

# NDFD Frequently Asked Questions (FAQs)

## [FAQs & Answers from WR offices](#)

**Q. How are the grids actually made (Forecast and mosaic process)**

**A. Forecasters in over 120 Weather Forecast Offices around the country apply considerable local weather knowledge and meteorological skill to the creation of the grids that go into the National Digital Forecast Database or NDFD. Each office is responsible for the grids over a specified area typically about the size of the state of West Virginia (the size of each area varies based on local geographic considerations). Forecasters at each office coordinate individually with forecasters at neighboring offices to generate grids that are meteorologically consistent in both space and time. When the grids are completed in this fashion locally, they are then sent to the NWS computing facility in Camp Springs, Maryland and combined into the gridded forecast mosaic known as the National Digital Forecast Database. The grids are often updated at individual offices. To allow for this updating, the NDFD data is updated with the latest data at the top of the hour.**

**Q. How are the grids verified?**

**A. At the moment the data in the grids is verified at specified points where meteorological observations are taken and have a history that can be used to generate model output statistics (MOS). These points are similar to the points at which the NWS verified its old style text forecast for the better half of the 20<sup>th</sup> century. They can be seen at <http://www.nws.noaa.gov/ndfd/verification/index.htm>. Work is feverishly being done to generate analysis grids that can be used to verify the grids in a more spatially significant way. Current quality assessment information for the NDFD gridded forecasts is available at: <http://www.nws.noaa.gov/ndfd/verification/index.html>**

**Q. How can I get the data into my GIS or into shape files?**

**A. NDFD grids are encoded in WMO standard GRIB v2 format. A downloadable GRIB2 decoder is available at [www.nws.noaa.gov/mdl/NDFD\\_GRIB2Decoder/](http://www.nws.noaa.gov/mdl/NDFD_GRIB2Decoder/). The decoder allows the output of the NDFD grids to be displayed as shapefiles, netCDF, GrADS, float files, and comma separated variable files. The decoder must be downloaded to your PC. Running it allows the user to both retrieve the GRIB2 files and then convert them to the desired file format. Complete instructions for using this software are posted on the web site.**

**Q. What other options are available to get the actual gridded data?**

**A. No other options are currently available to get the actual grids.**

**Q. How can I most easily get site specific data (actual grids or through web interface)?**

**A. If you can use the files generated by the GRIB2 Decoder, this is the probably best way to consistently get data for a specific location. Otherwise, the Western Region of the NWS maintains a link on our website [www.wrh.noaa.gov](http://www.wrh.noaa.gov) called "Prototype Digital Forecasts". This links to an web page that can be used to access values for a specific location from the grids in a variety ways: Text, tabluture, or XML; resolution of 1,3, 6, or 12 hours; forecast duration of 1 through 7 days. The information can be retrieved by inputting either a city name or a specific latitude/longitude pair.**

**Q. How is this different from regular model data?**

**A. Model data is 3 dimensional; whereas the NDFD data represents weather elements which can be either measured or sensed from the ground only (thus by definition 2 dimensional). The NDFD also benefits from having humans make improvements to data that in some cases is derived directly from a forecast computer model. This is especially important as there are many different computer models that a forecaster will consider before making any forecast decision.**

**Q. Why does the elevation I get on the grid page never match my elevation?**

**A. The grid is not the same as a point.**

### **[FAQ/Answers from nws.noaa.gov.ndfd](http://www.weather.gov/ndfd)**

***Q. When will forecast data from the NDFD become available on the Internet as an XML data feed?***

**A. Forecasts from the NDFD became experimentally available via XML in [June 2004](#).**

***Q. What can I do if none of the 16 predefined NDFD sectors matches the area for which I need forecasts?***

**A. A web service that provides the capability to download NDFD grids for user-defined domains is now online. See [weather.gov/ndfd](http://weather.gov/ndfd).**

***Q. In what formats can I access NDFD grids?***

**A.** NDFD grids are encoded in WMO standard GRIB v2 format. A [downloadable GRIB2 decoder](#) available at [weather.gov/ndfd/technical.htm](http://weather.gov/ndfd/technical.htm) can output NDFD grids as shapefiles, netCDF, GrADS, float files, and comma separated variable files.

