

**NATIONAL WEATHER SERVICE INSTRUCTION 10-1715**

**February 1, 2018**

**Operations and Services**

**Dissemination Services NWSPD 10-17**

**ENTERPRISE - NOAA WEATHER WIRE SERVICE (NWWS) DISSEMINATION**

---

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

---

**OPR:** W/DIS (C.Hodan)

**Certified by:** W/DIS (K. Cooley)

**Type of Issuance:** Routine

---

**SUMMARY OF REVISIONS:** This directive supersedes NWSI 10-1715, “NOAA Weather Wire Service (NWWS) Dissemination” dated June 28, 2012. Changes were made to reflect the NWS Headquarters reorganization, effective April 1, 2015.

This document also represents a major re-write for NWWS systems management which changed from a contractor-leased system to the NWS Enterprise Architecture (EA) on July 1, 2015.

Content changes were made to:

1. Name change to Enterprise - NOAA Weather Wire Service (NWWS) Dissemination
2. Update the document format and graphic
3. Remove NWS management and administration information that is addressed in NWSI 10-1716, “Enterprise NOAA Weather Wire Service (NWWS) System Management.”
4. Remove repetitive sections and information
5. Remove sections and information not pertaining to the Enterprise-NWWS
6. Clarify sections

/signed/

1/18/18

Kevin C. Cooley

Date

Acting Director, Office of Dissemination

**Enterprise-NOAA Weather Wire Service (NWS) Dissemination**

| <b>Table of Contents</b>      |   | <b>Page</b> |
|-------------------------------|---|-------------|
| 1                             | Introduction.....   | 3           |
| 2                             | Mission.....  | 3           |
| 3                             | Enterprise - NWS .....  | 3           |
| 3.1                           | NWS Enterprise Architecture Components .....  | 4           |
| 3.1.1                         | Advanced Weather Interactive Processing System (AWIPS).....   | 5           |
| 3.1.2                         | AWIPS Wide Area Network (AWIPS-WAN).....  | 5           |
| 3.1.3                         | AWIPS Network Control Facility (NCF) .....  | 5           |
| 3.1.4                         | Satellite Broadcast Network (SBN)/NOAAPORT .....  | 5           |
| 3.1.5                         | NWS Internet Dissemination System (NIDS).....   | 5           |
| 3.2                           | NWS Product Origination .....   | 5           |
| 3.2.1                         | Product Generation .....  | 6           |
| 3.3                           | NWS Product Communication.....  | 6           |
| 3.3.1                         | SBN/NOAAPORT .....  | 7           |
| 3.3.2                         | NWS Open Interface (OI) .....   | 7           |
| 4                             | NWS Product Archiving, Monitoring and Re-Transmission.....  | 8           |
| 4.1                           | Product Archiving.....  | 9           |
| 4.2                           | Product Monitoring.....   | 9           |
| 4.3                           | Product Re-Transmission.....  | 9           |
| 4.4                           | End User Product Display, Archive, Monitoring and Re-Transmission.....  | 9           |
| 4.4.1                         | End User Archiving .....  | 10          |
| 4.4.2                         | End User Monitoring .....   | 10          |
| 4.4.3                         | End User Re-Transmission .....  | 10          |
| 5                             | NWS End User Client (EUC) .....   | 10          |
| 5.1                           | EUC Ingest.....   | 11          |
| 5.2                           | EUC Priority .....  | 11          |
| 5.3                           | EUC Archive.....  | 11          |
| 5.4                           | EUC Monitoring .....  | 11          |
| 6                             | Responsibilities .....  | 11          |
| 6.1                           | Weather Service Headquarters (WSH) .....  | 11          |
| 6.1.1                         | Office of Dissemination (DIS).....  | 12          |
| 6.1.2                         | NCEP Central Operations (NCO).....  | 12          |
| 6.1.3                         | Office of Central Processing (OCP).....   | 12          |
| 6.2                           | Weather Forecast Offices (WFOs), River Forecast Centers (RFCs), National Centers,<br>and the National Water Center (NWC)..... | 12          |
| 7                             | Problems or Issues .....  | 12          |
| 7.1                           | Establishing an OI Account .....  | 13          |
| 7.2                           | Issues with NWS-OI Product Reception.....   | 13          |
| 7.3                           | Issues with SBN/NOAAPORT Channel 201 Reception.....   | 13          |
| 7.4                           | Issues with the EUC.....  | 13          |
| 7.5                           | Other NWS Problems.....   | 13          |
| APPENDIX A - References ..... |   | A-1         |

