Department of Commerce •National Oceanic & Atmospheric Administration •National Weather Service

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Operations and Services

Digital Services Specification, NWSPD 10-2

WEB-BASED PRODUCTS SPECIFICATIONS

NOTICE: This publication is available at: http://www.nws.noaa.gov/directives/.

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SUMMARY OF REVISIONS: This directive supersedes NWSI 10-203, *Web-Based Products Specifications* dated October 23, 2009. Primary revisions to this document include:

1. Update to Web-Based Graphical Products, Section 3
2. Removed Link for Office Configuration, Section 4.1
3. Update to Web-Based Services, Availability and Timeliness, Section 4.2.4
4. Update to NDFD Spatial Resolution, Section 4.2.6
5. Update to NDFD Temporal Resolution, Section 4.2.7
6. Update Approving Official

Signed 8/26/14
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Web-Based Products Specifications

1 Introduction

This procedural directive provides specifications for products generated from the digital forecast database prepared by the National Weather Service (NWS). A description of specifications for the National Digital Forecast Database (NDFD) graphic forecast displays includes national and regional forecast mosaics. Specifications include instruction on interactive web-based services including national, regional, and local applications. Additionally, specifications include instruction on displaying information and making changes on the World Wide Web (WWW).

2 Mission Connection

Web-based services utilizing national, regional and local databases deliver NWS forecasts in an efficient and accessible form. These services are designed to give our users a method to provide accurate weather forecast information in an environment of rapidly changing and evolving needs.

3 Linkage to Official Web-Based Graphical Products

Information on new or enhanced products is available in the *National Catalog of New or Enhanced Products and Services Changes*. The catalog lists products in experimental phase for comment and review, as well as those which have been approved for operational use. The link to the catalog is: http://products.weather.gov.

4 Interactive Web-Based Services

4.1 National Web-Based Services

National web-based services should meet national user requirements for digital services which are widespread (multi-regional or national) in scope or coverage. Services should be timely, accurate, and consistent (meteorologically, functionally, and aesthetically) with other NWS web-based digital services. The NDFD elements are accessed via file transfer. Links to the data, supporting information and software are available through: http://www.weather.gov/ndfd/technical.htm.

Specific point forecasts are available by way of each WFO web page or through a zip code / city search engine on numerous NWS web pages.

4.2 Regional Web-Based Services

Regional web-based services should meet user requirements for digital services covering multi-state, or multi-WFO geographic areas of responsibility. Services should be timely, accurate, and consistent (meteorologically, functionally, and aesthetically) with NWS national web-based digital services.

4.2.1.1 Multi-Format Forecast Information Web Page

This service is an interactive forecast information web page allowing users to access forecast information that is always current with higher resolution than is possible in traditional text forecast products (which may be averaged over time and space). Users can view forecast information retrieved directly from locally prepared forecast grids in a variety of formats, including icons, text, tabular and graphic.

Data fields include, surface temperature, dew point, wind speed and direction, weather, sky cover, and probability of precipitation.

4.2.1.2 Purpose

Advances in computer capabilities and web services technologies, as well as scientific advances in NWS software, have prompted the NWS to create user-based web services. Information dissemination via the WWW allows users to obtain high resolution forecast information in a variety of formats on-demand.

4.2.3 Audience

The audience for the forecast information web page consists of all individuals, agencies, and businesses interested in detailed and accurate weather forecasts, including the general public and partners such as emergency management, other government agencies, universities, media, and private companies.

4.2.4 Availability and Timeliness

All data disseminated by NWS web services are either sent via approved data transmission methods for reception by NWS Internet Dissemination System (NIDS) and other web servers for processing/presentation. Data should be available on the web site within a reasonable timeframe depending on the criticality of the data.

4.2.5 Presentation Format

The web grid point forecasts are presented for display as HyperText Markup Language (HTML) in text, hourly meteogram, and digital/tabular format. The forecasts can be viewed using a Web browser, and then selected on a map location or by entering specified latitude and longitude coordinates.

4.2.6 Spatial Resolution

Full resolution became experimental in the NDFD on August 28, 2012. The NWS transitioned the spatial resolution in the NDFD from experimental to operational status in August 2014. The operational NDFD is now available at 2.5 km spatial resolution for all forecast times. These are the finest spatial resolutions at which Weather Forecast Offices (WFOs) in the Conterminous United States (CONUS) provide forecasts. Forecasts from NWS offices and centers employing coarser resolutions will be mapped onto the finer resolution NDFD grid. This change will not affect grids for Alaska, Hawaii, Guam, Puerto Rico and the Virgin Islands, or the pre-defined 16 CONUS subsectors which will remain at their current operational resolutions.

4.2.7 Temporal Resolution

Temporal resolutions vary depending on forecast type. Text forecasts via the Point Forecast Page are available out to 7 days; Tabular Forecast out to 6 days for applicable forecast elements, and Meteograms / Hourly Weather Graph are displayed in 48 hour periods.

Full resolution digital data became experimental in the NDFD on August 28, 2012. The NWS transitioned the temporal resolution in the NDFD from experimental to operational status in August 2014. The operational NDFD is now available at one hour temporal resolution for the first 36 hours from NDFD issuance time. Beyond 36 hours, the NDFD data are available either in three or six hourly periods, depending upon the forecast element, through Day 7. These data are the finest temporal resolutions at which CONUS WFOs provide forecasts.

4.3 Local Web-Based Services

Local web-based services created by individual WFOs to include special support operations should be designed to meet local user requirements for digital weather information in multiple forms (e.g., text, graphics, and interactive services). Products and services should be timely, accurate, and consistent (meteorologically, functionally, and aesthetically) with NWS national and regional web-based products / services.