***Q. When will NDFD grids become official products?***

**A.** On December 1, 2004 , selected forecast elements in the NDFD became official NWS products. In 2005, all NDFD products will become official products:

- Maximum Temperature
- Minimum Temperature
- Probability of Precipitation (PoP12)
- Weather
- Sky Cover
- Quantitative Precipitation Forecasts (QPF)
- Wind Direction
- Wind Speed
- Snow Amount
- Temperature
- Dewpoint
- Significant Wave Height

***Q. How frequently are the updates to the NDFD gridded data made available?***

**A.** The gridded forecast products in the NDFD are updated once per hour.

***Q. Where can I find NDFD verification scores?***

**A.** An initial set of quality assessment information for the NDFD gridded forecasts is available at:

<http://www.nws.noaa.gov/ndfd/verification/index.html>

***Q. Where in NDFD do I find information on past weather?***

**A.** The NDFD currently contains only forecast data. A good place to look for historical observational data is the National Climatic Data Center at:

<http://www.noaa.gov/pastweather.html> or

<http://www.ncdc.noaa.gov/oa/ncdc.html>

***Q. At what times are NDFD forecasts updated? What can I do if they are missing?***

**A.** Our target is to provide an updated set of forecast grids by the top of each hour. During periods of high-volume, updates

are sometimes delayed until 5-10 minutes after the hour. Please contact the staff at the NWS Telecommunications Operations Center (TOC) for questions or problems regarding data access, and availability. The phone number of the TOC is 301-713-0902. The TOC is staffed 24 hours per day, 7 days a week including holidays, to provide customer support for the NDFD data disseminated via the ftp and http protocols.

*Q. Why are there sometimes holes in the NDFD mosaics?*

A. NWS forecast offices attempt to provide forecasts to the NDFD in a timely fashion. Occasionally, a NWS office's transmission of the data may be delayed due to unforeseen circumstances.

*Q. Why do I sometimes see unnatural discontinuities in the NDFD grids?*

A. Each forecast office prepares gridded forecasts for a specific area of responsibility. When these locally generated forecasts are merged into a national mosaic, occasionally lines of discontinuity will be evident. Staff at NWS forecast offices attempt to resolve discontinuities along the boundaries of the forecasts using forecast tools that identify and resolve these differences. We are making progress in this area, and recognize that this is an area in which we still need to improve.

*Q. Where can I find information on the weather text strings in NDFD grids?*

A. The abbreviations for weather types in NDFD can be found in Section 2 of the GRIB encoding details at [http://www.nws.noaa.gov/datamgmt/doc/GRIB2\\_encoding.html](http://www.nws.noaa.gov/datamgmt/doc/GRIB2_encoding.html)

*Q. Why do weather types appear in the grids that are not defined in the GRIB documentation?*

A. Local Weather Forecast Offices sometimes employ special weather types for their own local purposes.

*Q. How can I find out about upcoming technical workshops concerning NDFD?*

A. Check the [NDFD general information](#) page.

*Q. How much does it cost to obtain NDFD forecasts?*

A. NDFD is open to all and the data is freely available via the Internet.

*Q. When will Marine forecast grids become available in NDFD?*

A. We plan to begin to provide additional marine elements in

the NDFD such as experimental forecast grids of swell height, period and direction in 2005.

***Q. When will forecasts for Alaska and Hawaii become available in the NDFD?***

**A.** The goal is to provide forecasts from Hawaii and Guam beginning in October 2004, and from Alaska beginning in June 2005.

***Q. How can I access a forecast for a specific date and location?***

**A.** **NDFD graphical forecasts** are posted on the web. You can access the latest NWS text forecasts for any point along a route by clicking down to the local forecast office web pages from these graphics of the national scale forecasts.

***Q. Why are the graphical forecasts on the national, regional, and state graphics on <http://weather.gov/forecasts/graphical> sometimes inconsistent with those available on the local forecast office web pages?***

**A.** In general, graphics produced by local forecast offices are not updated as frequently as the NDFD forecast graphics. The forecast currency link near the bottom of the NDFD graphics pages indicates how long it has been since any particular WFO has provided an update to NDFD

***Q. How can I convert the NDFD grids from GRIB2 format to GIS files?***

**A.** The **DEGRIB** [link to [http://www.nws.noaa.gov/mdl/NDFD\\_GRIB2Decoder/](http://www.nws.noaa.gov/mdl/NDFD_GRIB2Decoder/)] tool developed by the Meteorological Development Laboratory provides a driver with the capability to convert the GRIB2 data to a file format that can be used with Geographical Information System (GIS) software.