## 1 Introduction

This is a National Weather Service (NWS) Instruction (NWSI) that provides dissemination information and instructions on or for products using the Enterprise - NOAA Weather Wire Service (E-NWWS or more commonly NWWS). This instruction includes: a brief description of system components and more details about product origination to user receipt; an identification of products and content appropriate for transmission; and guidelines on product retransmissions, monitoring and archiving. The following documents from the NWS Directive System (NDS) Section 10, *Operations and Services*, provide additional information on product formats, origination, dissemination, system administration, and management:

- a. NWSI 10-101, *Change Management Process*
- b. NWSI 10-1701, *Text Product, Formats, and Codes*
- c. NWSI 10-1702, *Universal Geographic Code (UGC)*
- d. NWSI 10-1716, *Enterprise - NOAA Weather Wire Service (NWWS) Systems Management*

The NWS directives are available on the Internet at <http://weather.gov/directives>.

## 2 Mission

NWS provides weather, water, and climate data, forecasts and warnings for the protection of life and property and enhancement of the National economy.

The mission of the NWWS is to provide the fastest possible dissemination of weather alerts, warnings, and information to users.

## 3 Enterprise - NWWS

The E-NWWS is an NWS Enterprise Architecture (EA) system comprised of major NWS components. E-NWWS was developed mirroring the rapid dissemination capabilities of the legacy NWWS over satellite and the Internet, and has been in operation since July 1, 2015. The NWWS is the fastest means possible for users to receive alerts and warnings.

The E-NWWS is designed for users to access both the Internet (commonly referred to as NWWS-Open Interface or NWWS-OI) and the NWS satellite broadcast network (SBN/NOAAPORT) Channel 201 (PID 201). Use of the NWWS-OI or PID 201 allows users to receive alert and warning text products within ten (10) seconds of being issued by the local Weather Forecast Office (WFO), River Forecast Centers (RFCs), National Centers, or National Water Center (NWC).

NOTE: Use of ***both*** the NWWS-OI and PID 201 product streams is recommended to achieve the highest level of product availability.

NWWS is an effective method in alerting communities since each NWWS product stream (both NWWS-OI and SBN/NOAAPORT) can activate the Federal Communications Commission (FCC) Emergency Alert System (EAS) resident at radio and television broadcast stations.

### 3.1 NWS Enterprise Architecture Components

The E-NWS consists of the following NWS Enterprise Architecture (EA) components (see figure 3.1);

- A. Advanced Weather Interactive Processing System (AWIPS) for NWS product origination and filtering via the NWS exclude file;
- B. AWIPS Wide Area Network (AWIPS-WAN/OneNWSnet) for internal NWS to NWS system telecommunications;
- C. AWIPS Network Control Facility (NCF) for NWS product collection and re-distribution;
- D. NCEP Central Operations (NCO) for routing products to satellite, systems monitoring, and internet processing;
- E. NWS Satellite Broadcast Network (SBN/NOAAPORT) – specifically PID 201 (an NWS products only data stream); and
- F. NOAA Internet Dissemination System (NIDS) for Internet dissemination to NWS-OI users.

