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Operations and Services
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ALL-HAZARDS EMERGENCY MESSAGE COLLECTION SYSTEM (HAZCOLLECT)

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SUMMARY OF REVISIONS: This directive supersedes NWSI 10-1708, "*All-Hazards Emergency Message Collection System (HazCollect)*," effective July 3, 2009. Changes were made to reflect the NWS Headquarters reorganization effective April 1, 2015.

Content changes were made to:

1. Change all Disaster Management Interoperability System (DMIS) references to the Integrated Public Alert and Warning System (IPAWS).
2. Remove all content related to the DMIS client and related alert authoring procedures and state that third party software is now used to author alerts for IPAWS.
3. Update all web links to ensure they point to the proper sites.
4. Simplify the HazCollect application and approval process so that public safety officials only need IPAWS Program Office approval as a prerequisite for using HazCollect.

/signed/ 11/27//17
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Director (Acting), Office of Dissemination

All-Hazards Emergency Message Collection System

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1 Introduction

This National Weather Service (NWS) Instruction (NWSI) describes the end-to-end process of the All-Hazards Emergency Message Collection System (HazCollect). HazCollect provides public distribution of Non-Weather Emergency Messages (NWEMs) created by authenticated alerting authorities, including Emergency Management (EM) organizations, across the nation through NOAA Weather Radio All Hazards (NWR) and other NWS dissemination systems. HazCollect is also known as HazCollect Legacy (HCL).

HazCollect should not be confused with HazCollect Extended (HCE). HazCollect involves transmission of authenticated CAP messages from the Federal Emergency Management Agency (FEMA) Integrated Public Alert and Warning System (IPAWS) to NWS. HCE is an NWS system that sends weather messages to FEMA IPAWS.

The use of HazCollect by alerting authorities for distribution of NWEMs is voluntary. As stated in NWSI 10-518, *Non-Weather Related Emergency Products Specification*, WFOs may use the Automated Weather Information Processing System (AWIPS) to create NWEMs at the request of EM organizations. However, NWEMs transmitted by EM organizations to IPAWS and further disseminated over NWS systems via HazCollect achieve broader dissemination. Thus, EM organizations are encouraged to use HazCollect.

1.1 References

The relevant NWSI documents that provide policy and procedures related to HazCollect include:

- NWSI 10-518, *"Non-Weather Related Emergency Products Specification"*
- NWSI 10-1701, *"Text Product Formats and Codes"*
- NWSI 10-1702, *"Universal Geographic Code (UGC)"*
- NWSI 10-1710, *"NOAA Weather Radio (NWR) All Hazards Dissemination"*
- NWSI 10-1715, *"NOAA Weather Wire Service (NWWS) Dissemination*"
- NWS Directive Series 60-7, *"Information Technology Security Policy"*
- NWS Directive Series 30-31, *"Logistics Support Planning and Operations"*

All NWSIs and associated NWS regional supplements may be found at:
http://www.nws.noaa.gov/directives

1.2 Mission Connection

The NWS mission to protect life and property is carried out by timely delivery of alerts, warnings and other weather and non-weather related information under the "all-hazards" concept. HazCollect provides the emergency management community with an automated, secure and standardized tool to post hazard information on NWS's all-hazards communications systems.

The dissemination of NWEMs by NWS is authorized by the Robert T. Stafford Disaster Relief and Emergency Assistance Act and implemented by the Department of Homeland Security (DHS) National Response Framework (NRF). The Department of Commerce's National Oceanic and Atmospheric Administration's (NOAA) responsibilities include using NWR as input to the Emergency Alert System (EAS) and providing the public with critical, all-hazards information using multiple information dissemination systems. These resilient "one-to-many" means of communications are also useful during and after a catastrophic disaster, whether natural or manmade, or failure of infrastructure.

