

**Product/Service Description Document
(PDD)**

**National Digital Forecast Database (NDFD)
Experimental Graphic Forecast Displays**

Approved signed by Glenn Austin for

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Product Description Document
05/21/07**

Part I - Mission Connection

- a. Description of Product – The National Oceanic and Atmospheric Administration (NOAA) National Weather Service (NWS) National Digital Forecast Database (NDFD) Experimental Graphic Forecast Displays (<http://weather.gov/forecasts/graphical/sectors/>) are web-based presentations of digital forecast data originating from local Weather Forecast Office (WFO) digital databases, National Centers for Environmental Prediction (NCEP), and the NDFD server. The data are displayed in a mosaic form on national and regional scales.

This document describes three experimental elements which were included in the NDFD when it was first introduced in 2003; see Tables 1 and 2. Additional experimental NDFD elements for the CONUS, Puerto Rico, the Virgin Islands, Hawaii, Guam, and Alaska added to NDFD since July 2006 are documented in individual PDDs. PDDs for the additional experimental elements in NDFD, including six elements for Alaska, can be found in the list of NDFD-related PDDs and Service Description Documents (SDDs) at: <http://www.weather.gov/ndfd/pdd.htm>.

For a list of all the elements in NDFD, see:

<http://www.weather.gov/ndfd/technical.htm#elements>

Unique local scale products are not covered under this PDD. For PDDs describing unique local experimental graphic forecast displays, please use the following links:

Eastern Region:	http://products.weather.gov/PDD/ERNDFD.pdf
Southern Region	TBD
Central Region:	TBD
Western Region:	TBD
Pacific Region:	TBD
Alaska Region:	TBD

User feedback is important in the evolution of product development. The following tables reflect the periods when comments were solicited for these experimental elements.

Graphic Element	Comment Open Date	Comment Close Date
Quantitative Precipitation Forecasts (QPF)	6/13/03	9/15/05
Sky Cover	6/13/03	9/15/05
Snow Amount (not required for Puerto Rico or the Virgin Islands)	6/13/03	9/15/05

Table 1. Experimental NDFD Graphic Elements for the CONUS, Puerto Rico, and the Virgin Islands.

Graphic Element	Comment Open Date	Comment Close Date
Sky Cover	9/14/04	9/15/05
Snow Amount (not required for Guam)	9/14/04	9/15/05

Table 2. Experimental NDFD Graphic Elements for Hawaii and Guam. Note, QPF for Hawaii is described in a separate PDD; see: http://products.weather.gov/PDD/hi_qpf_pdd_expr_110106.pdf.

Element Characteristics: Depending upon the element, forecast time projections extend out to a maximum of 168 hours; for forecast time projections for individual elements in NDFD, see: <http://www.weather.gov/ndfd/technical.htm#elements>. Additional data fields having greater temporal and spatial resolution will be added as the NDFD matures.

For more information on the NDFD, please refer to the NDFD home page at: <http://www.nws.noaa.gov/ndfd/>.

- b. **Purpose** - In support of the mission described in the *National Weather Service Strategic Plan for FY2003 - FY 2008*, the NDFD is a "...national information database and infrastructure which can be used by other governmental agencies, the private sector, the public, and the global community." Graphic displays of these data are required by NWS forecasters needing to view a composite of the collective forecast efforts, and by emergency managers (and other decision makers) who require visual forecast information. Once these graphic displays are created, they are also made available to the general public. The NDFD graphic forecasts fulfill NWS objectives for improving the accessibility and availability of weather information to the public. Future graphic mosaic displays will be developed in accordance with growing user needs.
- c. **Intended Audience** - The NWS graphic forecasts are intended for government emergency managers, academia, businesses, and anyone in the general public who needs to view the content within the NWS digital forecast databases. While the data are available in digital form, many NWS customers cannot interpret or use these digital data unaided. For those who cannot, a graphic presentation is the most efficient means to communicate the large amount of information originating from NWS WFOs and National Centers.

- d. Presentation Method - The data are presented as web-based graphic images. NDFD graphics are available for the CONUS, Hawaii, Guam, Puerto Rico, the Virgin Islands, and Alaska.

The graphic forecast displays follow a standard format prescribed by the NWS to best meet the needs of its customers and partners. When selected by the user (via a mouse click on the national mosaic), regional mosaics provide images for 16 pre-defined and slightly overlapping geographic sectors throughout the CONUS, as depicted at the following URL: <http://www.weather.gov/ndfd/coverage.htm>. Additional sectors are available for Hawaii, Guam, Puerto Rico, the Virgin Islands, and Alaska. For the CONUS, an additional mouse click will drill down to graphics for each state. One final mouse click will zoom to individual WFO County Warning and Forecast areas. Most OCONUS (other than CONUS) sectors have limited zoom capability. For each geographic level of display, the user may select the weather element and time period to display, and create animations of the images.

- e. Feedback Mechanism - We are always seeking to improve our products based on user feedback. Please submit your comments on these experimental elements by completing our brief experimental product survey (<http://www.weather.gov/survey/nws-survey.php?code=gfp>). You can submit online feedback even after the comment period has closed. Comments may also be submitted by clicking on the “Survey/Comments” link located on the bottom of the experimental graphical product web pages.

For general questions regarding the National Digital Forecast Database, please email: nws.ndfd@noaa.gov.

Technical questions regarding the NDFD graphics may be addressed to:

National Weather Service Headquarters
ATTN: David Ruth, W/OST21
1325 E-W Highway, SSMC2
Silver Spring, MD 20910

Part II - Technical Description

- a. Format and Science Basis - The NDFD technical information is available on the web. Descriptions of the temporal and spatial resolutions of the graphics, geographic coverage, and other details are available at:
<http://www.nws.noaa.gov/ndfd/technical.htm>

Definitions of the individual elements are available at:

<http://www.nws.noaa.gov/ndfd/definitions.htm>

- b. Product Availability - The NDFD web-based graphics are available from the main National Weather Service homepage, www.weather.gov, by clicking on the “Graphical Forecasts” tab, or directly at the following URL:
<http://weather.gov/forecasts/graphical/sectors/>

Forecast grids are generated at the local WFOs and National Centers and revised on an event-driven basis. Revised grids are uploaded to the NDFD server and new graphic mosaics and sectors are generated at the top of each hour. At a minimum, revised mosaics are refreshed daily no later than 2200 Coordinated Universal Time (UTC); forecast grids for the next Day 7 are introduced daily at that same time.

- c. Additional Information -

- (1) National Weather Service Instruction (NWSI) 10-506, *Digital Data Products/Services Specification* provides detailed information on both experimental and operational elements in NDFD. See:
<http://www.nws.noaa.gov/directives/sym/pd01005006curr.pdf>.
- (2) Experimental graphic elements are differentiated from NWS operational elements by the “experimental” label found on the individual graphics.
- (3) Experimental graphic elements are evaluated on both objective (e.g., statistical data) and subjective (e.g., internal and external feedback) criteria. If individual elements described in this PDD are declared “operational”, they are removed from this PDD describing experimental elements.