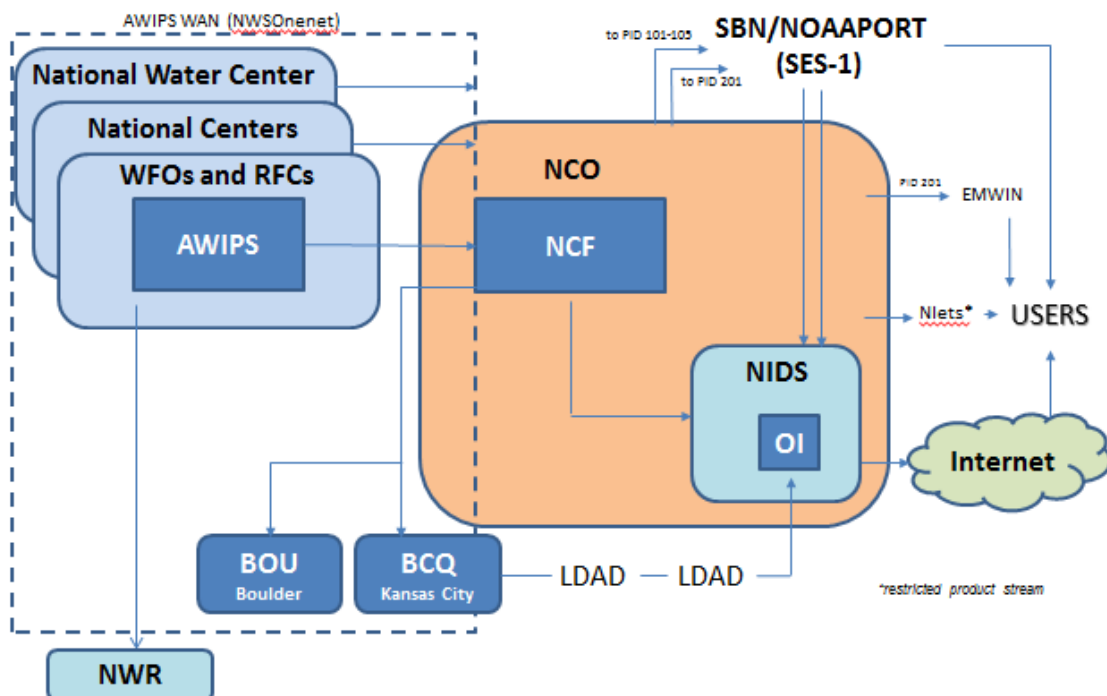


Figure 3.1 NWS Enterprise Architecture Diagram; product flow

E-NWWS system administration and management are addressed in NWS Instruction (NWSI) 10-1716, *Enterprise – NOAA Weather Wire Service (NWWS) System Management*. The NWSI 10-1716 Appendix A addresses potential user configurations.

Proposed new products, modifications or deletion of NWWS products, and/or changes to NWS components which represent a substantial change to NWS environmental information services will be implemented in accordance with NWS Policy Directive (NWSPD) 1-10, *Managing the Provision of Environmental Information*). This directive establishes a requirement for public comment/review on substantial changes, prior to an implementation decision.

### **3.1.1 Advanced Weather Interactive Processing System (AWIPS)**

The Weather Forecast Offices (WFOs), River Forecast Centers (RFCs), National Centers (NCs) and the National Water Center (NWC) provide meteorological, climatological, and hydrological alerts, weather and information (forecasts, outlooks and messages) in text format using AWIPS. AWIPS provides product origination (creation and dissemination) with a NWWS routing designation.

### **3.1.2 AWIPS Wide Area Network (AWIPS-WAN)**

The NWWS products are sent over the AWIPS-WAN telecommunication network (OneNWSnet) to designated distribution points, including the AWIPS Network Control Facility (NCF).

### **3.1.3 AWIPS Network Control Facility (NCF)**

The NCF collects and monitors receipt of all NWS products and directs the products to the appropriate system or distribution address. This includes distribution internally to the NCEP Central Operations (NCO) and the Office of Central Processing (OCP) for dissemination over both satellite and the Internet.

### **3.1.4 Satellite Broadcast Network (SBN)/NOAAPORT**

The NWWS product stream is available over satellite: SBN/NOAAPORT Channels 101-105 (PID 101-105) that carries all NWS products and requires a larger satellite dish (4.2m or larger) and Channel 201 (PID 201) that carries only NWWS products with a smaller dish size (2m or larger recommended). When PID201 is used in conjunction with the NWWS-Open Interface, via the Internet, this method provides the highest product availability for authorized NWWS users. See section 3.3 for more information.

### **3.1.5 NWS Internet Dissemination System (NIDS)**

NIDS receives both a satellite (PID 201) and a terrestrial product feed and de-duplicates the combined product ingests for posting to the NWWS-Open Interface (OI) chatroom within ten (10) seconds of issuance. Authorized NWWS-OI users can pull the product stream to their windows-based personal computers (PCs) to use or redistribute as necessary.

