

**NATIONAL WEATHER SERVICE INSTRUCTION 10-102
MAY 18, 2006**

***Operations and Services
NWS Requirements, NWSPD 10-1***

NEW OR ENHANCED PRODUCTS AND SERVICES

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

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SUMMARY OF REVISIONS: This directive supersedes NWS Instruction 10-102, dated August 28, 2002. This directive expands on the purpose and duration of experimental products/services. Information on format, approval process, and feedback has been enhanced. Umbrella PDDs (Sub elements under a parent PDD) have been addressed as well as Mandatory vs Optional National Products

Signed by _____ May 4, 2006
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and Weather Services

New or Enhanced Products and Services

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1. Purpose. The purpose of this directive is to describe procedures for implementation of an experimental product/service or a change to an existing operational product or service, consistent with NWS Policy Directive (NWSPD) 1-10, Managing the Provision of Environmental Information, and its Instruction. Procedures for notification of new, enhanced, or discontinued products and services that require public notification are described in NWS Instruction (NWSI) 10-1805, “National Service and Technical Change Messages”. Objectives of these procedures are to:

- a. Establish an orderly process for documenting change to National Weather Service (NWS) products and services;
- b. Subject proposed products and service changes to external review and comment;
- c. Establish steps for evaluating comments and deciding if the product or service should be made operational (official), discontinued, or improved and reissued for new comments.
- d. Establish the minimum necessary controls on innovative efforts to develop new products and services consistent with the need to ensure equitable services and mission relevance of products and services.

2. Framework. Throughout this document the word products will refer to both products and services. Description documents will include Product Description Document (PDD) and Service Description Documents (SDD). Products and service can be developed or changed at any level of the NWS – these procedures apply to national, regional, or local products/services. The following procedural steps will apply to the development of both product types (national products may include an additional evaluation step):

- a. Product/Service Description Document (PDD) development
- b. Experimental phase (user/partner feedback)
- c. National product prototyping (optional)
- d. Approval for operational use
- e. Feedback (continuous)

2.1 Applicability. The procedures in this directive apply to experimental products as well as substantial changes (enhancements) to existing operational products. Numerical prediction guidance products are exempt from the policies in this directive.

In the case of products developed by the FAA AWRP, approval for experimental or operational implementation on NWS systems may be steered by the joint FAA/NWS Aviation Weather Technology Transfer (AWTT) process, provided NWS timelines and requirements are met for documentation and user notification as outlined in this directive.

For purposes of this directive, the following definitions apply:

- a. Existing Operational Product – same as “current product” – a product currently issued on a national, regional, or local basis and defined in a product specification directive or a regional or local supplement.
- b. Experimental Product – a “new product” – a product issued on a test, demonstration, or experimental basis.
- c. Substantial change to An Existing Operational Product – same as “implementing an enhanced product” – a major change to a current product, for example, involving use of an entirely new delivery mechanism – e.g., display of current text product information in graphical form on the Internet. See NWSPD 1-10, for guidance on what is considered a “substantial” change.

For purposes of this directive, the following do not reach the threshold of being “a substantial change to an existing operational product:”

- a. Forecast and warning improvements to an already existing product, achieved through evolutionary improvements in NWS forecast processes and technologies
- b. Addition of one or more new forecast and warning locations to a current product, consistent with the six principles outlined below in Appendix B – section 2 (Guiding Principles)
- c. Revision of text product format, after the revisions have been coordinated with user and partners in accordance with NWS procedures.

2.2 Process Overview. Figure 1 describes the process to follow in developing and implementing a new or enhanced product or service. Products and services in this process are either national or regional/local in scope.

3. Product/Service Development. A new or changed product/service begins as a concept which is developed into a proposal. Once the proposal has been articulated but before development begins, the responsible office will ensure that implementing the new or changed product/service would be acting in a fair and evenhanded manner with respect to the private sector and accomplished in a manner which maximizes fairness and openness. The six guiding principles outlined below will be followed when considering whether a new product or service or change to an existing product or service can be made:

- a. Mission connection – the product or service must be connected to the NWS mission.