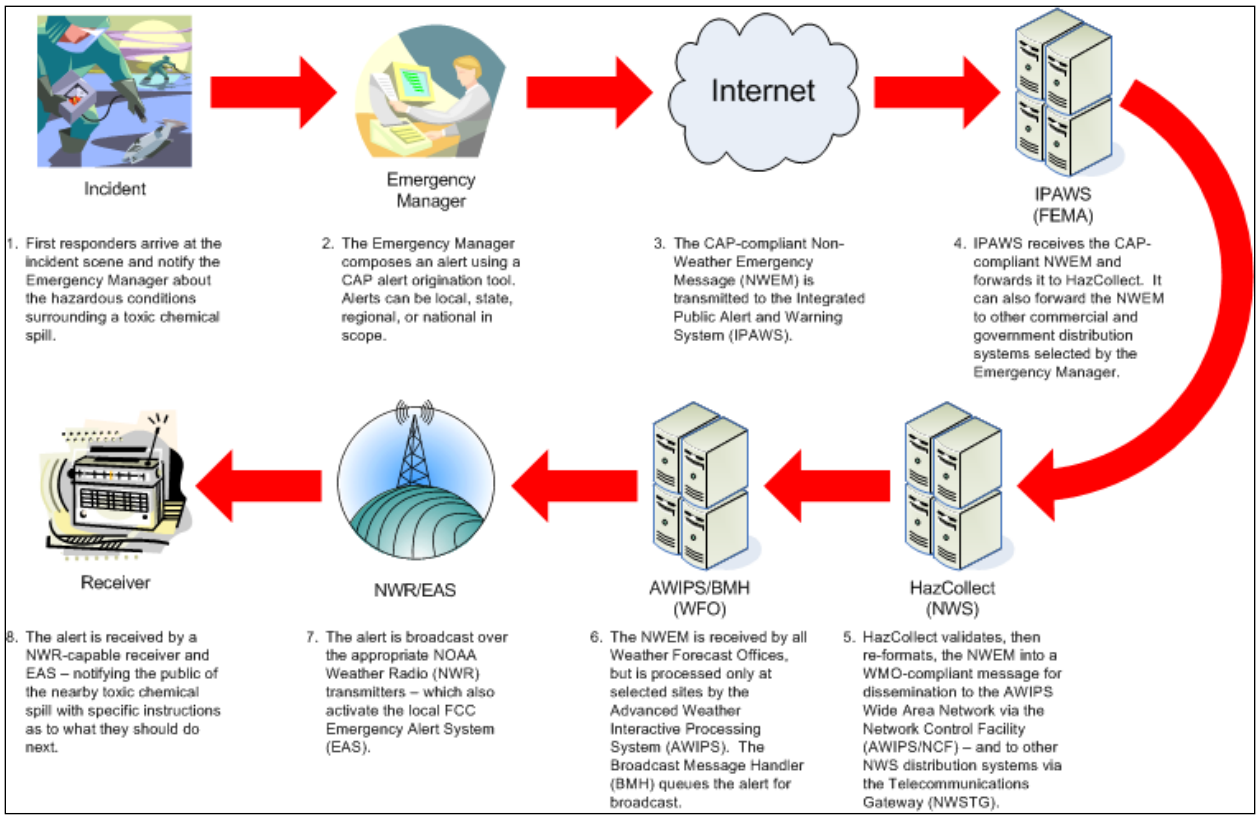

Figure 1. HazCollect Process

2 Summary of HazCollect Processes

The HazCollect process (see Figure 1) begins with identification of an incident by first responders that requires informing the public of a hazard or need to take specific action. First responders notify authorized public safety or EM officials about the hazard. The authorized alerting official composes an alert using a Common Alerting Protocol (CAP) message authoring tool. The CAP message is transmitted to FEMA IPAWS for authentication of the originator and processing of the data. IPAWS transmits the information to the NWS's centrally-located HazCollect system to be authorized, validated, and reformatted into NWS-compatible NWEM products. The NWS HazCollect system delivers the NWEMs to NWS systems for dissemination. The NWEMs are sent through the Emergency Alert System (EAS), other media

outlets, and through the communications networks of private and commercial vendors. This automated and secure process usually takes less than two minutes from the time the operator posts the message until it is disseminated to the public, including the initiation of the NWR broadcast sequence.

NWEMs include specific actions necessary to reduce the impact of the emergency, such as evacuation orders or instructions for sheltering in place. NWEMs follow the rules set forth in NWSI 10-1701, *Text Product Formats and Codes*, and NWSI 10-1702, *Universal Geographic Code (UGC)*. NWEM definitions, specific formats and examples are detailed in NWSI 10-518, *Non-Weather Related Emergency Products Specification*.

