RESEARCH

NOAA's OCEANIC & ATMOSPHERIC RESEARCH

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OAR Leadership

Craig McLean
Assistant Administrator for Oceanic & Atmospheric Research

Gary Matlock
Acting Deputy Assistant Administrator for Programs and Administration

Steve Fine
Deputy Assistant Administrator for Laboratories and Cooperative Institutes

OAR VISION & MISSION

VISION

To Deliver NOAA's Future.

MISSION

Conduct research to understand and predict the Earth's oceans, weather and climate, to advance NOAA science, service and stewardship and transition the results so they are useful to society.

OAR's Research Network

OAR Laboratories

- OAR's laboratories are critical to long-term research endeavors, particularly those that require major infrastructure, such as monitoring and modeling oceans and atmosphere for climate assessments.

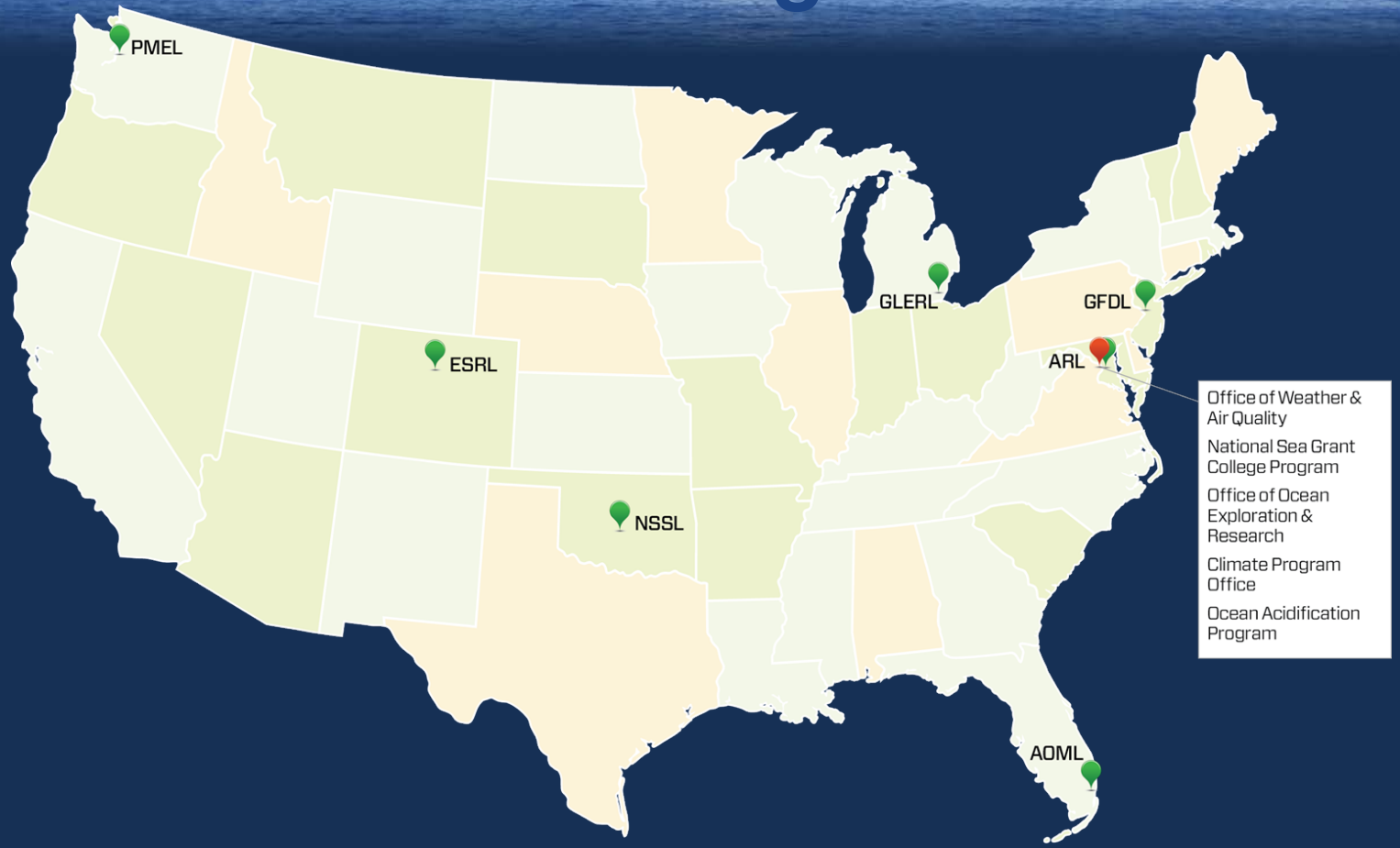
OAR Programs

- Program offices manage competitive and noncompetitive awards (including extramural) to focus on specific topics, including emerging areas of research. They are well suited to address research needs that are relatively short-term in nature or that require infrastructure that exists beyond OAR laboratories.