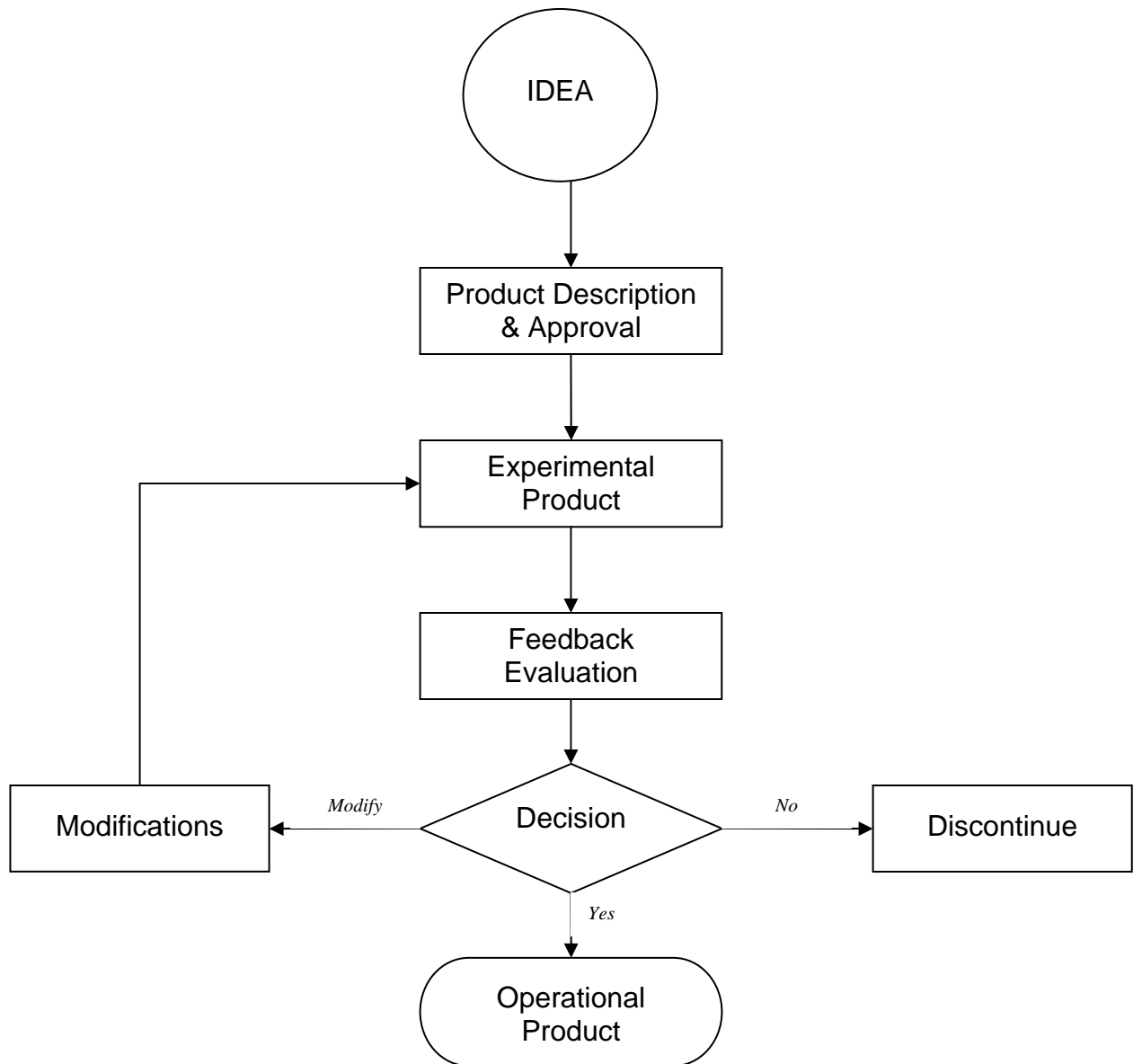
- b. Life and property first – protection of life and property must be placed first in the allocation of resources and the development and dissemination of products and services.
- c. No surprises - all users, including those in the private sector, must be provided adequate notice and opportunity for input into decisions regarding the development and dissemination of products and services.
- d. The taxpayers own the data - Open and unrestricted dissemination of publicly funded information is good policy and the law.
- e. Equity – all dealings with various constituents must be equitable and not show favoritism to particular partners, particularly those in the academic and commercial sectors. A service to a segment of the user community will not be provided that cannot be provided to all similar types of users.
- f. Maintain and explain the routine - When faced with requests for specifically tailored services, make sure the user fully understands the products which NWS "routinely" provides. Requests for specifically tailored products/services will be referred to the private sector.

Once it has been determined that the above six guiding principles can be met, the responsible office will take the following steps to appropriately document the new or enhanced product/service:

- a. Review guidelines (see Appendix B) to ensure the proposed product/service is consistent with the NWS mission and policy. In some service programs, it may be a requirement to coordinate with a designated development program manager who is responsible for activities such as identifying and managing development projects, facilitating coordination among developers, tracking progress and providing reports, and maintaining development management web pages.
- b. Review the NWS Product Inventory database (at <http://products.weather.gov>) to ensure work is not already underway or completed on a similar product/service.
- c. Follow accepted practices and applicable policies in developing product/service prototypes (e.g., change management procedures).
- d. Determine the appropriate geographic area (local, regional, or national).
- e. Prepare a PDD (Appendix B).
- f. Gain approval of the PDD (OCWWS/Regional/Center Director).
- g. Submit approved PDD and Information Template (Appendix G) to OCWWS (OS1) for posting.

After the above steps have been taken, the appropriate geographic area (local, regional, or national) will be determined and work can begin on a product/service prototype and any required software applications. Accepted practices and applicable policies (e.g., change management procedures) will be followed.

New or Enhanced Products/Services Process



4. Product/Service Description Document. PDDs have two purposes:
 - a. They provide official information to users and partners about the intent to provide a new or enhanced product/service that will initially be made available for comments/feedback during a specified time period. The PDD will describe the product/service content, format, intended purpose, and target audience.
 - b. They point to the location where detailed information is provided for experimental or, in some cases, existing operational products/services.

Each PDD is provided in the National Catalog of New or Enhanced Products on the Internet at <http://products.weather.gov>.

4.1 Format. The PDD has the author respond to the five journalistic questions (who, what, when, where, and why) to describe the content, format, and purpose of the proposed product/service. When modifying existing products/services or developing new ones, it is critical to understand the intended use of, and the mission need for the product/service. The PDD will have the following components:

- a. Mission Connection
 - (1) Product/Service Description
 - (2) Purpose/Intended Use
 - (3) Audience
 - (4) Presentation Format
 - (5) Feedback Method/Period
- b. Technical
 - (1) Format and Science Basis
 - (2) Availability
 - (3) Additional Information

A more detailed description for completing a PDD is included in Appendix B and example PDDs are in Appendix C.

