National Water Center, Tuscaloosa, Alabama. Source: NOAA

Annual NOAA Water Meeting

Senior leaders from across NOAA gathered at the National Water Center in Tuscaloosa, Alabama on November 13-14, 2017 for the inaugural Annual NOAA Water Meeting. The goals of the meeting were to:

- Enhance awareness of ongoing and planned water activities;
- Identify and agree on milestones for an FY19 NOAA Water Initiative Annual Operating Plan; and
- Identify approaches to incorporating these milestones into appropriate Line Office Annual Operating Plans.

Based on the input from the meeting, the NOAA Water Team identified a set of priorities that will be used to guide its efforts in advancing the NOAA Water Initiative over the coming year:

- Develop a value chain analysis for advancing water information services across NOAA.
- Align with the Department of Commerce 2018 Strategic Plan (expected publication date February 2018), particularly Strategic Objective 3.2 that calls for "Reducing the impact of extreme weather and water events."
- Complete the study required by the Weather Research and Forecasting Innovation Act of 2017 to improve subseasonal-to-seasonal forecasting and prediction.
- Release version 2.0 of the NOAA's National Water Model in FY19, which will expand the coverage to Hawaii and make the code modular to better enable community model development.
- Demonstrate coupling of coastal models with the National Water Model, to predict the combined effects of surge, tide, wave action, and freshwater in the coastal zone.
- Advance research and development for water quality forecasting, particularly in estuarine and coastal ocean environments.
- Invest in key technologies, including critical observing systems.
- Invest in key technologies, including critical observing systems and sufficient high performance computing for research and operational applications.
- Enhance cross-Line Office collaboration to better understand and be responsive to water information needs of society.
- Invest in innovative decision support tools and service delivery system.

For more information visit: **www.noaa.gov/water**

AMS Town Hall
Water Modeling and the Implementation of the NOAA Water Initiative
Thursday, January 11, 2018 | 12:15-1:15 PM
Room 18A Austin Convention Center and Hilton

NOAA Water Initiative

Focus on Water

In the United States and around the world, water security is increasingly in jeopardy. Too much water, too little water, or water of poor quality can endanger life, property, economies, and ecosystems. These threats to water security arise from several factors, including increased water demand from population growth, energy production, and economic development; deteriorating water infrastructure; and the weather- and water-related impacts of climate change. In particular, expected climate change impacts on water vary regionally and will include changing sea levels, increased frequency of heavy downpours, changes in water quality, and longer, more intense periods of drought.

In this context, NOAA has undertaken the NOAA Water Initiative, a comprehensive effort to give people and governments better access to the water information they need for their unique circumstances so that they may take appropriate actions to address water-related risks and manage their water resources more efficiently and effectively.

Vision

The NOAA Water Initiative envisions a Nation in which everyone from individual citizens to businesses and public officials has timely, actionable information about their vital water resources at their fingertips and can factor this information wisely into their decisions about water risks, use, management, planning, and security.

Mission

The mission of the NOAA Water Initiative is to improve the Nation's water security by providing science-based information and services that address vulnerability to water risks and by enabling greater efficiency and effectiveness in the management of water resources. NOAA will advance this mission primarily through transforming integrated water prediction services in collaboration with decision-makers, partners, and users.

NOAA Water Partners and Users

NOAA is actively working with its partners to develop and deliver services focused on next-generation water prediction, sustained decision support, and delivery of timely, accurate, and actionable water information services based on a deep understanding of user needs.

The landscape of NOAA's water partners and users is complex and diverse. Water information needs and requirements vary from region to region and across relevant stakeholder groups. NOAA cannot address the needs of these stakeholders alone and must coordinate its water-related programs and services with customers and partners in Federal, State, regional, local, and Tribal governments and agencies. In addition, NOAA's success critically depends on partnerships and collaboration with academic, non-governmental, private-sector, and international partners.

Too much water, too little water, or water of poor quality can endanger life, property, economies, and ecosystems. Source: NOAA.

The overarching goal of the NOAA Water Initiative is to transform water resources prediction and information service delivery to better meet and support evolving societal needs.

At the Federal level, NOAA works closely with partner agencies, including the U.S. Geological Survey (USGS), the U.S. Army Corps of Engineers (USACE), .the U.S. Bureau of Reclamation (USBR), the National Science Foundation (NSF), the Environmental Protection Agency (EPA), the Federal Emergency Management Agency (FEMA), the U.S. Department of Agriculture (USDA), and the Department of Energy (DOE), in the development and delivery of new water information services. While a number of these agencies have water management, water science, and water quality as part of their core missions--and are therefore more well known as “water agencies” — NOAA has specific responsibilities around water prediction and collaborates closely with its Federal partners in carrying out this mission.