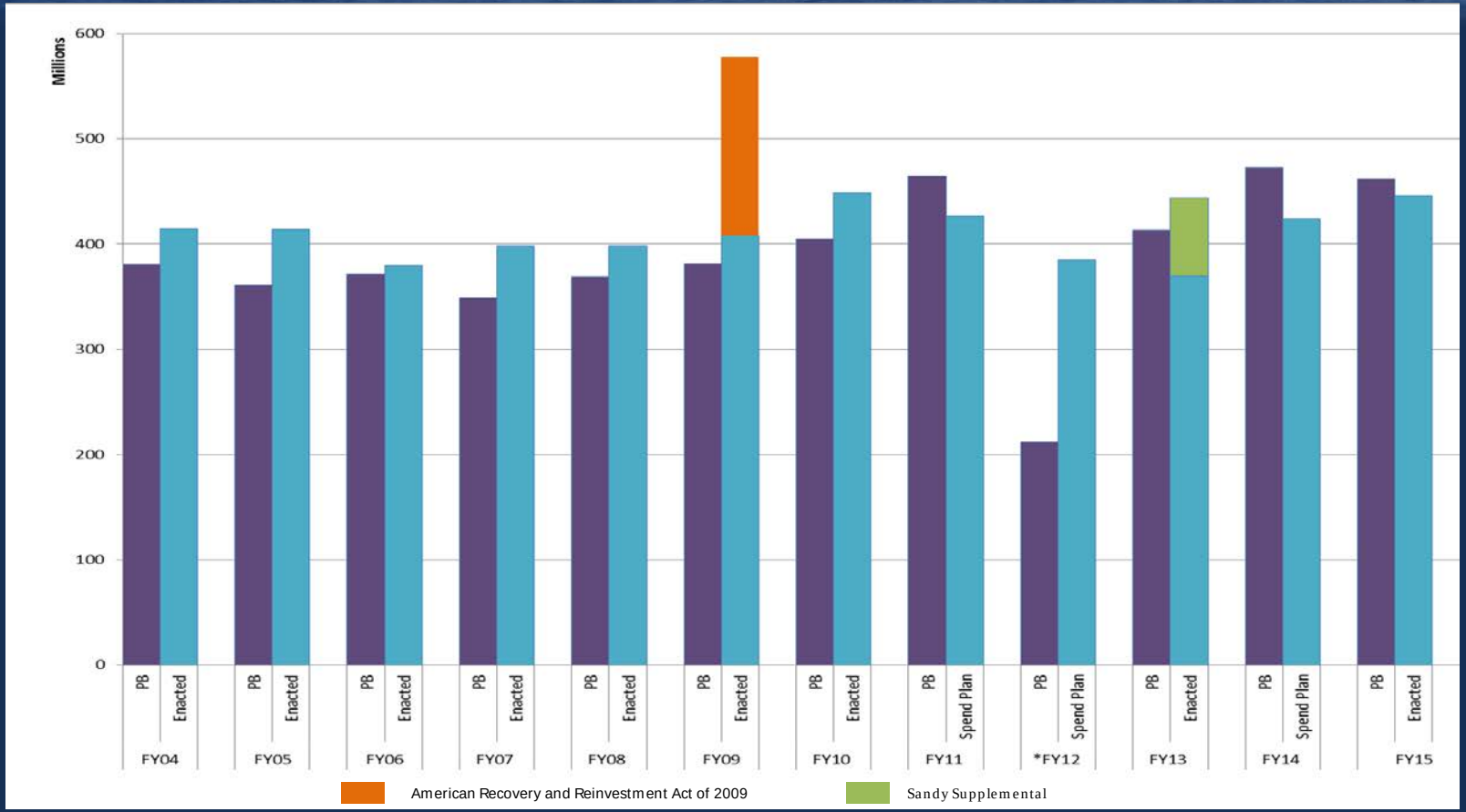
OAR Partners

- OAR manages the National Sea Grant College program and NOAA's Cooperative Institutes, to maintain dialog with academia. OAR also oversees NOAA's Technology Partnerships Office (TPO) and NOAA's Science Advisory Board.

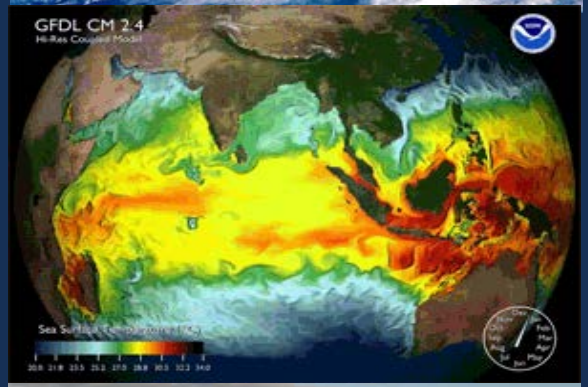
OAR's Labs and Programs



OAR Budget History



OAR RESEARCH AREAS

