

## NOAA's Proposed Climate Service – Background

*updated 7/13/11*

- NOAA's short-term weather forecasts of conditions out to about two-weeks are critical to saving lives and property. Similarly, NOAA's long-range weather and seasonal forecasts, also known as "climate forecasts," pick up where weather leaves off and refers to forecasts of conditions in the future beyond two weeks.
- These long-range climate forecasts or outlooks for severe weather, temperature, drought, and heavy precipitation are critical to saving lives and property. For example:
  - firefighters in Texas, New Mexico and Arizona used this information to help prepare for and respond to this record wildfire season.
  - emergency managers along the Mississippi, Missouri and Red River basins used this information to help prepare communities for the onset of flooding months before it began.
- In addition, businesses, industry and governments – including national security agencies like the Department of Defense - depend on such information to make strategic decisions and smart investments in the economy and infrastructure. For example:
  - the U.S. home building industry estimates it saved \$300 million per year in construction costs alone by using temperature trends to design efficient building foundations.
  - electricity providers use climate information to determine anticipated power demands for winter heating and summer cooling and to set electricity prices.
  - farmers use it to determine what crops to plant and when, as well as their irrigation needs.
  - Part of the military mission is to anticipate threats and changes to national security. Climate variability and change, and its interaction with and impacts on demographics, technology, globalization, and resource allocation and management, will be one of the drivers of security in this century. DoD recognizes the significant role that climate variability and change can play in "shaping the future security environment" as a potential "accelerant" of instability and conflict in the 2010 Quadrennial Defense Review and the 2010 National Military Strategy .
- Americans have come to depend on this information and are now demanding more information at finer geographic and time scales to make smarter choices at home and in their communities and businesses. For example,
  - NOAA saw an 86% increase in climate related data provided from data centers from 2009 to 2010 – from 806 terabytes to 1500 terabytes (or 1.5 petabytes), respectively. To put this in context, your favorite Kindle download averages about 800,000 bytes. So, in 2010, NOAA served up a total of at least 1.9 billion Kindle books worth of climate data, roughly 867 million more Kindle-book equivalents than in 2009.
  - On June 30, NOAA signed an MOU with the Western Governors' Association (WGA) on this issue. The WGA represents the Governors of 19 Western states and three U.S. Flag Pacific Islands. The Governors recognize the significant impacts of climate on our environment, infrastructure, economies and

communities, and they are committed to developing better information and new management strategies to build a resilient West. This would include reaching out to decision-making regarding climate variability and change.

- To meet the public's increasing demand for this information, NOAA's proposed internal agency reorganization would consolidate the management of its climate related programs, labs and data centers in a new Climate Service, in a number of ways like the National Weather Service. It would provide a single point of access for this information and better organize NOAA to be more responsive to escalating demands of state and local governments, as well as the private sector.
  - This concept first surfaced in the early 1970's and later gained prominence in the last (Bush) Administration. NOAA and external groups have been engaged in efforts ever since to further develop this idea and improve climate science and services.
  - To develop our proposal, NOAA's expert scientists and managers from across the agency and external experts, analyzed our current organizational structure, sought significant external input, and evaluated options for further improvement.
  - Chief among the external advisers was a National Academy of Public Administration expert panel that, at Congress' request, completed a study on options for a Climate Service in NOAA in the fall of 2010.
  - The unanimous conclusion among all the various panels, studies, internal and external scientists and decision makers was that the establishment of a single management structure encompassing the agency's core climate capabilities would be required if the agency is to rise to meet the nation's growing need for increasingly sophisticated information.
  - Our reorganization proposal maintains the highest standards of scientific integrity for all NOAA science and strategically renews and realigns the Office of Atmospheric Research's (OAR) forward-looking research agenda.
  - In proposing to house much of OAR's climate research in the proposed Climate Service Line Office, a structure strongly endorsed by NAPA, NOAA will both be able to better transition its high quality climate science into usable services and seize upon the opportunity to refocus OAR's efforts to incubate solutions to tomorrow's long-term science challenges, integrate an agency-wide science portfolio, and drive NOAA science and technology innovation.
- In the current state of the economy, maximizing organizational efficiency, creating jobs and stimulating economic growth are major priorities.
  - NOAA's proposed reorganization is budget neutral, comes at no additional cost to the taxpayer, and will allow NOAA to advance science and deliver services more efficiently and effectively with the funding it receives.
  - None of NOAA's climate or other research capabilities are diminished by this proposed reorganization, and we do not anticipate any marked change to the balance of internal vs. external funding.
  - NOAA's reorganization will also allow the agency to better support the development of the private sector climate industry that is emerging around NOAA's climate information, in much the same way that the roughly \$1+ billion private sector weather industry has grown up around NOAA's weather data.
- NOAA is committed to working with Congress to gain approval of its proposal.