## **3.2 NWWS Product Origination**

NWWS products are originated using AWIPS in NWS approved text formats per the respective product defining directive under NDS Section 10, *“Operations and Services.”*

### 3.2.1 Product Generation

Issuance of any NWWS product by NWS is based on the AWIPS location, season and current weather conditions. Information on NWS formats can be found in NWSI 10-1701, “*Text Product Formats and Codes.*” NWWS products are in World Meteorological Organization (WMO) Standard format<sup>1</sup>.

Proposed new products, modifications or deletion of NWWS products are coordinated in NWS Instruction (NWSI) 10-101, “*Change Management Process*” and amend the AWIPS product configuration file.

The message request server program “msgreq\_svr” in AWIPS is modified to enable the Message Handler System (MHS) at the originating office to automatically duplicate the NWWS products. NWWS products destined to the NWWS-uplink (NWWSUP) for SBN/NOAAPORT Channel 201 are re-identified with a new product ID format through the local MHS configuration file. This local MHS configuration file has a simple content format of “NWWSUP NWWSPROD,” and is identical for all offices.

*NOTE: There are no office changes to the AWIPS site application software for this product ID substitution.*

*NOTE: The AWIPS configuration file for approved NWWS products must be updated for any new products when available or the products will not be distributed over Channel 201.*

Products that will be disseminated via NWWS receive an 8-character identifier: “NWWSPROD”. This identifies products specific to SBN/NOAAPORT PID 201, the NWWS product only channel.

*NOTE: All NWS products, which includes the NWWS products are disseminated unfiltered over SBN/NOAAPORT Channel 101-105.*

Products strictly not intended for NWWS dissemination are included in the AWIPS NWWS exclude file which serves as a filter for products with the “NWWSPROD” identifier and prevents them from going over SBN/NOAAPORT PID 201 or into the NWWS-OI chatroom.

*NOTE: The NWWS exclude file for disallowed NWWS products must be reviewed and updated regularly by each AWIPS site for accuracy.*

### 3.3 NWWS Product Communication

NWWS products are sent over the AWIPS WAN to the Office of Central Processing (OCP)’s AWIPS Network Control Facility (NCF), for uplink to SBN/NOAAPORT PID 101-105 for

---

<sup>1</sup> WMO Standard format is addressed in World Meteorological Organization (WMO) Handbook No. 386 Manual on Global Telecommunication System.

normal all NWS product dissemination, and over PID 201 for NWS product only dissemination. Products are also routed to NCEP Central Operations (NCO) for use in the NIDS NWS- OI system. Products are also sent via the AWIPS WAN to other designated offices (for example BCQ-Kansas City and BOU-Boulder) for terrestrial dissemination via NIDS to the NWS-OI chatroom to authorized users. See Table 3.3 for NWS product dissemination.

**Table 3.3 NWS Product Dissemination**

| NAME                        | SATELLITE or INTERNET | RECOMMENDED DISH SIZE | PRODUCTS               | NWS FORMAT   |
|-----------------------------|-----------------------|-----------------------|------------------------|--------------|
| SBN/NOAAPORT<br>PID 101-105 | SES-1                 | > 4.8m                | All NWS products       | WMO Standard |
| SBN/NOAAPORT<br>PID 201     | SES-1                 | ≥ 1.2m                | NWS text products only | WMO Standard |
| NWS-OI                      | Internet              | -----                 | NWS text products only | XMPP format  |

Note: Larger dish sizes provide better reception.

### 3.3.1 SBN/NOAAPORT

Users accessing PID 101-105 will require a 4.2m satellite dish or larger for clearer reception. PID 201 users will need a satellite dish larger than 1.2m for clear reception. All NWS products are offered over PID 101-105. NWS alerts and warnings are contained within the full product stream and will have to be filtered out by the user.

1. NCEP/NCO (NMC – PID 101)
2. GOES/NESDIS (GOES – PID 102)
3. NCEP/NCO2 (NMC2 – PID 103)
4. OCONUS Imagery/Model/DCP (NOPT – PID 104)
5. NPP (POLARSAT – PID 105)

Anyone with the proper equipment can receive SBN/NOAAPORT products. Information on required equipment configuration(s) is provided on the NWS web page:

<http://www.nws.noaa.gov/nws/configuration.html>.

### 3.3.2 NWS Open Interface (OI)

NIDS receives the text-only products in WMO standard format from both SBN/NOAAPORT Channel 201 and terrestrially and are placed in a dedicated Local Data Manager (LDM) database for de-duplication before changing each product into XMPP format and sending to the “nws” one-way chatroom.