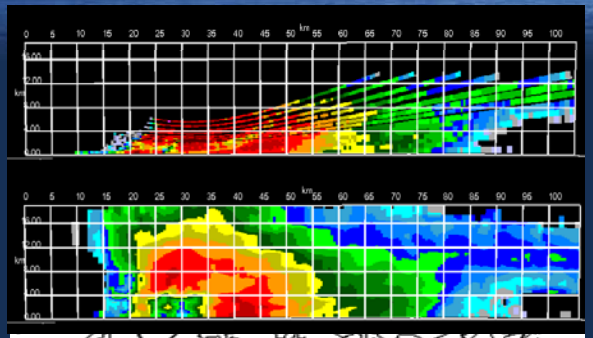


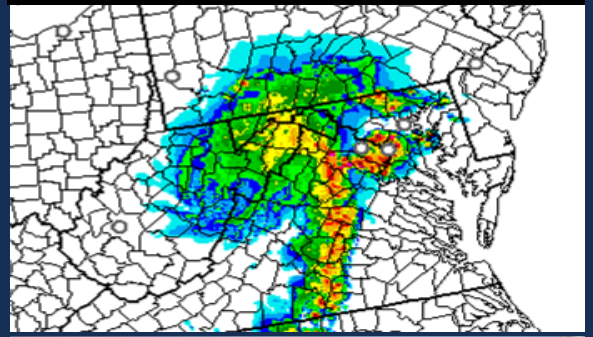
Weather & Air Chemistry

Climate

Oceans, Coasts and Great Lakes

WEATHER & AIR CHEMISTRY RESEARCH





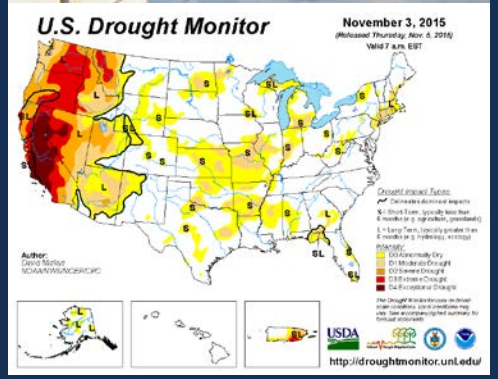
Historic Accomplishments

- Modernization of the National Weather Service
- High Resolution Rapid Refresh (HRRR)
- Multi-Radar Multi-Sensor System