Note: NWEM formats and examples in this document may be slightly different from those in NWSI 10-518 due to differences between NWEM creation platforms used by EM organizations for HazCollect and NWEM creation by NWS using AWIPS.

2.1 Types of NWEM Events

Examples of non-weather events include earthquakes, volcanic activity, avalanches, chemical spills/releases, biohazards, fire incidents, nuclear incidents, child abduction emergencies (AMBER Alerts), 911 outage emergencies and terrorist incidents. All of these events require quick alerting and warning dissemination.

2.2 NWEM Nomenclature

Emergency information originated from alerting officials is in the form of data fields and is not technically a standardized public NWEM product until the HazCollect system reformats the incoming data into standard text and codes with appropriate product headers. For simplicity, this NWS I refers to non-weather/non-flooding emergency information at any stage in the HazCollect process as NWEMs.

2.3 Systems Disseminating NWEM Products

NWEMs from HazCollect are disseminated via NWS systems including NWR, NOAA Weather Wire Service (NWWS), Emergency Managers Weather Information Network (EMWIN). These messages are further relayed to multiple external systems for dissemination by the private sector and the EAS.

3 Federal Emergency Management Agency (FEMA) Interoperability Infrastructure

Understanding the end-to-end dataflow and functions of HazCollect requires a discussion of Federal government infrastructure provided by FEMA.

3.1 Integrated Public Alert and Warning System (IPAWS)

The IPAWS platform provides interoperability interfaces for sharing alerts, situation reports, common operational picture snapshots and other emergency related information. These interfaces provide data structures and rules of operations designed to enable information sharing between diverse systems, both commercial and government. In general, these interfaces conform

to open messaging standards, including Common Alerting Protocol (CAP) as defined through the Organization for the Advancement of Structured Information Standards (OASIS).

FEMA provides documentation to support the IPAWS interoperability interfaces and user interface development by third-party vendors.

3.1.1 Common Alert Protocol (CAP)

CAP is an international standard for the exchange of emergency alert information. On September 30, 2010, FEMA adopted CAP as the official message format for IPAWS. CAP is the basic eXtensible Markup Language (XML) data exchange format enabling interoperability across data networks, computer-controlled public warning systems and incident management applications. CAP is a simple, flexible, open, non-proprietary digital message format for collecting and distributing various types of "all-hazard" safety notifications and emergency alerts.

The CAP format is fully compatible with existing formats, including the NWS Specific Area Message Encoding (SAME) used for NWR and the EAS.

Using CAP has the following advantages:

- Allows a consistent warning message to be disseminated simultaneously over many different warning systems, thus increasing warning effectiveness while simplifying the alerting task
- Helps ensure alert messages reach the right audience at the right time
- Reduces the workload, costs and operational complexities associated with using multiple warning systems and the need for multiple custom interfaces
- Enhances technical reliability
- Ensures consistency in the information transmitted over multiple delivery systems
- EAS can be activated by CAP pushed to FEMA IPAWS
- Wireless Emergency Alerts (WEA) can be activated by CAP pushed to FEMA IPAWS (https://www.fcc.gov/guides/wireless-emergency-alerts-wea)

More information on CAP is available at:
https://www.oasis-open.org/committees/tc_home.php?wg_abbrev=emergency-adopt

HazCollect is designed to receive a CAP-formatted message from the alerting authority through IPAWS. While the CAP format is fully compatible with SAME and EAS, most current NWS dissemination systems are not CAP-compliant. Therefore, an important function of the NWS HazCollect system is to reformat the original CAP formatted messages into WMO-formatted messages for dissemination over NOAA/NWS systems, to include NWR.

3.2 How Alerting Authorities Sign Up for IPAWS and HazCollect

A federal, state, territorial, tribal nation or local alerting authority applying for authorization to use IPAWS is designated as a Collaborative Operating Group (COG) by the IPAWS Program Management Office (PMO). Only an authorized COG can post NWEMs to IPAWS for subsequent distribution to HazCollect for public dissemination via NWS systems. There are

currently numerous types of COGs affiliated with IPAWS varying in size, structure and governance styles. A COG may have members from multiple jurisdictions with each individual member account administered through its software system. See http://www.fema.gov/alerting-authorities for a list of organizations with IPAWS public alerting authority.

