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**SUMMARY OF REVISIONS:** This directive supersedes NWSI 10-1716, “NOAA Weather Wire Service (NWWS) Systems Management,” dated August 27, 2008. Changes were made to reflect the NWS Headquarters reorganization effective April 1, 2015.

Content changes were made to:

1. Replace system description and correct information to reflect current NWS Enterprise configuration for Enterprise-NWWS, as implemented on July 1, 2015
2. Update format and graphics
3. Add the National Water Center (NWC)
4. Add Acronym List and Definitions
5. Remove information covered in other directives

_Signed_ October 17, 2017  
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Enterprise - NOAA Weather Wire Service (E-NWWS) Systems Management

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1 Document Purpose

This Instruction describes how the National Oceanic and Atmospheric Administration (NOAA) National Weather Service (NWS) manages, operates, administers, and maintains the NWS Enterprise NOAA Weather Wire Service (E-NWWS).

Note: NWWS is still the most common reference used by and for the public, and will be used interchangeably with E-NWWS throughout this document.

2 Description

The NWS developed E-NWWS within the Enterprise Architecture (EA) to maintain the fastest method NWS has to disseminate alerts and warnings to federal, state, and local emergency management agencies, radio and television commercial broadcasters, weather re-distributors, and other approved users. E-NWWS is designed to take advantage of both the Internet (via NWWS Open Interface [OI]) and the SBN/NOAAPORT satellite Channel 201 (PID 201) to provide the highest degree of product availability in the dissemination of weather information, alerts and warnings.

The E-NWWS consists of several NWS EA components that originate, filter, distribute, process and disseminate designated E-NWWS text products as issued by the Weather Forecast Offices (WFOs), National Centers, and the National Water Center.

Since 1999, NWWS and NOAA Weather Radio All Hazards (NWR) have provided alerts and warnings to affected United States populations and include the ability for radio and television broadcasters to activate the local Emergency Alert System (EAS) in their coverage area(s).

Note: NWWS text products remain available over SBN/NOAAPORT Channels 101-105 which carry all NWS products and can also be used for EAS activation. Dissemination over Channels 101-105 is not a part of the E-NWWS architecture and will not be addressed in this document.

2.1 E-NWWS Components

The E-NWWS consists of the following NWS EA components (see figure 2.1):

A. Advanced Weather Interactive Processing System (AWIPS) for NWWS product origination and filtering via the NWWS exclude file;

B. AWIPS Wide Area Network (AWIPS-WAN) for internal NWS to NWS system telecommunications;

C. AWIPS Network Control Facility (NCF) for NWS product collection and re-distribution;

D. NWS Central Operations (NCO) for routing products to satellite, systems monitoring, and internet processing;

E. NWS Satellite Broadcast Network (SBN/NOAAPORT) – specifically PID 201 (an NWWS products only data stream); and

F. NOAA Internet Dissemination System (NIDS) for Internet dissemination to NWWS-OI users.

3 Organizational Responsibilities

This section describes the responsibilities of the NWS Headquarters (WSH), Regional Headquarters (RH), field offices, National Centers and the National Water Center with respect to the E-NWWS.

3.1 Weather Service Headquarters (WSH)

The NOAA Assistant Administrator (AA) for Weather Services has overall responsibility for the NWS Enterprise Architecture.

3.1.1 Office of Dissemination (DIS)

DIS provides staff assistance to the NOAA AA for Weather Services for NWWS program management and configuration control. DIS provides program and financial management as well as operational, engineering and communications support for NWWS. DIS has responsibility for the coordination of NWS system telecommunications.
The Dissemination Systems Team (DST) is a designated branch within DIS.

