Mary Glackin
Deputy Under Secretary for Operations
February 14, 2011
BACKGROUND/PROCESS

Reports from the National Academies (‘01, ‘06, ‘09)
Reports from the NOAA SAB CWG (‘08, ‘09)
NOAA/Commerce Announcement of Intent, 2/10
National Academy of Public Administration, 9/10
Draft Vision and Strategic Framework v9.0, 12/10
FY12 President’s Budget (Climate Service Proposal), 2/11
NOAA COMPONENTS PROPOSED TO FORM A CLIMATE SERVICE

FROM NESDIS*
- National Climatic Data Center
- National Oceanographic Data Center
- National Geophysical Data Center

FROM OAR*
- Earth System Research Lab
  - Chemical Sciences Division
  - Global Monitoring Division
  - Physical Sciences Division
- Geophysical Fluid Dynamics Laboratory
- Climate Program Office

FROM NWS
- Climate Prediction Center
- Management Oversight for the Climate Observing Network including, Tropical Atmosphere Ocean (TAO)
  - Historical Climate Network Modernization (HCN-m)

NOS & NMFS UNCHANGED

*Select Administrative functions from NESDIS and OAR will transfer to Climate Service

The physical location of these facilities will not change
Climate Service Definition

From Version 9 (V9) Climate Service Strategic Plan
Climate Services (NRC 2009)

- A mechanism to identify, produce, and deliver authoritative and timely information about climate variations and trends and their impacts on built, social-human and national systems and regional, national and global scales to support decision making.

Definition proposed to USGCRP roundtable on Climate and Information Services (CENRS)

- The identification, production, and easy access to timely and authoritative scientific data and information about all aspects of climate including its impact on human and natural systems that helps people make informed decisions in their lives, businesses and communities.
Climate Service Vision and Mission

Vision
By providing science and services, the Climate Service envisions an informed society capable of anticipating and responding to climate and its impacts.

Mission
Improve understanding and prediction of changes in climate and promote a climate-resilient society by:

- Monitoring climate trends, conducting research, and developing models to strengthen our knowledge of the changing climate and its impacts on our physical, economic, and societal systems
- Providing authoritative and timely information products and services about climate change, climate variability, and impacts
- Informing decision making and management at the local, state, regional, national, and international levels

The Climate Service delivers products and services in collaboration with public, private, and academic partners to maximize social, economic, and environmental benefits.
CLIMATE SERVICE IN NOAA

PROPOSED CLIMATE SERVICE

HEADQUARTERS

Office of the Assistant Administrator for Climate Services
Deputy Assistant Administrator for Climate Services

Climate Senior Scientist

OFFICE OF CLIMATE RESEARCH

Geophysical Fluid Dynamics Laboratory
Chemical Sciences Laboratory
Physical Sciences Laboratory
Global Monitoring Laboratory

OFFICE OF OBSERVATION, MONITORING & PREDICTION

National Climatic Data Center
National Oceanographic Data Center
National Geophysical Data Center
Observation Systems Division
Climate Prediction Center

OFFICE OF SERVICE DEVELOPMENT & DELIVERY

Regional Climate Services Partnerships Division
Customer Engagement and Education Division
Grants Division
INNOVATE: Enable discovery, development, and deployment of science

- Past & Present: Ocean acidification, ozone hole, ocean exploration, coastal forecasting
- Opportunities: Computer technology—Graphical Processing Units, ecological forecasting, improving fish and bi-valve stock assessments, gliders and autonomous underwater vehicles (AUVs), water cycle forecasting

INCUBATE: Identify and foster long-term transformative research

- Past & Present: Climate science and services, Tsunami warning system, NEXRAD Radar, Mauna Loa Observatory, Unmanned Aircraft Systems (UAS), Sea Grant Extension
- Opportunities: Multi-function Phased Array Radar (MPAR), advances in weather forecasting, sensor development, easy-to-deploy buoys, socio-behavioral-economic sciences