NOAA Water Initiative

Water is a common thread that runs through all of NOAA’s mission areas and offices, each of which serves stakeholders through a variety of field offices, laboratories, and national service outlets.

Cover of the NOAA Water Initiative (full report available at: http://www.noaa.gov/explainers/noaa-water-initiative-vision-and-five-year-plan)

The NOAA Water Initiative takes into consideration the entirety of the water cycle while also focusing on the unique physical and socio-economic attributes and challenges of specific regions. It supports the efforts of communities to engage in a holistic analysis of their water resource challenges and to promote integrated water resources management across geographic and jurisdictional boundaries. This holistic approach allows NOAA to leverage the expertise and assets residing across the agency toward the coordinated delivery of actionable water intelligence to those who need it to make decisions, manage resources, and address water-related risk. This approach will be supported by a world-class technical enterprise of integrated decision tools, delivery methods, predictions, observations, and networks of experts and practitioners working to contextualize information for decision support and strategic planning.

NOAA’s water responsibilities.

Who relies on NOAA’s water predictions and information?

Economic Sectors

- Agriculture
- Utilities (Water Supply/Power Generation)
- Infrastructure/Construction
- National Security
- Recreation/Tourism
- Transportation/Navigation

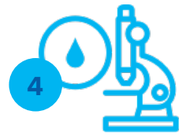
Decision-makers

- Coastal zone managers
- Ecosystem managers
- Emergency managers
- Fisheries managers
- Marine resource protection managers
- Ports and navigation managers
- Reservoir managers
- Other Federal, State, local, and Tribal governments and agencies
- Individual business owners and home owners

Build Strategic Partnerships for Water Information Services

Strengthen Water Decision Support Tools and Networks

Revolutionize Water Modeling, Forecasting, and Precipitation Prediction



Accelerate Water Information Research and Development and Research Transitions

Enhance and Sustain Water-related Observations

NOAA WATER INITIAVE STRATEGIC OBJECTICES

By working toward these objectives, this initiative will advance the nation’s awareness and understanding of water-related risks, extreme events, and vulnerabilities across sectors and regions and will promote the development of sustainable tools to foster more informed decision-making.

NOAA Water Initiative Strategic Objectives

To achieve the goal of the NOAA Water Initiative, the agency is pursuing five interdependent strategic objectives; they are equal in priority, will be pursued concurrently, and will result in a specific set of outcomes.

Objective 1: Build Strategic Partnerships for Water Information Services

NOAA will enhance strategic partnerships that span jurisdictions, geographic boundaries, agency mission areas, and sectors to meet shared water decision-support goals.

Objective 2: Strengthen Water Decision Support Tools and Networks

NOAA will collaborate with its partners to foster the development of new weather and water decision support tools and networks, leveraging existing networks and tools where possible, to create accessible solutions that work across multiple platforms.

Objective 3: Revolutionize Water Modeling, Forecasting, and Precipitation Prediction

A key building block of the NOAA Water Initiative is the transformation of NOAA’s current water prediction services to provide integrated water modeling and prediction across a range of timescales and watershed sizes, with the appropriate timeliness, resolution, reliability, and accuracy required to help inform decision making.

Objective 4: Accelerate Water Information Research and Development and Research Transitions

A number of fundamental scientific barriers must be broken down to achieve the caliber of water information services necessary to meet user needs. NOAA will benefit from and advance focused research agendas that targets these barriers and engages the best extramural and intramural talents to tackle them, and transitions them from research to operations, application, commercialization, or other uses.

Objective 5: Enhance and Sustain Water-related Observations

NOAA will take greater advantage of advanced observational datasets from new or future space-based, airborne, terrestrial, and marine Earth observing platforms, more fully exploiting them to determine the amount and quality of water from sub-surface to atmosphere and in rivers, lakes, and oceans.

The NOAA Water Team

The NOAA Water Team was established in 2015 to conduct stakeholder outreach and to develop and implement the NOAA Water Initiative. Its functions include:

- Hosting the Annual NOAA Water Meeting to create an Annual Operating Plan for Water;
- Establishing and overseeing the Objective Teams supporting the five objectives of the NOAA Water Initiative;
- Tracking the progress of the deliverables detailed in the implementation plans of each Objective Team;
- Promoting the development and advancement of cross-NOAA Integrated Water Prediction budget initiatives, as appropriate; and
- Promoting cross-Line Office awareness of and participation in Line Office-led stakeholder engagement activities around water.