

**National Digital Forecast Database (NDFD)  
Experimental Graphic Forecast Displays  
Product Description Document (PDD)  
10/01/03**

**Part I - Mission Connection**

- a. Description of Product - The National Weather Service's National Digital Forecast Database (NDFD) Experimental Graphic Forecast Displays (<http://www.weather.gov/forecasts/graphical>) are web-based presentations of digital forecast data originating from local Weather Forecast Office (WFO) digital databases and the NDFD server. The data are displayed in a mosaic form on national and regional scales. Local scale products are not covered under this Product Description Document (PDD). For more information on the NDFD, please refer to the NDFD Information web site at the following URL: <http://www.nws.noaa.gov/ndfd/index.htm>.

The WFO digital forecast data are uploaded to the NDFD server where regional and national mosaics are formed. These mosaic graphic images will display the following specific forecasted weather parameters:

**Group 1 Elements:**

MAXIMUM TEMPERATURE  
MINIMUM TEMPERATURE  
PROBABILITY OF PRECIPITATION /POP12/  
WEATHER  
SKY COVER  
WIND DIRECTION AND SPEED  
SIGNIFICANT WAVE HEIGHT

**Group 2 Elements:**

TEMPERATURE  
DEWPOINT  
QUANTITATIVE PRECIPITATION FORECAST /QPF/  
SNOW ACCUMULATION

Depending upon the element, forecast time projections will extend out to a maximum of 168 hours from initial issuance. Initially, the available elements (and their temporal and spatial resolutions) will be limited to those listed above, but additional data fields having greater temporal and spatial resolution will be added as the NDFD matures.

- b. Purpose - NDFD is a high resolution data set in non-displayable form. 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 primarily required by NWS forecasters

needing to view a composite of the collective forecast efforts, as well as emergency managers who require rapid visual forecast information to help make critical decisions. Once these graphic displays are created, they must also be made available to the general public. The NDFD graphic forecasts fulfill additional 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 and the general public who need 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.
- d. Presentation Method - The data are presented as web-based graphic images. The NDFD National mosaic provides weather forecast information for the entire contiguous United States (CONUS) and Puerto Rico. In the future, geographical data sectors will be available for OCONUS sites including, Alaska, Hawaii, and Guam.

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 predefined and slightly overlapping geographic sectors throughout the CONUS, and a sector covering Puerto Rico as depicted at the following URL: <http://www.nws.noaa.gov/ndfd/technical/coverage.htm>. For each geographic level of display, the user may select the weather element and time period to display, and create a looped presentation of images over time.

- e. Feedback Mechanism - We are always seeking to improve our products based on user feedback. Please submit your comments by completing our brief [experimental product survey](#). Comments may also be submitted by clicking on the “Survey/Comments” links on the experimental product web pages.
  - Specific comments regarding **Group 1 Elements** (shown in section {a.} above) will be accepted through **December 1, 2003**. The evaluation of these elements will be completed while they continue to be available as experimental. The process, and decision whether to declare them official, will be completed no later than **March 31, 2004**.
  - Specific comments regarding **Group 2 Elements** (shown in section {a.} above) will be accepted through **March 31, 2004**. The evaluation of these elements will be completed while they continue to be available as experimental. The process, and decision whether to declare them official, will be completed no later than **June 30, 2004**.

For general questions regarding the National Digital Forecast Database, please email: [nws.ndfd@noaa.gov](mailto:nws.ndfd@noaa.gov)

## Part II - Technical Description

- a. Format & Science Basis - The NDFD forecast element definitions and technical information (e.g., temporal and spatial resolutions of the graphics, and geographic coverage) may be found on the NDFD technical page at the following URL:  
[www.weather.gov/ndfd/technical/technical.htm](http://www.weather.gov/ndfd/technical/technical.htm)
  
- b. Product Availability - The NDFD web-based graphic mosaics are continuously available on the NDFD web page. Forecast grids are revised at the local WFOs on an event-driven basis. The revised grids are uploaded to the NDFD server and new graphic mosaics are generated shortly after the top of each hour. At a minimum, revised mosaics will be refreshed daily around 1800 Coordinated Universal Time (UTC). Use the URL below to access real-time NDFD graphic mosaics:  
<http://www.nws.noaa.gov/forecasts/graphical/>
  
- c. Other Details -
  - National Weather Service Instruction (NWSI) 10-506 will be the official procedural directive for NDFD.