, recreational fishing,

HIGH SEAS: pirate fishing, RFMOs



EXTREME WEATHER & CLIMATE SERVICES

2011: 14 >\$1 Billion-Dollar Disasters



Three more in 2011 approaching \$1B

1. Late-October Northeast winter storm
2. April 19-20 Midwest and Southeast tornadoes
3. August 18-21 Midwest and East high wind & hail

JOINT POLAR SATELLITE SYSTEM



EDUCATION

B-WET & ENVIRONMENTAL LITERACY GRANTS



B-WET: 59 projects to receive \$5.5M to support activities:

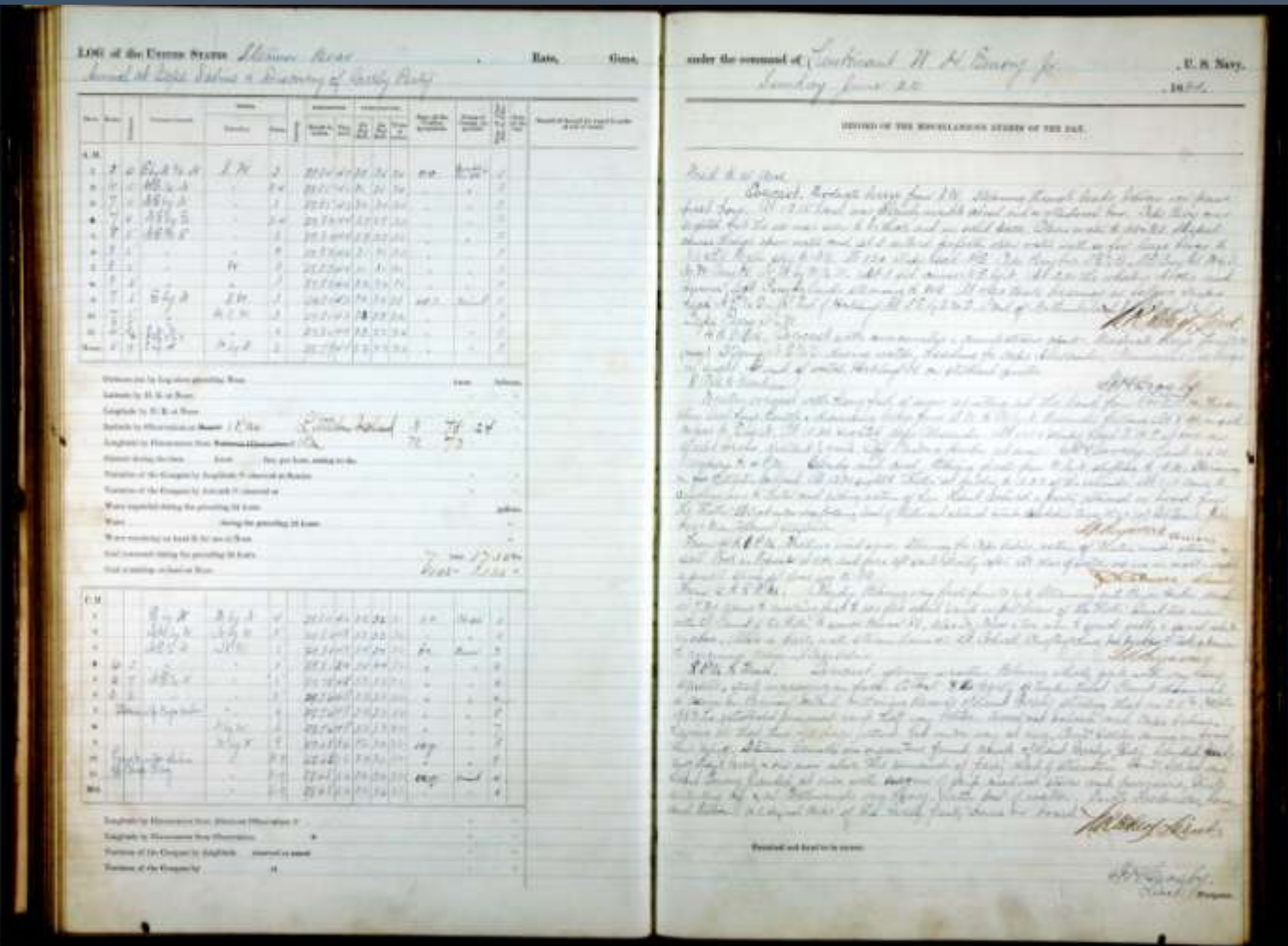
- ☑ PacNW data driven field investigations for storm water management studies
- ☑ Great Lakes invasive species