Responsibilities include:
  a. Program management of E-NWWS;
  b. Approving and processing coordination of change requests for NWWS product; configuration control (in accordance with NWSI 10-101, *Change Management Process*);
  c. Maintaining the official NWWS excluded product list, and communicate any changes in accordance with NWSI 10-101;
  d. Responding to NWWS user inquiries, requests, and issues;
  e. Maintaining the NWWS Internet website [http://www.nws.noaa.gov/nwws](http://www.nws.noaa.gov/nwws);
  f. Maintaining state-requested NWWS satellite receiver sites;
  g. Performing public outreach and coordination to NWS partners, local, state and federal government agencies; emergency managers; commercial alert entities; radio and television broadcasters; and public and private organizations; and
  h. Submitting timely notifications and updates to users regarding planned preventative, corrective, and unplanned system servicing of the E-NWWS.

3.1.2 National Centers for Environmental Predication Central Operations (NCO)

NCO provides staff assistance to the AA for NOAA Weather Services concerning E-NWWS telecommunications and all product dissemination from WSH over the SBN/NOAAPORT and the NWS Internet Dissemination System (NIDS).

Responsibilities include:
  a. NWS product routing;
  b. Tier I monitoring, incident response, and support;
  c. Tier II and Tier III issue response, resolution and support;
  d. Internet Technology (IT) security implementation and monitoring;
  e. Enterprise system assessment and accreditation (in accordance with all applicable and relevant National Institute of Standard and Technology special publications and Federal Information Processing Standards);
  f. Designing, developing, maintaining and validating databases and Local Data Managers (LDMs);
  g. Issuing *user IDs* and *passwords* for NWWS-OI users; and
  h. Disseminating NWWS products to SBN/NOAAPORT Channel 201 (NWWS products only) and to NIDS (NWWS-OI).

3.1.3 Analysis, Forecast, and Support Office (AFS)

AFS provides staff assistance to the AA for NOAA Weather Services concerning NWS field sites and all National Centers and the National Water Center coordination for product development and integration into the E-NWWS product stream.

Responsibilities include:
  a. Establishing service requirements, including the nature and scope of products to be originated and distributed throughout the NWS EA;
b. Defining message content in accordance with formatting and rules as defined in NWSI 10-1701, 10-1702, 10-1703 and 10-1715; and

c. Administrating change management in accordance with NWSI 10-101 for product addition, deletions or content changes throughout NWS EA.

3.1.4 Office of Central Processing (OCP)
OCP provides staff assistance to the AA for NOAA Weather Services concerning the AWIPS Enterprise system.

Responsibilities include:

a. Updating AWIPS configuration file for the latest NWWS alerts and warnings in accordance with NWSI 10-101;
b. Monitoring appropriate use of product type messages for NWWS dissemination;
c. Resolving Tier II and Tier III issues;
d. Configuration management; and
e. Programming and demonstration testing.

3.1.5 Office of the Chief Information Officer (OCIO)
OCIO provides staff assistance to the AA for NOAA Weather Services concerning IT security. The OCIO has responsibility for over-all NWWS IT security.

Responsibilities include:

a. Authorizing Official for the Certification and Accreditation of the NWS EA Systems;
b. Managing processes that control the routing of data and products throughout the NWS EA; and
c. Monitoring telecommunication networks and reporting failures and outages.

3.2 Regional Headquarter Offices (RH)
RHs coordinate with the field sites for NWWS issues or product changes and forward to WSH any problem that cannot be resolved at the local or regional level. RHs validate field requirements for new and updated products, forwarding requests to AFS.

3.3 Weather Forecast Offices (WFOs) and River Forecast Centers (RFCs)
WFOs and RFCs prepare and issue NWWS products. Each site monitors their product stream and assures proper product-type, priority, and text format are selected (if optioned). Sites are responsible for updating the AWIPS configuration file to assure the latest product types approved for dissemination. Sites are responsible for assisting DST with missing product inquiries for their respective area of responsibility. The WFO’s Warning Coordination Meteorologists (WCMs) communicate and coordinate with state/local emergency managers and local weather users as needed.

3.4 National Centers (NCs)
The NCs add or remove their respective NWWS meteorological and climate products in
accordance with NWSI 10-101. The NCs are also responsible for monitoring the respective products and reporting any issues to NCO Tier I support.

3.5 National Water Center (NWC)
The NWC adds or removes NWWS hydrologic products in accordance with NWSI 10-101. The NWC is also responsible for monitoring the respective products and reporting any issues to NCO Tier I support.