4.2 PDD Approval. Each PDD will be approved by the appropriate NWS Director(s) before a product/service is made available on an experimental basis. If the proposed experimental product/service involves users in only one NWS region, the corresponding regional director approves the PDD. If the product/service involves NWS offices in more than one region, the PDD will be coordinated with the directors of all affected NWS regions, with final approval given by the director in the originating region. If a proposed experimental product/service involves a national product/service from local offices or one or more of the National Centers for Environmental Prediction (NCEP), the Director, Office of Climate, Water, and Weather (OCWWS), will approve the PDD. All PDDs will be approved/disapproved by the appropriate director via a written response within 21 working days of receipt.

4.3 Submission of Approved PDDs. Approved PDD, along with the associated Information Template (Appendix G), will be forwarded to managers of the PDD database via NWSProducts@noaa.gov. OCWWS (Operations and Requirements Division) will maintain a catalog of PDDs with links to all experimental products/services. Regional directors will provide to the OCWWS Director the latest PDD to ensure that the catalog is current. PDDs will be submitted in Word or Adobe PDF format only. The database manager will link the PDD to the web site within 5 working days once all required information has been provided. The responsible office(s) will ensure all experimental PDDs are consistent with NOAA's Partnership Policy.

5. Experimental Product Distribution and Evaluation.

5.1 Distribution. Once approved, the responsible office will distribute the product/service with the primary purpose of receiving partner/user feedback. The product's labels must clearly identify it as experimental (e.g., Experimental Precipitation Runoff Rate). If the product/service is available via the internet, the Uniform Resource Locator (URL) of the page will be included in the PDD.

5.2 Feedback and Evaluation. Procedures to use in obtaining feedback are outlined in Appendix D. Information needed to Request a Survey is provided in Appendix H. Evaluation guidelines are contained in Appendix F. At the conclusion of the feedback period, the approving NWS Director(s) will evaluate the experimental product, taking into account user feedback and determine if the product should be terminated, reevaluated (resubmitted with changes), or permanently implemented.

5.3 Duration. The duration a product is allowed to be issued on an experimental basis will range from a minimum of 30 days to a maximum of 1 year. It is understood that some products (i.e., seasonal, climate, etc) could require more time, but the majority completed within a year, thus a longer comment period may be granted on a case by case basis. Not later than 90 days after the end of the comment period, the deciding official will make a clear decision regarding the product/service based on an analysis of the evaluation information. This decision should be made available upon the user's request.

Decisions will result in one of the following actions:

- (1) declare the experimental product operational,
- (2) discontinue the experimental product, or
- (3) re-submit the product for another comment period. A decision to re-submit the product for another comment period may be appropriate if
 - (a) the product was submitted as a local product, but is going to be considered for implementation as a national product;
 - (b) the comments have revealed a need to change the product, and a revised product is going to be made available for another comment period; or
 - (c) in rare cases, if the conditions during the comment period have not produced a sufficient number of representative cases.

- (d) it is determined that the product is appropriate, but there are currently insufficient resources to transition to operational status.

When a product is re-submitted, the PDD must be revised if the product is changed, and comments submitted during the original comment period will still be applied to the re-submitted product.

After the comment period, the product/service will be discontinued, re-submitted or made operational (official).

6. Approval for Operational Use. Once approved, an updated PDD should be submitted to OCWWS (Operations and Requirements Division) for posting. The database manager will post the updated PDD to the official section and remove the old PDD from the experimental section of the National Catalogue of New or Enhanced Products. To ensure all PDD approvals are consistent with NOAA's Partnership Policy, prior to posting an approved PDD, OCWWS (OS1) will provide a copy to the Office of Strategic Planning and Policy (SPP).

6.1 Local/Regional Products. Regional directors will approve/disapprove new products/services or product/service enhancements intended for local use. Regional products for users in more than one NWS region must be approved by all appropriate directors. A copy of the product evaluation (see Appendix F) will be kept on file by all approving directors and a copy sent to nws.infoservice.changes@noaa.gov. In keeping with policy directive 1-10, apply the following rules:

- a. If a "local" product is not judged to be a "substantial change" (see directive 1-10) from an existing "national" product, the local product simply should not be produced – the change should be made to the "national" product or not at all.
- b. If a "local" product is a "substantial change" from an existing "national" product, we should question whether the proposed change is appropriate for the national product, only if the answer is no should the local product be produced.

6.2 National Products. The Director, OCWWS will have the authority to approve or disapprove new products/services or enhancements to products/services intended for national operational use (this includes the National Centers). OCWWS Director may choose to initiate an expanded prototype and feedback phase prior to making a decision on operational use. When the OCWWS director reaches a final decision to approve or disapprove a product, a copy of the product evaluation (see Appendix F) will be provided to all affected NWS units and a copy sent to NWS.infoservice.changes@noaa.gov.

6.3 Mandatory vs Optional National Products. A product/service should be identified as a national mandatory product/service when it has applicability on a nationwide basis and when NWS can support it on a nationwide basis. A product/service should be identified as national optional when NWS can support it on a nationwide basis but the product/service may not be applicable on a nationwide basis.

6.4 Notification. Partner/users will be provided 30 days notification prior to discontinuing an experimental product or converting an experimental product to an operational product. Notification will be made by issuing Public Information Statements (including Service Change Notices [SCN] and Technical Implementation Notices [TIN]) for the application dissemination pathways (e.g., Family of Services, NOAA Port, EMWIN) through coordination with NWSH and the responsible offices. If applicable, notification should also occur on the Web site containing the product/service.