Environmental Literacy grants: \$4.5 to support 6 multi-year projects enhancing science education activities in classrooms, aquariums, museums, and other U.S. institutions

CLIMATE

OLD WEATHER CITIZEN SCIENCE PROJECT



Ship logs, preserved by NARA, are from U.S. Navy, Coast Guard & Revenue Cutter voyages in the Arctic between 1850 & the World War II era

An aerial photograph of the Deepwater Horizon oil rig engulfed in a massive fire. A thick, dark column of smoke rises from the burning structure. Several fireboats are positioned around the rig, directing high-pressure water jets onto the flames. The scene is set in the open ocean under a clear sky.

DEEPWATER HORIZON

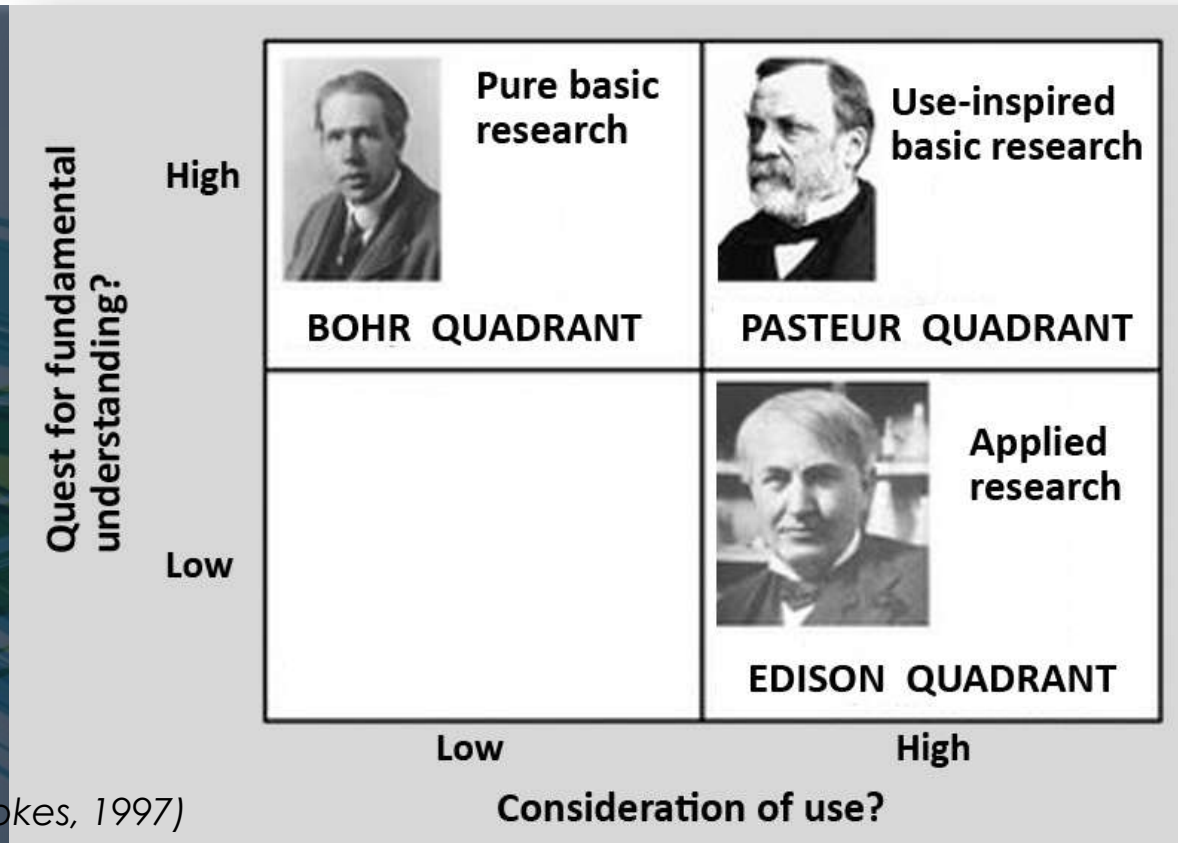
An aerial photograph capturing the aftermath of a tsunami. A coastal town is almost entirely submerged in dark, turbulent water. In the lower-left center, a large fire rages from a building, sending a massive, thick plume of black smoke into the sky. The water is covered in a dense layer of brown debris, including wood, metal, and household items. Several houses with dark roofs are partially submerged. In the background, more buildings and structures are visible, some appearing to be floating or partially underwater. The sky is overcast and grey.

