

**Experimental
National Digital Forecast Database (NDFD)
Full Resolution XML Web Service
NWS Product Description
Document (PDD)**

Part 1 - Mission Connection

a. Product Description – The [National Digital Forecast Database \(NDFD\)](#) contains a seamless mosaic of digital weather forecasts from National Weather Service (NWS) field offices and the National Centers for Environmental Prediction (NCEP).

On August 28, 2012, the spatial resolution was increased experimentally in the National Digital Forecast Database to 2.5km resolution for all forecast times. In addition, the temporal resolution was made accessible at one hour resolution for the first 36 hours from NDFD issuance time in experimental status. These are the finest spatial and temporal resolutions at which NWS Weather Forecast Offices (WFOs) in the Conterminous United States (CONUS) provide forecasts. Forecasts from WFOs and NWS National Centers that employ coarser resolutions will be mapped onto the finer resolution NDFD grid.

On August 14, 2014, the experimental resolution increase was transitioned to operational status. Since that time, data from NDFD Simple Object Access Protocol (SOAP)/REST/XML web services have continued to be made available at the old coarser resolution.

b. Purpose – In support of the mission described in the *National Weather Service Strategic Plan for FY2005 - FY 2020*, "expanded digital services allow communication of forecast information with greater resolution in time and space and facilitates the integration of data in all service program areas." The NDFD is the primary means by which digital information is available to customers and partners.

NDFD XML allows NWS customers to maximize the economic value of NDFD data by making it available in a convenient and understandable form. NDFD XML makes this possible because XML is a widely accepted World Wide Web Consortium (W3C) standard for data exchange via the Internet.

Full resolution data from NDFD web services will be made available experimentally in order to be consistent with the resolution of data provided in Gridded Binary Data Edition 2 (GRIB2) via file transfer protocol (ftp) or hypertext transfer protocol (http), and that of graphical images produced by the NDFD Map Viewer.

c. Audience – NDFD XML is intended primarily for web applications developers requiring the weather information contained in the NDFD. These users represent members of the public, government agencies, and private sector entities.

d. Presentation Format – The service is presented as a stream of character data sent over the internet. These characters represent the XML elements and attributes and the NDFD data they wrap.

The full resolution NDFD XML web service can be accessed at:

<http://preview.weather.gov/xml/>

e. Feedback Method – The NWS will accept comments and feedback on the increase in resolution for NDFD web services during the experimental period through December 31, 2015. Links to surveys are online at:

<http://weather.gov/survey/nws-survey.php?code=xmlsoap>

General information on accessing and using NDFD elements is online at:

<http://ndfd.weather.gov/technical.htm>

For general questions regarding NDFD data, please email:

nws.ndfd@noaa.gov

Part II – Technical Description

a. Format and Science:

See the following link for a complete description for each forecast element available at full resolution from the NDFD XML web service.

http://www.nws.noaa.gov/ndfd/resources/NDFDelem_fullres.xls .

b. Product Availability – This experimental web service is expected to be available consistently 24/7. The underlying NDFD forecasts are updated according to NWS Directives and Instructions.

c. Additional Information – Detailed information about the NDFD is also [available online](#) .