A COG is a virtual organization of users who agree to dynamically create and mutually share information in real time. In terms of emergency management functions, a COG is typically a voluntary incident or consequence management organization consisting of emergency response officials who need to coordinate actions, communicate and exchange information in a collaborative environment. Each COG has a COG Administrator who manages all activities and assigns roles and privileges to the COG members (see section 6.1 for specific Administrator duties). With access rigorously controlled and secured via specific user roles and privileges, COG members can communicate internally with each other, and with other COGs, as stipulated in their operations plans. Most COGs are formed for these and other internal purposes apart from NWS and HazCollect.

Examples of organizations that may constitute a COG include an entire state or county EM office, divisions of an EM organization, local fire departments, federal agencies, military units, a public or private consulting organization participating in consequence management, or any combination of these (or similar entities) as necessary to maintain the desired level of collaboration.

3.2.1 Select IPAWS Compatible Software

Access to IPAWS is free; however, to send a message using IPAWS, organizations must procure their own IPAWS compatible alert authoring software. See http://www.fema.gov/media-library/assets/documents/25916 for a list of IPAWS compatible alert authoring software which has been successfully tested in the IPAWS test environment. Organizations should consult with their software vendor to ensure the software provides the capabilities required by the organization.

3.2.2 Apply for a Memorandum of Agreement (MOA) with FEMA

To become a COG, an MOA governing system security must be executed between the organization and FEMA. Each MOA is specifically tailored to the organization and their interoperable software system. To apply for IPAWS access, organizations access the MOA Application at http://www.fema.gov/how-sign-ipaws or send an email to ipaws@fema.dhs.gov with the subject line "COG Application". In return, the organization will receive an application form and instructions to begin the MOA process.

The FEMA COG coordinator will next prepare and return the MOA for the applicant's signature. Once signed by the applicant, the MOA will be routed back to FEMA for signatures. Once executed, a COG Identification (ID) and digital certificate will be generated and implemented in IPAWS. A copy of the executed MOA and COG ID will be returned to the organization. Additionally, the COG ID and digital certificate will be provided in order to configure the IPAWS compatible software. After completing these steps, the organization will have the capability to exchange standards-compliant messages and content between COGs.

3.2.3 Apply for Public Alerting Permissions

Alerting authorities that want to send alerts to the public through IPAWS must also complete an application defining the types of alerts they intend to issue and the extent of their geographic warning area. The application for IPAWS public alerting authority will be provided when the organization applies for a COG MOA, along with contact information for a designated state reviewer. In order to ensure consistency with state public alerting plans, the application must be reviewed and signed by the designated state official before it is submitted to FEMA. Once approved by FEMA, the alerting authority has the necessary approval to push alerts through IPAWS to HazCollect for dissemination over NWS systems.

3.2.4 Complete IPAWS Web-based Training

FEMA's Emergency Management Institute (EMI) offers the independent study course, IS-247a Integrated Public Alert and Warning System. The course provides authorized public safety officials with increased awareness of the benefits of using IPAWS for effective public warnings, skills to draft effective warning messages, and best practices in the effective use of CAP to reach all members of their communities. The course is a prerequisite for full access to IPAWS for the purpose of public alerting.

3.2.5 Complete the Application

Once the public alerting application and web-based training is complete, specific alerting permissions will be implemented in IPAWS. Initial functionality includes the ability to access and send alerts through EAS, WEA, and the IPAWS All-Hazards Information Feed. The IPAWS PMO notifies the NWS HazCollect Administrator of the new COG's profile for entry into the HazCollect system database as an active HazCollect COG, so the individual members specified by the COG will be able to send alerts and warnings to the geographically prescribed areas via NWR and other NWS dissemination systems.

4 COG Authentication and Authorization

The HazCollect system uses a two-part authentication and authorization process. The following explains the distinctions between the two.

a. Authentication. FEMA ensures that a COG desiring interaction with IPAWS, or HazCollect, is correctly identified through secure communications protocols. The IPAWS and trust model is based on the concept of establishing validated COGs. Once validated through formal registration procedures, each COG administers its own individual membership.

b. Authorization. This automated process ensures that the NWEMs originated from an authenticated COG are correctly coded for their pre-assigned geographic areas, among other information, as noted in the COG's registration to become an IPAWS and HazCollect participant.