Ongoing Projects

- NOAA's Hurricane Forecast Improvement Project (HFIP)
- High Impact Weather Prediction Project
- Multi-Function Phased Array Radar

CLIMATE RESEARCH



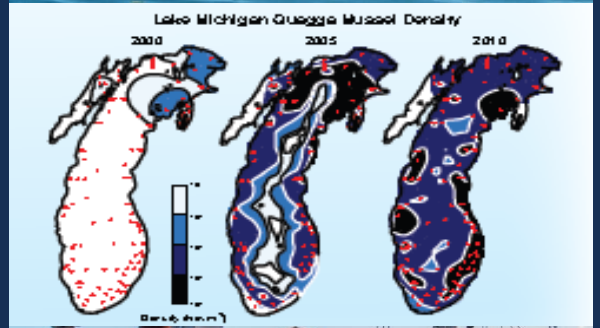
Historic Accomplishments

- The “Keeling curve”: continuous monitoring of atmospheric CO2 since 1957
- Contributions to the Intergovernmental Panel on Climate Change (IPCC)

Ongoing Projects

- The Argo program – a global array of autonomous ocean-monitoring floats
- National Integrated Drought Information System (NIDIS)
- Sustained atmospheric observations

OCEANS, COASTS & GREAT LAKES RESEARCH



Historic Accomplishments

- Ground breaking work on Ocean Acidification
- Tracking the invasion and spread of zebra and quagga mussels in Lake Michigan

Ongoing Projects

- OAR's Office of Ocean Exploration mapping efforts in support of the U.S. Extended Continental Shelf Project
- Great Lakes Water Level Dashboard
- Arctic Report Card
- National Sea Grant College Program delivery of products and services locally