6.5 Directives Review/Official Product Designation. The approving NWS Director will conduct a review of NWS directives for any necessary changes and initiate actions to accomplish these changes. When all required changes are complete, the operational product will be designated as an official NWS product.

7. Umbrella PDDs. PDDs exist which contain several sub-elements (i.e., aspects or features of a product/service) under a parent PDD. Normally a one-to-one correspondence between a product/service and a PDD is required to provide adequate documentation for all products, including both “policy” documentation (why we produce it, connection to mission, etc.) and “technical” documentation (techniques used to produce it, format description, etc.). Under an Umbrella PDD one general document may be written for the overall product/service (e.g., NDFD). Included within the umbrella PDD are references or links to other documents that may be, for example, regional or optional national. Web links can simply link back to the “umbrella” PDD for the description of all of the applicable general information required, leaving only the specifics about the individual element in the “attachment.” Using cross-links in a thoughtful way can improve the readability of every PDD, avoid duplicating information in multiple locations, and show more clearly how the information in any product is related to the information in other products.

8. Feedback on Operational Products. NWS will seek ongoing user feedback on official products.

8.1 Feedback Statements. For products that lend themselves to the inclusion of a statement requesting feedback, the statement will include the name of the person responsible for receiving feedback for each specific product and instructions on how to submit comments. Web-based products will complete a Request for Survey (Appendix H).

8.2 Periodic Feedback Notices. For products that do not lend themselves to the inclusion of such a statement, periodic notices via Public Information Statements and/or other appropriate mechanisms will be transmitted on the same data stream as the product(s) in question.

8.3 Feedback Review. Each person responsible for receiving feedback will review the feedback at least annually and, when necessary, pursue modifications to the product.

9. Provision for Emergencies. If life and safety concerns require emergency dissemination of NWS information in a form other than an official product, the responsible office will do so. If the office(s) involved intend to continue issuing this information as a new product, the provisions of this directive will be followed as soon as possible.

APPENDIX A

Definitions

User - an individual, government agency, or other entity which obtains and applies NWS water, weather, and climate information and services.

Data Service - Any capability provided by NWS for users to interactively access a subset of NWS data.

Experimental Products - Products available for testing and evaluation for a specified, limited time period for the explicit purpose of obtaining user feedback.

NCEP - National Centers for Environmental Prediction

OCWWS - Office of Climate, Water, and Weather Services

Official Products - Operational products defined in NWS policy

Operational - Produced on a reliable and continuous basis

Local Operational Implementation - A locally generated products at several NWS site(s) for a sub-national user-defined area that often extends across NWS regional boundaries

National Operational Implementation - A locally generated product produced at all sites of the same type Operational (e.g., WFOs, centers) for users nation-wide

Partners - Companies, corporations, vendors, agencies, universities, etc., that associate with NWS in the distribution of weather information

PDD – Product Description Document

SDD - Service Description Document

Product¹ - Any collection of NWS information in a defined format

Service - Any method for providing NWS information

Guidance - Forecast models and tools used by forecasters in creating official forecast products

EMWIN - Emergency Managers Weather Information Network

SPP - Strategic Planning and Policy

¹Note: While the term “product” is used almost exclusively in this document, all elements of this instruction refer to both ‘Experimental NWS Products and Data’ and ‘Data Services’ (as defined above).

APPENDIX B
Guidelines for Experimental NWS Products/Services for National or Local/Regional Implementation

1. Introduction. This appendix provides the document format required to describe experimental (new or enhanced) and official NWS products. Advances in science and technology [e.g., Interactive Forecast Preparation System (IFPS), National Digital Forecast Database (NDFD), and Advanced Hydrologic Prediction Services (AHPS)] provide the capability to produce better information in multiple formats for use by users and partners. We must consider the content and format of proposed new products to ensure they meet our mission, effectively convey information, and are understandable and consistent in format.
2. Guiding Principles. NOAA must act in a fair and evenhanded manner and in accordance with NOAA's Partnership Policy. To maximize fairness and openness, we will follow the six principles outlined in NWSPD 1-10, section 3.
3. Detailed explanation of Product/Service Description Document
 - 3.1 Part I – Mission Connection. A brief description of the product/service as well as responses to questions designed to stimulate thought about content and format plus rationale for the product or service.
 - a. Product/Service Description – Provide a brief description of the experimental product/services.
 - b. Purpose/Intended Use – Why should the NWS produce this information? Is the product available to our general mission or to a well-established area of service?

Keep in mind:

 - (1) There are specific areas where NWS has been prohibited from providing services (e.g.):
 - (a) Specific agricultural forecasts
 - (2) New products/services should be developed to satisfy valid user needs and/or requirements
 - (3) Products/Services created to support another government agency's mission should document the request from that agency.
 - c. Audience – Who is the intended audience for the product? For example, is the product intended for the general public, for the government decision makers, etc. Remember to consider principles 2d 2e above. In general, specialized products/services for a limited number of users (e.g., for a particular industry group or company) are not allowed.

- d. Presentation Format – How is the information presented (e.g., text, graphic) and why have we chosen to present it in this manner?
- (1) We should aim to make currently available forecast information readily accessible, usable, and understandable.
 - (2) We should aim for presentations of forecast information to be consistent nationally.
 - (3) Presentations in a proprietary format are generally not acceptable. Stick to formats which are widely accepted as standards (e.g., GRIB, HTML, XML).
 - (4) We should not expend resources to produce “cool” or “cute” presentations of information if no specific benefit is provided.
- e. Feedback Method – Describe how feedback can be provided on the experimental product/service

Provide the following information:

- Point of contact for information on the product. This is the person who originally developed the product.
- Name of point of contact’s office.
- Office address.
- Telephone number for point of contact.
- Email address for point of contact.
- Dates of Comment Period

Describe where comments on the new product can be registered and how they will be addressed. Follow the guidelines in Appendix D of NWSI 10-102 for collecting feedback on experimental products from the user community.