The NWS-OI uses two Domain Name Server (DNS) locations at College Park, MD, and Kansas City, MO, for authorized user access. As designed, either one of the two server farms can be unavailable without directly impacting availability and performance of the other server farm.

The “nwws” chatroom “pushes” all available products to authorized users. Users can apply filters to view and save specific alerts and warnings.

### 3.3.2.1 NWWS-OI Access

Prospective users must sign-up for a *user\_ID* and *password* to receive the NWWS product stream from the NWWS-Open Interface. This is an automated process off the NWWS webpage (<http://www.nws.noaa.gov/nwws/news.html>).

NWS authorizes use of the NWWS-OI and may include federal, state, local governments, agencies, commercial radio and television broadcasters, NWS partners, weather and alert oriented companies, communities and the public.

Users must also have an Extensible Markup Language/Extensible Messaging Presence Protocol (XML/XMPP) reader. Readers can either be the basic End User Client (EUC) developed by the NWS, self-programmed, or purchased from other commercial providers. The EUC was developed to be easy to set up, receive and de-duplicate both NWWS product streams (NWWS-OI and SBN/NOAAPORT PID-201).

### 3.3.2.2 NWWS-OI Format Reader

An XMPP reader (Java, Pidgin, or similar software program) is required to decipher the XMPP formatted message content of the NWWS-OI product stream. Just using a basic XMPP reader will give only the message header information. Additional programming is required to see message content in the “stanzas.” NWS has developed an End User Client (EUC) (see Section 5) to facilitate accessing the NWWS-OI. This EUC is available upon request also at the NWWS webpage. Users at their discretion can develop or purchase a commercially available reader, software program, or service that can acquire and access the XMPP message content “stanzas” or products. All authorized users, regardless of method, must use the provided *user\_id* and *password* to access the NWWS-OI. The following information is required for any developed XMPP reader software (including the EUC) to access the NWWS-OI properly;

1. Port Assignment: “5223”
2. Product Stream URL: [nwws-oi.weather.gov](http://nwws-oi.weather.gov)
3. Chatroom: “nwws”

NOTE: Only one *user\_id* and *password* can be used on a computer system without crashing the system.

NOTE: No *user\_id* or *password* is required for NWWS products from either PID 101-105 or PID 201.

## 4 NWS Product Archiving, Monitoring and Re-Transmission

Product archiving, monitoring and re-transmission requirements are system and software dependent in the NWS Enterprise Architecture.



#### **4.1 Product Archiving**

Archiving depends on the respective NWS dissemination system and NOAA-NWS policies and requirements. NWWS products are archived in accordance with the offices' official archiving and retention procedures (WFO and NCO) for each NWS enterprise component (AWIPS, NCF, and NIDS). The active retention range is from 3 days to 30 days depending on the system. Official long-term NWS product archives may be accessed via the National Centers for Environmental Information (NCEI), formerly the National Climatic Data Center (NCDC).

*NOTE: The EUC has an archiving capability which is user selective from 3 days to 90 days. The selection is limited based on user requirements and system storage capacity. Please see the EUC manual for additional information.*

#### **4.2 Product Monitoring**

Product monitoring capability for NWWS is accomplished at product origination (WFO), product transmission (NCF) and at the SBN/NOAAPORT. For the SBN/NOAAPORT monitoring, there is a loopback satellite downlink to monitor the reception of weather products from the SBN/NOAAPORT called the Message Monitoring System (MMS). Other NWS dissemination systems that receive NWWS products directly (for example EMWIN and NIDS) also provide confirmation of message receipt or transmission.

#### **4.3 Product Re-Transmission**

When a NWWS product is issued, the product is transmitted once to the NCF for processing and broadcasting over the SBN/NOAAPORT. The NCF monitors the downlink to verify that the product has been received. This is a one-time product validation loop within the NCF. Should the product fail to transmit a second time, there is no backup to re-transmit. This "loopback" retransmission is accomplished by the MMS.

