



# Digital Services

## NDFD Expansion Planned for June 15

By Wayne Presnell and Glenn Austin, NWS Digital Services  
Wayne.Presnell@noaa.gov, Glenn.Austin@noaa.gov

On June 15, NOAA's NWS will add two new experimental elements to the National Digital Forecast Database (NDFD) for the lower 48 states, Puerto Rico, Hawaii and Guam. NWS will also upgrade six experimental elements to operational status for Puerto Rico and Hawaii.

The initial operating capability of NDFD, released last year, included 12 forecast elements. On June 15, NWS will add two new experimental elements: relative humidity and apparent temperature. These elements are derived from the operational temperature and dew point and experimental wind forecasts. Relative humidity and apparent temperature gridded forecasts will be available out to 7 days.

This is the first expansion of NDFD. The elements are being added in response to land management, emergency response and public health officials who requested relative humidity, wind chill and heat indices be added to the digital database.

Also on June 15, the following elements will be upgraded from experimental to operational status for Puerto Rico and Hawaii:

Maximum temperature	Temperature
Minimum temperature	Dew point
12-hour probability of precipitation	Weather

These six forecast elements are already operational for the lower 48 states and will be operational for Guam later this year. The remaining experimental grid elements are:

Quantitative precipitation forecast	Snow amount
Significant wave height	Sky cover
Wind direction	Wind speed

An ongoing NDFD assessment shows progress made toward improving these forecasts. An official decision is expected early this summer on which of these elements will become operational next, and when. Meanwhile, NWS plans to add additional experimental weather parameters to NDFD in the near future. Check future editions of *Aware* and the NDFD website for details on this evolving program: <http://www.nws.noaa.gov/ndfd>. ❄

## NWS Recognizes Need to Evolve Digital Services

By Glenn S. Austin, National Digital Services Program Manager  
Glenn.Austin@noaa.gov

Commerce is becoming increasingly dependent on computer transactions. Meanwhile, NOAA's environmental information is becoming a greater vital national asset in support of the nation's economic growth. Recognizing this need, starting in 2004, NWS began providing operational forecasts stored in NDFD in digital formats (see related article above).

## Aware

NOAA's  
National Weather Service  
Office of Climate, Water,  
and Weather Services

Dennis H. McCarthy  
Director

Kim Campbell, Chief  
Performance and  
Awareness Division

Bob McLeod, Chief  
Awareness Branch

### Editors:

Melody Magnus  
Donna Ayres  
Deborah Lavine

### Articles:

Melody.Magnus@noaa.gov

### Questions:

Melody Magnus:  
301-713-1970 x163

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Faster and more efficient methods of data exchange are still needed. To improve the production and distribution of critical weather information, NWS must continue to evolve. A successful transformation will depend on upgrading the agency's information technology infrastructure, including systems such as AWIPS.

Digital Services includes plans for improving how data is produced and flows to the customer. The implementation of Digital Services will help NOAA fulfill the President's Management Agenda to "expand electronic government." Digital Services also adopts the National Research Council's recommendation to "provide data and products in digital form." (Fair Weather Report; June 2003, <http://books.nap.edu/catalog/10610.html>)

Customers and partners have expressed their need for additional weather information in new formats and asked that this information be more reliable and accurate. Finally, customers requested forecast information with higher spatial and temporal resolution. Users, such as the U.S. Departments of Energy and Homeland Security, U.S. Forest Service, state and local emergency managers, broadcast media and commercial weather companies, have requested the following additions to NDFD:

- Hazardous weather watches and warnings
- Aviation, marine, tropical weather and hydrologic weather forecasts
- Weather information presented in probabilistic fashion
- Other data including snow and ice information and weather observations

To satisfy this critical need, NWS must commit to taking the following actions:

- Implement improved forecast tools including quality assurance applications
- Enhance the support of these software applications
- Develop, test and deploy new digital forecasts and formats
- Create new national guidance products
- Integrate other NOAA data into compatible digital databases
- Ensure forecasters are trained to use new tools and applications
- Educate consumers and monitor customer satisfaction
- Update, backup and maintain operational Internet servers and web-based applications

The NWS goal is to provide all these enhancements by 2012. By that date, NWS envisions the digital database(s) will have much finer geospatial and temporal dimensions and be much more interoperable exchanging data in standard, convenient-to-use formats. An ongoing dialogue with all stakeholders will ensure these capabilities will be developed in a coordinated fashion and guarantee relevant weather information continues to flow efficiently in this fast-changing world. ✨

