NOAA's NEXT GENERATION STRATEGIC PLAN GOALS

Healthy Oceans

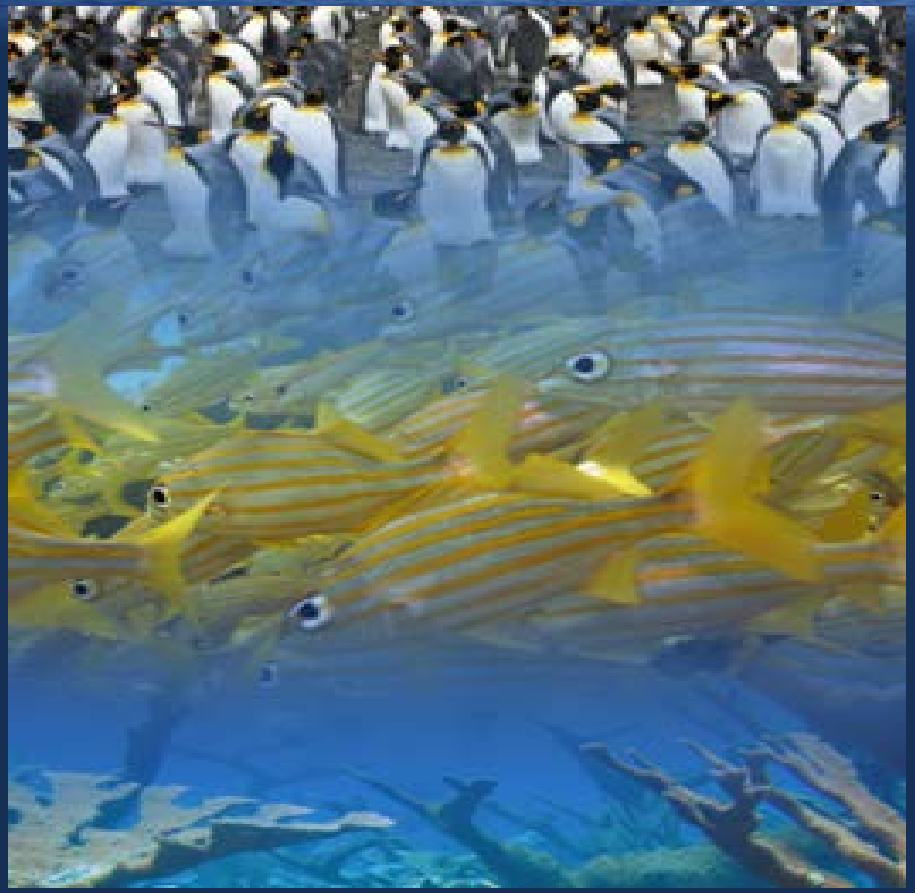
Weather Ready Nation

Climate Adaptation & Mitigation

Resilient Coastal Communities & Economies

SCIENCE & TECHNOLOGY

HEALTHY OCEANS



Key Questions

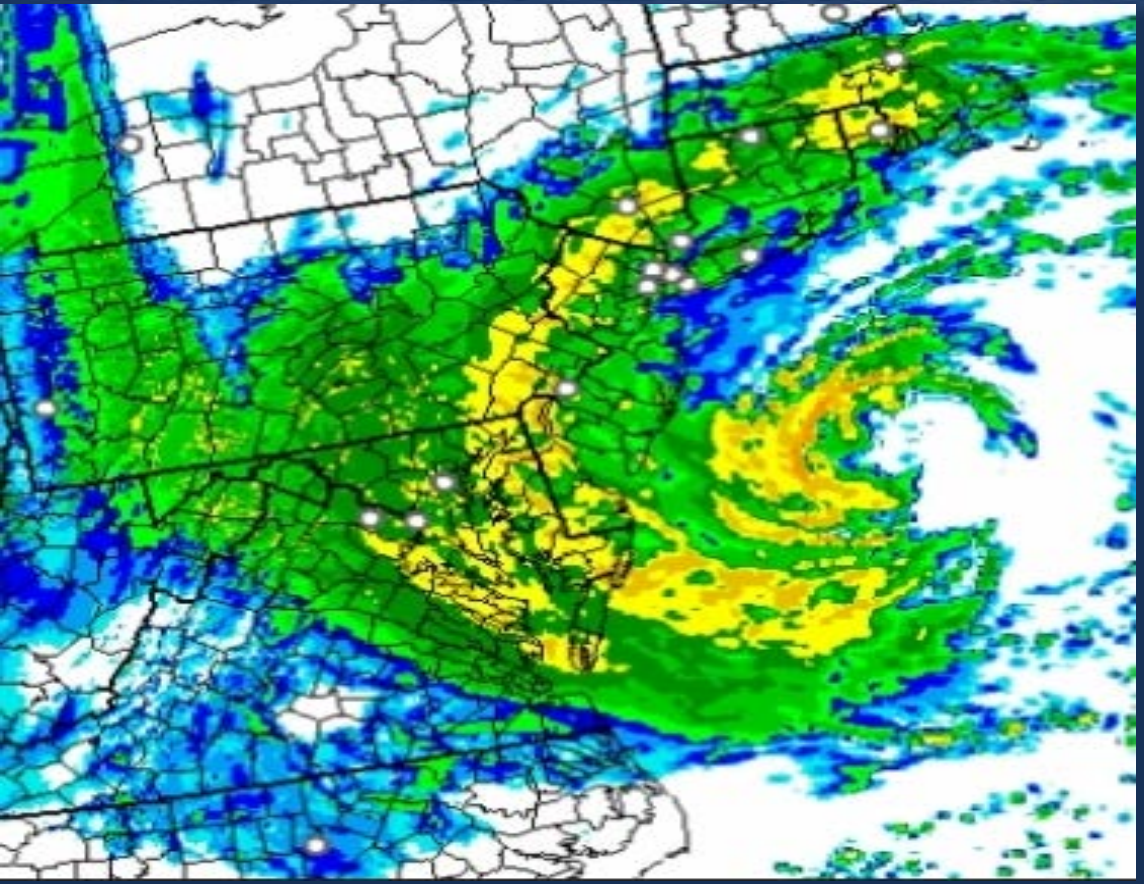
How do environmental changes affect marine ecosystems and the value of fisheries?