The MMS is a 24x7 operational system that monitors and/or produces:

- Message queues
- Duplicate Product Validation
- Missing Product Reports
- SBN/NOAAPORT feed (in addition to other Dissemination systems)
- Performance monitoring of the NWWS Satellite feed (latency calculated from the time of reception of the WMO message at the NCF to the reception of the message at the EUC)
- Monitoring Reports (e.g., event logging, error logging)
- Notifications (email, dashboard inbox)
- Database storage

#### **4.4 End User Product Display, Archive, Monitoring and Re-Transmission**

End Users of NWWS-OI can use a commercial eXtensible Machine Language (XML) client application, develop their own XML/XMPP application (Java, Pidgin, etc.), or use the NWS provided NWWS EUC (see NWWS webpage) to display, archive, and monitor the NWWS products from the SBN/NOAAPORT satellite ingest, NWWS-OI ingest, or both product streams.

NOTE: *Use of both ingests is the recommended configuration for highest product availability.*

#### 4.4.1 End User Archiving

Archiving is based on user requirements, software used and system capacity. The EUC is designed to help the user decide the best archiving solution (see Section 5.3).

#### 4.4.2 End User Monitoring

System operation and performance are based on user requirements and developed software used. The EUC has the capability to monitor NWS-OI connectivity and will alert if the connection is dropped.

#### 4.4.3 End User Re-Transmission

NWS products may be re-transmitted without modification to the original text.

### 5 NWS End User Client (EUC)

The NWS developed EUC is a self-enclosed Java application for use on stand-alone systems that provides dual NWS ingest (Internet and Satellite), including product filtering and archiving. The EUC ingests both the NWS-OI and SBN/NOAAPORT PID 201 product streams with a product de-duplicate filter.

NOTE: *Reception of **BOTH** the SBN/NOAAPORT PID 201 and NWS-OI is the recommended configuration to assure highest product availability.*

The EUC is available upon request at: <http://www.nws.noaa.gov/nws/news.html>.

### EUC Provided Functionality

- Ingest multicast WMO stream from the NWS-2 DVB-S2 satellite receiver
- Ingest of Internet NWS-OI XMPP chatroom feed of WMO products
- Store (archive) all ingested NWS products for a user configurable period of up to 90 days
- Display archived products based on the following filters:
  - Message Type
  - Message Priority
  - Region
  - Originator
- Configurable alerts based on:
  - Message Type
  - Message Priority
- Direct push of ingested products to printer or file-system
- System disk space alerts
- Emergency Manager's Information Network (EMWIN) support
  - Flat File System Archiving

After making the EUC request on the NWS webpage tab, a URL will be sent to the requesting e-mail address that will allow the EUC requestor to select appropriate EUC zip-file; 64-bit or 32-bit for download. Once the zip-file is opened the user has access to the EUC User Manual for complete installation and set-up of the EUC.

### **5.1 EUC Ingest**

The NWS EUC allows users to separate the SBN or OI traffic into individual subnets. Since the OI uses an internet-ready interface, it is automatically received by the EUC software. However, to receive the SBN, the corresponding interface value connection must be selected (either multicast or dual). Multicast is for SBN only operation. Dual is for SBN and OI product ingest.

### **5.2 EUC Priority**

The priority type preference allows the user to set the EUC priority (see EUC manual for specific settings) filter that will be used to receive and store the WMO products.

### **5.3 EUC Archive**

The EUC archive layout provides two options for storing messages. A hierarchical tree structure is the default option and stores messages by message originator. The flat directory option is provided primarily for EMWIN support.

The EUC archive period preference allows the user to determine how long messages are stored in the system. The default value is 60 days. Messages older than the selected number of days (15, 30 or 90) are removed from the database and the file system. New messages cannot be received at the same time that outdated messages are being removed from the archive. If a new message is received, the removal task will be cancelled or rescheduled.

### **5.4 EUC Monitoring**

The EUC is designed to monitor the NWS-OI connection and will send an alarm if the connection is dropped. The EUC also monitors system storage capacity and will alarm if disk space becomes an issue.

## **6 Responsibilities**

NWS responsibilities are covered in NWSI 10-1716, “*Enterprise NOAA Weather Wire Service (E-NWWS) System Management.*” Those responsibilities address the public and user communications concerning NWS and provide some insights into NWS communications for issue management.

### **6.1 Weather Service Headquarters (WSH)**

The NWS WSH is responsible for establishing policy and procedures for the administration, operation and maintenance of NWS dissemination systems and services available to the public.