JAPANESE TSUNAMI



PROSPECTIVE

PASTEUR'S QUADRANT



USE-INSPIRED RESEARCH: to pursue fundamental understanding but motivated by a question of use



CUTTING-EDGE, USE-INSPIRED SCIENCE

- **Climate change & adaptation**
- **Extreme weather & water events**
- **Healthy oceans**
- **Sustainable fisheries**
- **Resilient coastal habitats**

**RESILIENT ECOSYSTEMS • RESILIENT COMMUNITIES
RESILIENT ECONOMIES**

MAPPING & CHARTING

ARCTIC

ARCTIC VISION & STRATEGY

NOAA National Weather Service Joplin Tornado Path of Destruction

Sunday May 22, 2011, an EF5 tornado with multiple vortex tore through Joplin, MO with 200 mph winds, leaving almost 160 people dead. The tornado is the deadliest since modern record keeping began.



EXTREME WEATHER/CLIMATE





SPACE WEATHER FORECASTING

SCIENCE ADVISORY BOARD

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Under Secretary of Commerce for Oceans & Atmosphere
NOAA Administrator

National Oceanic and Atmospheric Administration

November 14, 2012



BACKUP MATERIAL



ANNUAL GUIDANCE MEMORANDUM

Budget uncertainty constrains NOAA's mission and critical responsibilities

Focus on near-term execution imperatives

1. Evolve NOAA's weather services to become more effective, efficient, and agile
2. Cost-effectively sustain NOAA's operational satellite capabilities
3. Re-engineer a sustainable suite of NOAA's core infrastructure (e.g., facilities, IT, observation platforms)

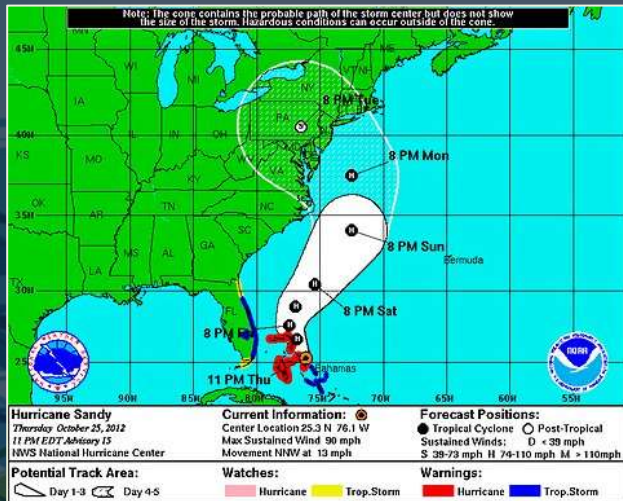
Focus Areas for Planning

- ☑ Strengthen the production and delivery of climate information and services
- ☑ Habitat efforts in priority areas and demonstrating landscape-scale results
- ☑ Advance NOAA's data integration and services to supporting resilient coastal communities and economies
- ☑ Improve the methodologies to assess and manage fish stocks and protected resources
- ☑ Enhance research and modeling to advance NOAA's mission