3.2 Part II – Technical Description

- a. Format and Science Basis – Provide a brief description of the product format. What type of software is required to decode and/or display the product? Be sure to include whether it is one of the following:
- Text or graphically disseminated over an NWS-supported system. Include the format for the product data, e.g., ASCII, JPG, etc. Optional: provide an example which can be uploaded.
 - Image or data displayed via the Internet. Provide the URL where the product can be accessed. Briefly describe any capabilities that users may have to custom configure the product to meet their own needs.
 - Briefly describe the science basis for the product/service as well as its technical limitations (e.g., what it can and cannot do). What input data are used to generate the product (e.g., model output)?
 - Describe why the product/service presents information in the selected format (e.g., text, graphic, probabilistic). Keep the following in mind:
 1. The goal should be to make currently available forecast information readily accessible, usable, and understandable.

2. and for presentations of forecast information to be consistent nationally.
- b. Availability – Describe: When is the information available? How often is the product updated?
 - c. Additional information – Include any other pertinent technical detail, such as:
 - (1) Who created the product (person, office)?
 - (2) What data are used to generate the product (e.g., model output)?
 - (3) Software package that can be used to decode or display the product.
 - (4) References to relevant technical or scientific publications (e.g., UGC or VTEC) and Directives.

APPENDIX C

Examples of PDDs

NATIONAL MULTI-SENSOR PRECIPITATION ESTIMATES WEB-BASED EXPERIMENTAL SERVICE

Part I - Mission Connection

a. Product Description - The National Weather Service (NWS) collects rainfall data to support its forecast and warning operations. Individual River Forecast Centers (RFCs) and Weather Forecast Offices typically provide rainfall collectives in text format and graphical format for their areas of responsibility. This service provides unified precipitation estimates for the continental United States (CONUS) and Puerto Rico on the Internet. The service includes graphics that display these precipitation data, as well as the ability to download the information in GIS and netCDF formats.

This suite of graphics includes precipitation for the last day, last 7-days, last 14-days, month-to-date, and year-to-date. Monthly and yearly archives will be maintained. Except for the 1-day duration, graphics of the normal precipitation, percent of normal precipitation, and departure from normal will be generated. Note that other durations may be made available in the future.

b. Purpose - Quantitative Precipitation Estimates (QPE) Graphics are representations of rainfall that has occurred for a specific length of time. Currently, each office prepares its QPE graphics using different colors, precipitation thresholds, and geographic projections. By producing these graphics centrally, it will enable the public to compare data across the CONUS and Puerto Rico.

Parameter-Elevation Regressions on Independent Slopes Model (PRISM) climate data from a cooperative venture between Oregon State University and the United States Department of Agriculture-Natural Resources Conservation Service provides a grid format of normal precipitation. More information about PRISM can be found at <http://www.ocs.oregonstate.edu/prism/docs/przfact.html>.

c. Audience - The target audience for these graphics is wide ranging. Partners, such as the Army Corps of Engineers, the U.S. Geological Survey, the Federal Emergency Management Agency, the U.S. Department of Agriculture, the National Park Service, state emergency managers, and river authorities have areas of responsibility that span states and often River Forecast Centers. The centralized location of these graphics makes it easy for these partners to view precipitation data for a wide area. Water resources managers and climatologists can use the departures/percent of normal information for drought monitoring and climatological applications. Use will not be limited to those interested in large areas, however. Local emergency managers and the general public will also use these graphics to evaluate conditions at the local level.

d. Presentation Format - The Precipitation Graphics are web-based graphics, and can be viewed at the following URL:

http://www.srh.noaa.gov/rfeshare/precip_analysis_new.php

The information can also be downloaded in GIS and netCDF formats.

e. Feedback Method - We are always seeking to improve our services based on user feedback. Comments regarding the National Multi-Sensor Precipitation service should be sent to the feedback email address on the graphics webpage.

Comments may also be provided to:

Arkansas-Red River Forecast Center
10159 E. 11th Street, Suite 300
Tulsa, Oklahoma 74128-3050
Attn: Ken Pavelle
918-832-4109
SR-TUA.Precip@noaa.gov

Experimental Feedback Period: November 14, 2005 through June 16, 2006.

Part II - Technical Description

a. Format and Science Basis - Rainfall data (gage) are collected from cooperative observers and data collection networks such as GOES Data Collection Platforms and Automated Surface Observing Systems (ASOS). Hourly precipitation estimates from WSR-88D NEXRAD radar are compared with gage precipitation and satellite-derived estimates to derive a multi-sensor precipitation estimate. Using 24-hour multi-sensor precipitation files generated at the CONUS RFCs, software written in C is used to prepare the web-ready precipitation suite for the CONUS and Puerto Rico. Web browsers using standard Hypertext Markup Language (HTML) can be used to display these graphics. A sample graphic is shown in Figure 1. Users can also download the observed precipitation information in shapefile and netCDF formats for use in their projects or research.

b. Product Availability - The Precipitation Graphics are routinely updated twice daily.

c. Additional Information – Please click on the “About NWS Precip Analysis” tab at the top of the graphics webpage.