4 NWWS Products
The generation, dissemination, and management of NWWS products are covered under NWS Directives System (NDS) Section 10, Operations and Services (http://www.nws.noaa.gov/directives ). Products to be excluded from the NWWS product stream are submitted by the respective office or center to WSH in accordance with NWSI 10-101. DST maintains the official NWWS exclude list.

5 NWWS Accessibility
The NWWS is offered to the public, government (federal, state and local) and commercial users free of charge (this pertains to the NWWS product streams and End User Client [EUC] software). NWWS is accessed over the NWS SBN/NOAAPORT Channel 201 (satellite) and NWWS-OI (internet).

5.1 NWWS Operations
The NWS bears all costs for the operation and maintenance of the E-NWWS and relevant support systems. Upon request and at the discretion of the NWS, NWWS hardware (satellite dish and receiver) for a state-designated emergency agency may be purchased, installed and maintained by NWS based on a mutually signed Memorandum of Agreement (MOA).

5.1.1 NWWS Enterprise Systems
The NWS EA systems supporting the NWWS are operated and maintained by the respective NWS system owner organization. This support includes applicable System Owner, System Administrator management, Internet System Security Officer (ISSO) monitoring, Internet Technology (IT) security documentation and accreditation.

5.1.2 NWWS Tier Support
Except for user ID and password issuance and resets, the NWS provides a limited NWWS problem resolution capability for users. This policy is based on the multi-variant hardware and software configurations that are available to users.

Users may e-mail the NWWS Program Office if there is an issue that cannot be resolved locally. The NWWS Program Office provides two e-mail addresses for user specific communications; NWWS.Help@noaa.gov (setup or inquiry questions) and NWWS.Issue@noaa.gov (reception problems). The NWWS Program Office will respond by the next business day.
Tier I support is provided by NCO and addresses user ID and password generation, changes, and re-sets within two business days.

Tier II and III support are provided by OCP. This tier support is initiated after discussion(s) with DST concerning extent of issue and risk to the public; including potential impact of current or critical weather to affected users, and recommended solutions.

5.1.3 Software Support
The End User Client (EUC) is a self-contained Java application that allows users to receive either or both NWWS product streams (satellite receiver and Internet). The EUC is available for request from the NWWS webpage http://www.nws.noaa.gov/nwws/news.html. EUC users should send any unresolved issues to NWWS.Issue@noaa.gov. Due to limited resources, the NWS may not be able to update the EUC to correct an issue, the distribution webpage, or issue change notifications in a timely manner and may at its discretion update, change, or discontinue provisioning the EUC without user notification.

5.2 State and Other Agencies
Most state and local agencies currently use NWWS or other weather alert, warning and information via the Internet.

Several legacy NWWS state agencies (prior to July 1, 2015) elected to retain a government supported satellite dish system. DST installed and maintains those sites, addressing NWWS issues when reported.

6 NWWS Problems and Issues
Reporting problems and issues is the responsibility of the respective NWS EA system owner and NWWS user.

E-mails addresses were set up to handle NWWS User problems and issues:

1. NWWS.Help@noaa.gov for setup or general inquiry questions;
2. NWWS.Issue@noaa.gov to identify and alert DST of problems, corrupted or missing products;

DST or the NWWS program manager may be contacted directly. EA system owners should contact DST directly.

6.1 NWWS Outage Reporting

6.1.1 NWS Enterprise Architecture System Notifications
The respective EA system operation managers will inform DST of any scheduled outages as soon as planned.

The respective EA system operation managers will inform DST on the cause of any unplanned outage within 24 hours of occurrence.
Respective EA systems that report system status and schedule to NWS management will also include DISS and DST on the distribution.

6.1.2 NWWS User Notifications
The DST will notify users of any planned and unplanned system outages for system re-sets for both monitored and un-monitored systems.

NWWS User who experiences an outage or issue should contact the DST or NWWS Program Manager directly or send an e-mail to NWWS.Issue@noaa.gov.