WEATHER & SATELLITES

HURRICANE SANDY & WEATHER READY NATION



**Hurricane Sandy Forecast Track,
GOES-13 Imagery, & WP-3D Flight**



**Celebrating Year 1 of Weather
Ready Nation**

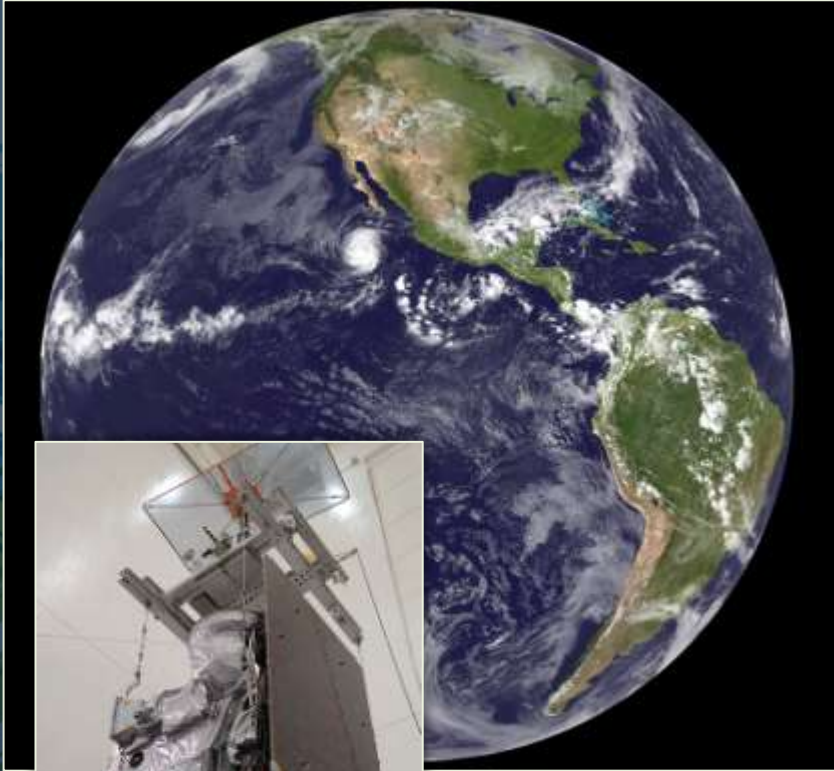
WEATHER & SATELLITES

GoM DISASTER RESPONSE CENTER & CENTER FOR WEATHER & PREDICTION



WEATHER & SATELLITES

GOES 14 & INT'L SPACE WEATHER AGREEMENT



**GOES 14 &
Full Disk Image**



**Obama & Cameron highlight space weather
partnership (2011/2012)**



WEATHER & SATELLITES

INNOVATIVE SOCIAL SCIENCE GRANTS

\$879,000 for 4 new NOAA-funded research awards examine weather warnings and social media use

- Office of Weather & Air Quality with U.S. Weather Research Program and NWS funding
- University and nonprofit social science and weather researchers to lead
- NOAA Storm Prediction Center, National Severe Storms Laboratory, NWS offices, and River Forecast Centers will collaborate



CLIMATE NATIONAL CLIMATE ASSESSMENT & NATIONAL ESTUARINE RESEARCH RESERVE SYSTEM GRANTS

NOAA & University of New Hampshire provide \$4.9M to fund 9 collaborative research projects aimed at making coastal communities and environments more resilient to rising sea levels, changing weather patterns, extreme storms, and ocean warming and acidification

Fund projects in South Carolina, Maryland, Massachusetts, New Hampshire, Maine, Rhode Island, Alabama, Oregon and California



ECOSYSTEMS & FISHERIES

RESTORE ACT & LOPHELIA II PROJECT TEAM



Obama signs RESTORE Act (June 2012)

Lophelia II project team received
National Oceanographic Partnership Program's
2011 Excellence in Partnering Award



ECOSYSTEMS & FISHERIES

FISHERIES OF THE U.S. 2011 & FISHERIES DISASTERS

Fisheries of the United States 2011

Current Fishery Statistics No. 2011

National Marine Fisheries Service
Office of Science and Technology

Fisheries Statistics Division
David Van Voorhees, Chief

Alan Lowther, Editor

Silver Spring, MD
August 2012



U.S. Department of
Commerce
Rebecca Blank, Ph.D.
Acting Secretary

National Oceanic
and Atmospheric
Administration
Jane Lubchenco, Ph.D.
Under Secretary

National Marine
Fisheries Service
Eric C. Schwaab
Assistant Administrator for
Fisheries



Northeast
Groundfish

Alaskan
Chinook Salmon



Mississippi's Oyster &
Blue Crab Fisheries

ECOSYSTEMS & FISHERIES

RESEARCH GRANTS: FISHERIES & OCEAN ACIDIFICATION

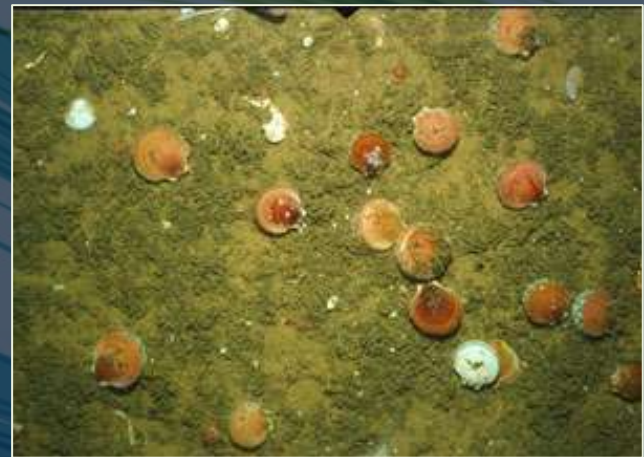
~1.6M over 3 years to

- ✓ **WHOI: ocean scallops**
- ✓ **SUNY Stony Brook: bay scallops and hard clams**
- ✓ **University of Washington: model economic impacts based on climate models**

Goal to incorporate ocean acidification effects into providing guidance to regional fishery management councils



Hard clams



Atlantic scallops