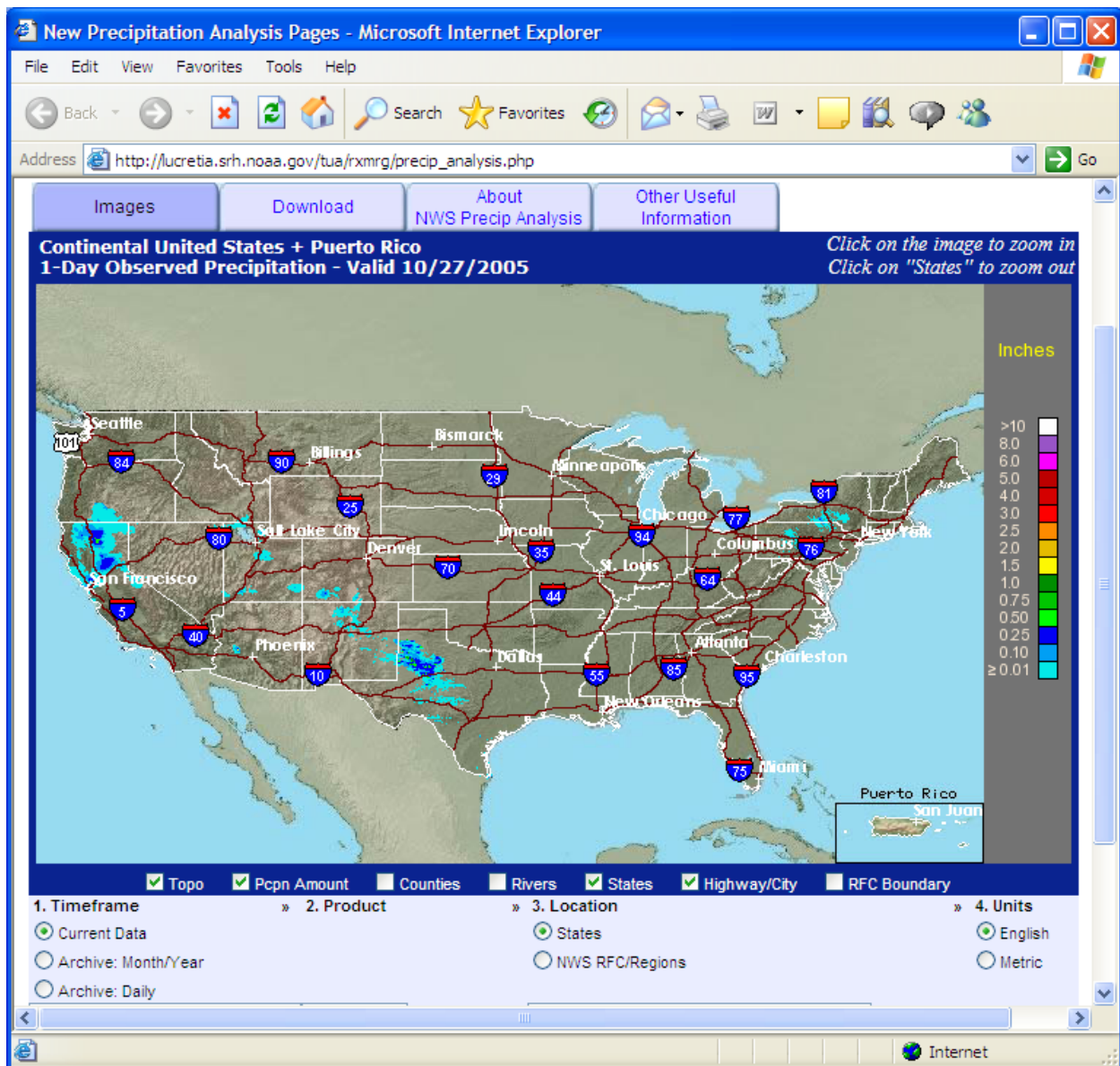


Figure 1. Screen capture showing estimated precipitation for October 27, 2005

Examples of PDDs (cont)

Experimental NOAA Weather Radio Podcasts Product Description Document (PDD)

Part 1 – Mission Connection

1. Product Description:

The NWS is responsible for making its weather, water and climate information widely available to taxpayers using commonly accepted standards and technologies. Currently, the NWS provides only limited audio broadcasts of their NOAA Weather Radio All Hazards (NWR) via the Internet.

The Voice Improvement Program (VIP) software on the NWR is able to convert the text transmitted to the Console Replacement System (CRS) into MPEG audio Layer-3 (MP3) files. Southern Region NWS offices are making these MP3 files available on the Internet as “podcasts”. Podcasting allows for publishing of audio programs to the internet and subsequent downloading of these programs to a personal computer or MP3 device. Users subscribe to the NWR podcast by using a freely available podcasting application that downloads the MP3 file automatically using an RSS (Really Simple Syndication) feed. Podcasting applications typically check for new content (new MP3 files) at user defined intervals. Once downloaded, the user can then listen to the podcast at his/her leisure (versus a radio broadcast of NWR).

2. Purpose/Intended Use:

The purpose of the podcasts is to provide NWR products and weather information to people who either do not have access to a weather radio or do not live close enough to a transmission tower to receive an NWR audio signal. Podcasting has the benefit of allowing automatic download of NWR broadcasts and the convenience of allowing people to listen to these broadcasts on their own time.

3. Audience:

This service is available to anyone with a computer connected to the Internet, a device that can play MP3 files, and a podcasting subscription (free) service.