What exists in the unexplored areas of our oceans?

How can emerging technologies improve ecosystem-based management?

How is the chemistry of our ocean changing and what are the effects?

WEATHER READY NATION



Key Questions

How can we improve forecasts, warnings and decision support for high-impact weather events?

How are seasonal weather and extreme weather events influenced by climate?

How can we improve forecasts for resource management?

RESILIENT COASTAL COMMUNITIES & ECONOMIES

Key Questions

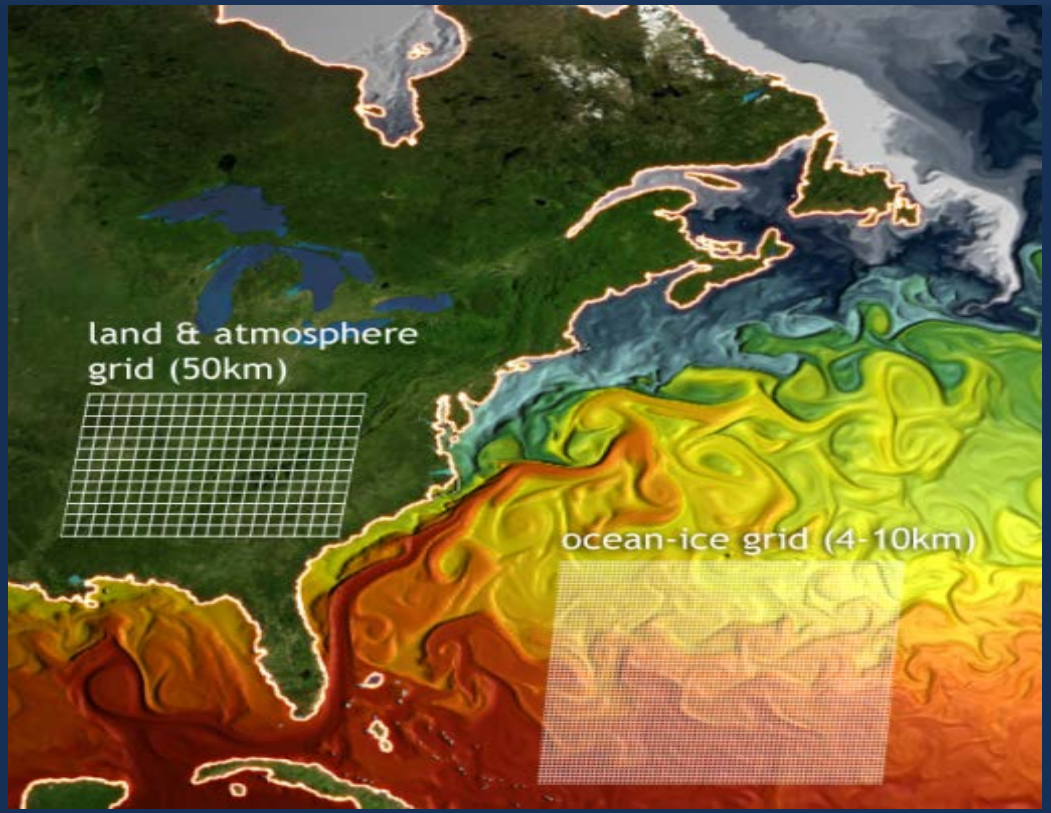
What is the value of coastal ecosystems?

How do we reduce the economic and ecological impacts of degraded water quality?

How is the Arctic affected by expanding industry and commerce?

How do communities prepare for, and respond to hazards?

CLIMATE ADAPTATION & MITIGATION



Key Questions

What is the state of the climate system and how is it evolving?

What causes climate variability and change on global to regional scales?

How can NOAA best inform and support the Nation's efforts to adapt to the impacts of climate variability and change?

SCIENCE & TECHNOLOGY INFRASTRUCTURE

Key Questions

What is the best suite of observing systems to meet NOAA's mission?

How can we best use current and emerging environmental data?

How can modeling be best integrated, and improved, with respect to skill, efficiency, and adaptability?