### **6.1.1 Office of Dissemination (DIS)**

DIS provides staff assistance to the NOAA Assistant Administrator for Weather Services for NWWS program management and configuration control. DIS provides program and financial management as well as operational, engineering and communications support. DIS is responsible for providing oversight for NWWS maintenance, managing NWS telecommunication circuits, and providing WSH support for any commercial telecommunications services as needed by NWWS.

The DIS is also responsible for communications with the public and providing operational support for NWWS-OI issue resolution. The DIS is responsible for communicating planned, preventative and un-planned system servicing or outages to users.

E-mail communications have been established to assist communications from users:

[NWWS.issues@noaa.gov](mailto:NWWS.issues@noaa.gov) for missing products, reporting outages, or corrupted file reporting  
[NWWS.help@noaa.gov](mailto:NWWS.help@noaa.gov) for set-up assistance and general information.

The NWWS webpage (<http://www.nws.noaa.gov/nwWS>) includes information for user system configurations, frequently asked questions, and identified issues with resolutions. The NWWS webpage also has specific tabs for users to sign up for the NWWS-OI and for requesting the EUC.

### **6.1.2 NCEP Central Operations (NCO)**

The NCO is responsible for monitoring SBN.NOAAPORT, NIDS and MMS operations and performance. The NCO is responsible for providing advance notice of any preventative or annual system maintenance and alerting DIS of any critical system outage.

### **6.1.3 Office of Central Processing (OCP)**

The OCP is responsible for monitoring AWIPS WAN and NCF. The OCP is responsible for providing advance notice of any preventative or annual system maintenance and alerting DIS of any critical system outage.

## **6.2 Weather Forecast Offices (WFOs), River Forecast Centers (RFCs), National Centers, and the National Water Center (NWC)**

AWIPS sites are responsible for assuring the correct product type is used for NWWS transmission and issuing NWS products with timely dissemination to the public. All sites are responsible for coordinating issues with NWWS product dissemination with DIS.

## **7 Problems or Issues**

NWS has limited resources to help the public due to multiple system configurations and the likelihood of different software interference. Problems and issues will be handled on a case-by-case basis and when time is available. Maintaining operations of NWS dissemination systems, managing and administering NWS programs, and the resolution of critical issues may also limit availability of resources to help the public.

### **7.1 Establishing an OI Account**

For issues with establishing the OI account or access to NWS-OI using the *user\_id* and *password*, send detailed request to [NWWS.Issues@noaa.gov](mailto:NWWS.Issues@noaa.gov) or [NWWS.help@noaa.gov](mailto:NWWS.help@noaa.gov).

### **7.2 Issues with NWS-OI Product Reception**

Report missing or corrupted products to [NWWS.Issues@noaa.gov](mailto:NWWS.Issues@noaa.gov).

### **7.3 Issues with SBN/NOAAPORT Channel 201 Reception**

NWS is aware of possible SBN.NOAAPORT sideband interference, and as a solution recommends using a larger satellite dish size to enhance product reception. NWS also recommends using both SBN/NOAAPORT and NWS-OI product ingests for the highest product availability. Report reception and product loss issues to [NWWS.issues@noaa.gov](mailto:NWWS.issues@noaa.gov).

### **7.4 Issues with the EUC**

Only one version of the EUC can run on any one system using the unique *user\_id* and *password*. If more than one EUC is running or the same *user\_id* and *password* is used on another system, the computer(s) will lockup and have to be restarted.

*User\_id* and *password* are both case sensitive.

Public Notice of any EUC update will be posted to the NWS webpage.

Report issues with the EUC to [NWWS.issues@noaa.gov](mailto:NWWS.issues@noaa.gov).

### **7.5 Other NWS Problems**

Report any other NWS problem not already addressed to [NWWS.help@noaa.gov](mailto:NWWS.help@noaa.gov).

## APPENDIX A - References

1. See Website: <http://www.nws.noaa.gov/directives/010/010.htm> for the list of NWS Directives.
2. See Website: <http://www.nws.noaa.gov/noaaport/html/noaaport.shtml> for more information on SBN/NOAAPORT.
3. See Website: <http://www.nws.noaa.gov/tg/headef.php> *The WMO Communication Header, Telecommunications Abbreviated Heading Symbolic Structure Explained.*
4. See Website: <http://xmpp.org/rfc/rfc6122.html> for the XMPP specifications