4. Presentation:

Podcasts are available in the commonly-accepted compressed audio format of MP3. Virtually all desktop computers can play MP3 files. In addition, stand-alone MP3 players are widely available on the market and, just recently, many cell phones and car radios are being outfitted to accept and play MP3 files.

Podcasts can be retrieved manually. However, a benefit to using podcasting applications is the ability to receive podcasts automatically via a subscription to an RSS feed. This software is widely available on the Internet. The podcasting software will periodically check for new podcasts and subsequently download them to a designated computer or MP3 device. For

example, podcasting software could be configured to check for and automatically download an NWR broadcast of a specific zone forecast product. Once downloaded, the broadcast would be available to listening at the subscriber's convenience.

5. Feedback Method:

We are always seeking to improve the availability and quality of NWS products and services based on user feedback. Comments regarding the podcast service should be e-mailed to the National Weather Service Southern Region webmaster at: SR-SRH.Webmaster@noaa.gov. The feedback period for this experimental service will extend from October 19, 2005 through April 19, 2006.

Part 2 – Technical

1. Format and Science Basis:

The MP3 files for the podcasts will be generated with the VIP on the NWR CRS for subsequent transfer to the NWS office's Local Data Acquisition and Dissemination (LDAD) system. Once on LDAD, a PERL script will take the MP3 file and give it a unique file name based on the product and time the MP3 was created. Then, the script file will produce the RSS file and transfer the MP3 and RSS file to the website. During access from the website, a PHP script dynamically reads each RSS file and creates a table for each geographic location with the latest time stamp for each MP3 file.

2. Availability:

This service will be available 24 hours a day and 7 days a week. Availability of broadcast information may differ from site to site.

Example

APPENDIX D
Example of Umbrella PDD

National Digital Forecast Database (NDFD) Gridded Data Product Description
Document 6/15/05

Part I - Mission Connection

Product/Service Description - The National Oceanic and Atmospheric Administration (NOAA) National Weather Service (NWS) is charged to collect data on climate, water, and weather, provide forecasts and warnings of severe weather in order to protect life and property, and create and disseminate forecasts and other weather information for the benefit of a wide range of weather sensitive businesses and activities.

By capitalizing on rapid advances in science and technology and infusing these advances into its operations, the NWS has taken steps to proactively respond to ever changing and growing demands of its users and partners. The 2003 Fair Weather report, produced by the National Research Council, recommended making NWS data and products available in an Internet accessible digital form. The specific recommendation is as follows: *“Information held in digital databases should be based on widely recognized standards, formats, and metadata descriptions to ensure that data from different observing platforms, databases, and models can be integrated and used by all interested parties in the weather and climate enterprise.”* The Internet is now a principal means of communicating NWS forecasts.

The NWS provides access to operational and experimental gridded forecasts of sensible weather elements (e.g., Maximum Temperature, Sky Cover) through the National Digital Forecast Database (NDFD). NDFD contains a seamless mosaic of digital forecasts from NWS field offices working in collaboration with the National Centers for Environmental Prediction (NCEP).

Experimental gridded weather forecast elements available in NDFD (and the associated comment/ feedback periods) for the coterminous United States (CONUS) and Puerto Rico are shown in Table 1 below.

Grid Element	Comment Open Date	Comment Close Date
Quantitative Precipitation Forecasts (QPF)	6/13/03	9/15/05
Significant Wave Height	6/13/03	9/15/05
Sky Cover	6/13/03	9/15/05
Snow Amount (CONUS only)	6/13/03	9/15/05
Wind Direction and Wind Speed	6/13/03	9/15/05
Apparent Temperature	6/15/05	12/15/05
Relative Humidity	6/15/05	12/15/05

Example of Umbrella PDD (cont)

Table 1. NDFD Experimental Grid Elements (CONUS and Puerto Rico) and Associated Comment/Feedback Period.

Experimental gridded weather forecast elements available in NDFD (and the associated comment/feedback periods) for Hawaii, and Guam are shown in Table 2 below.

Grid Element	Comment Open Date	Comment Close Date
Significant Wave Height	9/14/04	9/15/05
Sky Cover	9/14/04	9/15/05
Snow Amount (Hawaii only)	9/14/04	9/15/05
Wind Direction and Wind Speed	9/14/04	9/15/05
Apparent Temperature	6/15/05	12/15/05
Relative Humidity	6/15/05	12/15/05

Table 2. NDFD Experimental Grid Elements (Hawaii and Guam) and Associated Comment/Feedback Period.

Purpose/Intended Use – NDFD is a central database storing geospatially referenced (GIS compatible) digital forecast information. The NDFD houses both operational and experimental (as defined in *NWSI 10-102, New or Enhanced Products and Services*) grid fields. The NDFD is the primary means by which grids will be made available to users and partners.

Audience – The current audience for NDFD gridded data is large volume users of forecast information, utilities, emergency managers, businesses/industry, academia, and any others who wish to decode and explore various potential applications of the NWS digital data.