6.2 Corrupted or Missing Products
Corrupted or missing products should be reported as soon as possible to DST via NWWS.Issue@noaa.gov or by e-mailing the NWWS Program Manager directly. Please identify whether the corruption or missing product is from NWWS-OI or SBN/NOAAPORT PID 201 if known.

7 Acronyms
AA Assistant Administrator
AFS Analyze, Forecast and Support Office
AWIPS Advanced Weather Interactive Processing System
BCQ Central Region Headquarter site, Kansas City, Kansas
BOU Alternate backup site, Boulder Colorado
DIS Office of Dissemination
DST Dissemination Systems Team
EA Enterprise Architecture
EMWIN Emergency Manager’s Weather Information Network
E-NWWS Enterprise-NWWS (commonly referred as NWWS)
EUC End User Client
ID Identity
ISSO IT System Security Officer
IT Information Technology
LDAD Local Data Acquisition and Dissemination
LDM Local data manager
MOA Memorandum of Agreement
NC National Center
NCF Network Control Facility (AWIPS related)
NCO NWS Central Operations
8 Definitions

End User Client (EUC) is an NWS-developed XMPP Java script designed for Windows-based PCs for extracting and filtering NWWS text products from either SBN/NOAAPORT Channel 201 or NWWS-OI, or from both product streams with a de-duplication feature. The latest EUC version can be requested from NWS using the NWWS webpage; [http://www.nws.noaa.gov/nwws/news.html](http://www.nws.noaa.gov/nwws/news.html)

Enterprise Architecture (EA) is a comprehensive blueprint that aligns an organization’s business processes with its Information Technology (IT) strategy. It is documented using
multiple architectural models or views that show how the current and future needs of an organization will be met. The key components of the EA are:

- Accurate representation of the business environment, strategy and critical success factors
- Comprehensive documentation of business units and key processes
- Views of the systems and data that support these processes
- A set of technology standards that define what technologies and products are approved to be used within an organization, complemented by prescriptive enterprise-wide guidelines on how to best apply these technology standards in creating business applications.

**SES-1** is a telecommunication satellite principally used to provide high-power direct-to-home (DTH) and digital broadcasting services to very small aperture terminals (VSAT) in the US. [http://www.aerospace-technology.com/projects/ses1communicationssa/](http://www.aerospace-technology.com/projects/ses1communicationssa/) The SES-1 is the platform for the NWS SBN/NOAAPORT Channels 101-105 and Channel 201 (NWWS products only).
Appendix A  NWWS User Configuration

End users have multiple options of receiving NWWS text alerts via satellite or the Internet. For NWWS product stream, it is recommended that NWWS users have both satellite (SBN/NOAAPORT PID 201) and the Internet (NWWS-OI) for the highest product availability. Updated information is available to the public on the NWWS webpage (www.nws.noaa.gov/nwws).

Configuration 1 - Satellite only

A. Satellite dish (historically 1.2m; though 2.4m or larger is recommended for better reception and product availability)

B. Low Noise Band (LNB) down converter (Norsat Model 3220 or similar)

C. Ethernet, RF coaxial and CAT5 network cables (as necessary)

D. Windows - based PC with minimum 20GB storage and 3GB RAM

E. Satellite receiver DVB-S2 that as a minimum is characteristically similar to or better than a Novra S300.

F. Software to filter and display products (similar to the NWWS End User Client-EUC)

or

Configuration 2 – Internet only

A. Internet connection

B. Windows - based PC with minimum 20GB storage and 3GB RAM

C. XMPP client (Commercial Software or EUC) for NWWS-OI Internet stream access and message display.

Note: A user-ID and password required. See NWWS webpage-NEWS to request.

or

Configuration 3 – Both Satellite and Internet access

This is the recommended configuration for the highest product availability. The EUC is capable of receiving both SBN/NOAAPORT PID 201 and the NWWS-OI from the Internet and de-duplicate the product streams.

Note: There are commercial software interfaces that allow user’s access to the NWWS product stream(s) using the user ID and password.