INTEGRATE: Bridge research activities across NOAA and partners

- Past & Present: Hurricane track and intensity forecast improvement, Advanced Weather Interactive Processing System (AWIPS), Cooperative Institutes, Sea Grant
- Opportunities: Ecosystem functioning with special emphasis on Arctic & Gulf of Mexico, Earth System modeling and forecasts, renewable energy
PROPOSED OFFICE OF OCEANIC & ATMOSPHERIC RESEARCH (OAR)

HEADQUARTERS

Science Advisory Board

Science Director

Office of the Assistant Administrator for Oceanic & Atmospheric Research & Senior Advisor to Chief Scientist

Deputy Assistant Administrator for Programs & Administration

Research Council

Great Lakes Environmental Research Laboratory

Atlantic Oceanographic & Meteorological Laboratory

National Severe Storms Laboratory

Pacific Marine Environmental Laboratory

Air Resources Laboratory

Global Systems Laboratory

Cooperative Institutes

National Sea Grant College Program

Office of Ocean Exploration & Research

Office of Environmental Modeling & Research

Office of Research & Technology Applications (ORTA)/Small Business Innovation Research (SBIR)
Highest Priority Areas for OAR

• **Next-generation forecasts**
  - Hurricane Forecast Improvement Project (HFIP)
  - Multi-function Phased Array Radar (MPAR)
  - Aviation weather
  - Increased lead time from minutes to an hour or more

• **Ecosystem understanding**
  - Ocean acidification monitoring and research
  - Ocean exploration and research
  - Fisheries tools and applications

• **Earth system modeling**
  - Integrated climate/environmental models
  - Integrated ecosystem-stock assessment modeling

“All parts of NOAA benefit from OAR’s work to incubate fundamentally new approaches to mission-centered science, a capability best sustained by maintaining a nimble, freestanding OAR line office.” - National Academy of Public Administration (2010)
PROPOSED NATIONAL ENVIRONMENTAL SATELLITE SERVICE (NESS)

HEADQUARTERS
Office of the Assistant Administrator for Satellite Services
  Deputy Assistant Administrator for Satellite Services
  Deputy Assistant Administrator, Systems

OFFICE OF SATELLITE AND PRODUCT OPERATIONS

CENTER FOR SATELLITE APPLICATIONS AND RESEARCH

OFFICE OF SYSTEMS DEVELOPMENT

JOINT POLAR SATELLITE SYSTEM PROGRAM OFFICE

GOES-R PROGRAM OFFICE

Senior Scientist
<table>
<thead>
<tr>
<th>What we heard…</th>
<th>From …</th>
<th>What we did…</th>
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<tr>
<td>NOAA needs to prioritize what a climate service will do, in order to not be overrun by requests</td>
<td>Congress, NAPA</td>
<td>• Developed the draft Strategic Vision and Framework document</td>
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| NOAA needs to ensure that climate science will not be politically influenced and is not prescribing policy | Congress | • Clarified mission statement and the Vision and Framework Document  
• Separated research and service into distinct climate service branches  
• Climate Service to include a science advisor for integrity, data quality issues |
| NOAA is diminishing its research capability by moving climate research out of OAR | Congress | • Reorganization does not reduce any research in NOAA; only reorganizes it.  
• Designating OAR AA as cross-NOAA research portfolio manager, and science advisor to senior scientist.  
• Reestablished NOAA Chief Scientist |
| NOAA needs to coordinate with other federal agencies | Congress, NAPA | • Administration has established the Climate Information and Services Roundtable.  
• NOAA recognizes this need, and is participating in formal and informal interagency processes. |
| Advance dialogue around February announcement was insufficient | Congress | • Meeting regularly to discuss plans and progress prior to seeking approval.  
• Public comment period on Strategic Vision and Framework document |
NOAA commits to providing critical assets in science and service to a Federal partnership

Information Delivery and Decision Support
NOAA uses its national and regional infrastructure to deliver climate services today

Assessments of Climate Change and Impacts
NOAA is a leader in national and regional climate impact assessments
Over 70% of Federal IPCC AR4 WG1 authors were from NOAA

Climate Change Research and Modeling
International recognized models of the global climate

Climate Observations and Monitoring
NOAA operates over 90 observation and monitoring systems
NOAA is mandated to monitor and provide access to climate data and information

*Representative Organizations & Sectors
QUESTIONS?