Presentation Format - The NDFD is available for 16 predefined and slightly overlapping geographic sectors throughout the CONUS, as depicted at the following URL: <http://www.weather.gov/ndfd/coverage.htm>. Three OCONUS sectors are also available for Hawaii, Guam, and Puerto Rico/Virgin Islands. The data is presented in GRIB, Edition 2 format and can be readily decoded for those that wish to create derived products from the forecast parameters/values contained within the NDFD. A user defined GRIB2 access is also available. This service allows the user to provide latitude/longitude points for two corners and a weather element. A resulting GRIB2 message is built “on-the-fly” and downloaded by the user. For more information about User Defined GRIB2 access, please refer to the Products/Service Description Document at the following URL:

http://products.weather.gov/PDD/User_Defined_Grib2.pdf

Example of Umbrella PDD (cont)

In addition, NDFD data is available in Extensible Markup Language (XML). XML is a service that provides the ability to request NDFD data over the internet and receive the information back in an XML format. The request/response process is made possible by the NDFD XML Simple Object Access Protocol (SOAP) server. For additional details regarding XML, please refer to the NDFD XML Service Description Document at the following URL:

http://products.weather.gov/PDD/Extensible_Markup_Language.pdf

Feedback Method - User feedback is extremely important in our effort to improve the quality and usefulness of products and services. Please submit your comments on these experimental grids by completing our brief [experimental product survey](#) during the comment period specified for the individual grid shown in Tables 1 or 2 above. Comments may also be submitted by clicking on the “Feedback/Survey” link on the NDFD web pages at the following URL: <http://www.weather.gov/ndfd>.

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

Technical questions regarding the NDFD 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

Format and 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:

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

Product Availability - Updates to the NDFD are made available shortly after the top of each hour. Forecast grids for the next Day 7 will be introduced daily no later than 1800 UTC.

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.
- (2) Experimental grids are evaluated regularly on timeliness, completeness, spatial consistency, accuracy, and other subjective criteria. When they meet the guidelines established by the NWS, they are declared “operational” and are no longer covered by this PDD for experimental grid elements.

APPENDIX E

Dissemination and Feedback

Experimental Product Web Page

Experimental products will be accompanied by a Web page that, as a minimum, contains the following:

- ✓ A brief statement of the intended use of the product, “experimental” label and the evaluation period, for example: “New Product Name” is an experimental product that will be posted to this page for evaluation from (beginning date) to (ending date). During this period, we encourage your comments or suggestions for improvements using the electronic survey provided. Your feedback will help us determine product utility, if modifications are needed, and whether the product should become part of our operational suite.
- ✓ Link to a Product/Service Description Document (PDD)
- ✓ Point of Contact (address/phone/e-mail) to address additional comments/feedback
- ✓ Submit Request for Survey to Survey System (see Appendix H)
- ✓ Date when Web page was last updated

Feedback Solicitation

1. Public Information Statement

Locally-generated or national Public Information Statements (PNS) will be issued before distribution of any experimental products/service. The PNS will include a brief description of the product/service, Web address, evaluation period, and a local and/or regional point of contact.

2. Other Methods for Soliciting User Feedback.

In addition to the Web-based experimental product survey, offices should actively seek comments on products. The following examples are ways to seek user feedback.

- ✓ User/Partner Workshops – Partner’s Web Site
- ✓ Weather Forecast Office (WFO) Warning Coordination Meteorologist
- ✓ Management meetings and SKYWARN training sessions
- ✓ WFO Outreach (open house events, school and community visits, workshops, fairs, conventions, expos, seminars)
- ✓ Conferences of professional organization

APPENDIX G
Information Template (example)

Product/Service Name: Wireless Application Protocol for Marine and Coastal Products

Type product/service: Experimental

Scope: Local, Regional, or National

Originator: John Doe
The Wireless Application Protocol (WAP) is the de facto industry standard of making available products which are currently disseminated via the Internet, available to users of wireless technology.

Email: john.doe@noaa.gov

Office: Marine and Coastal Weather Services Branch W/OS21

Address: 1325 East West Highway Silver Spring, MD 20910

Phone: 301-713-???? X100

Parameters: Wind, waves, pressure, fog, ice, seismic information, tsunami travel times, tide heights, water run-up distances.

SW Required: Web Browser

Date Type/Format: Alphanumeric/graphic

Example: Provide example if available

Product URL: Provide URL for new/enhanced product/service

PDD files name: twcDM pdd2.pdf

Dates of Comment Period: 20 January 200X to 21 December 200X

Approved By: Jane Doe

The above information is required to quickly link PDD's to the National Catalogue of New or Enhanced NWS Products

Information Template

Product/Service Name:

Type product/service:

Scope:

Description:

Originator:

Email:

Office:

Address:

Phone:

Parameters:

SW Required:

Data Type/Format:

Example:

Product URL:

PDD file name

Dates of Comment period:

Approved By:

APPENDIX H Request for Survey

To add a new product/services or website to the survey system you will need to submit a request for Survey

Requests for surveys should be submitted to w-nws.webmaster@noaa.gov

The following information will be needed to set up the survey:

- 1) Type of survey (Experimental Product/Service or Web site Satisfaction survey)
- 2) Experimental Product/Service Name
- 3) If email notification of survey responses is desired, the name(s) of the recipients

Add a New Product or Website to the Survey System

Please select a product type

- Experimental NWS Product
- Generic NOAA website satisfaction survey

Please enter your product code (maximum 16 characters)

Set by OCIO

Please enter your product name

Please enter the OMB control number (maximum 16 characters)

Generic NOAA web survey number: 0648-0342

NWS product survey number: 0648-0342

0648-0342

Please enter the expiration date

Generic NOAA web survey date: 07-31-2008

NWS product survey date: 07-31-2008

07-31-2008

Please enter the mailing list. These people will get the results in the form of an email, but the results will also be stored in the database (the default domain is noaa.gov).

Request for Survey (cont)

Survey Results For NWS/PDT-SUNPROB Graphical Sunshine Probability Chart

**17 surveys submitted
from 01.14.2005 to 01.21.2006**

From
mm dd yyyy

To
mm dd yyyy

Summary of Ratings
 Summary of Comments
 Individual Surveys
 Raw Data