5 Responsibilities of HazCollect Partner Organizations

The NWS has overall responsibility for the HazCollect program. While many of the partner organizations' responsibilities are included in earlier sections, this section presents the HazCollect responsibilities and functions for each of the respective partner organizations, in the

order of the end-to-end HazCollect process.

5.1 Local/State Emergency Management Groups

To interact with HazCollect, a pre-existing or newly appointed COG administrator, typically an emergency manager and/or Information Technology (IT) Manager or designee, must formally register its group with FEMA to become an official COG. An alternate/back-up co-administrator is allowed, even recommended. When registering with FEMA, the COG may also apply for authorization to post NWEMs to HazCollect for its respective geographic areas of responsibility.

The approved COG administrator then has the following responsibilities: Advise decision makers; recommend COG configuration; install and configure (or equivalent) software; establish operator accounts; provide or arrange for training (see section 7); and, assign roles and privileges, (i.e., select individuals within the COG to have the authority to variously create, read [review], edit or post incident and emergency information). The COG administrator has all privileges. Posting, the most important privilege, allows an operator to release (transmit or send) information to the IPAWS for further distribution.

5.2 FEMA IPAWS

The FEMA IPAWS Program Management Office administers and manages the IPAWS program, including the IPAWS infrastructure and formal COG registration.

5.3 National Weather Service (NWS)

The NWS has overall responsibility for the HazCollect program.

5.3.1 NWS Headquarters (NWSH)

5.3.1.1 Office of Dissemination (DIS)

DIS manages the HazCollect program. DIS is responsible for outreach of information to WFOs which can be shared with the Emergency Management community, needs identification from stakeholders, requirements analysis, documentation of HazCollect users, and creation of NWS training material. DIS is also responsible for coordination and issuance of Advanced Weather Information Processing System (AWIPS) Modification notes and AWIPS software releases. A DIS Dissemination Systems Team (DST) staff member is assigned as the HazCollect Manager to oversee and coordinate these activities. The DIS HazCollect Manager or designee is also responsible for assisting AFS with addressing concerns from field offices about the appropriateness of a COG to use HazCollect.

Upon notification from the IPAWS PMO of any new COG registrant with public alerting authority for HazCollect, the HazCollect Manager or other DIS designee will take the following actions:

a. Notify the NWS field office Warning Coordination Meteorologist (WCM) by email of any new COGs in the WCM's area of responsibility which have been enabled with interoperability between IPAWS and HazCollect.

b. Provide the HazCollect System Administrator with the COG registration information necessary to populate the HazCollect system COG authorization database.

5.3.1.2 Analyze, Forecast, and Support Office (AFS)

As a service and operations related matter, AFS is responsible for addressing any concerns from field offices about the appropriateness of a COG to use HazCollect. An AFS Analysis and Support Division staff member is designated, along with the DIS HazCollect Manager and regional designee, to investigate and evaluate information presented to determine the appropriate course of action. If COG access changes are determined to be necessary, AFS is responsible for notifying NCEP Central Operations (NCO) of the changes by email.

5.3.2 National Centers for Environmental Prediction (NCEP)

5.3.2.1 NCEP Central Operations (NCO)

NCO provides maintenance and logistics support as the system owner and HazCollect System Administrator, technical contract administration, hardware and software configuration management, , software and maintenance releases, and security functions. NCO is responsible for entering the COG registration information provided by DIS to populate the HazCollect system COG authorization database and implementing any changes to COG status as directed by AFS.

5.3.3 Regional Headquarters

The regional dissemination program manager, WCM program manager or other designee, at the discretion of the Regional Director, has overall management responsibility of the HazCollect program for their region, providing coordination and guidance with the field office WCMs and NWSH. The WCM program manager or other designee is responsible for assisting AFS with addressing concerns from field offices about the appropriateness of a COG to use HazCollect.

5.3.4 Field Offices

5.3.4.1 Operational Field Office Procedures

Backup procedures for government and alerting officials that are HazCollect participants will be maintained by the WFO in the event of failure of HazCollect, IPAWS or other automated systems. Backup procedures will include fax, telephone or radio conversation, e mail and other communication methods for authentication and message relay from the COG to NWS staff.

5.3.4.2 Operational Field Office Staff Duties

As part of their overall situational awareness on shift, field office staff keeps apprised of all hydrometeorological and non-hydrometeorological information and events occurring within their area of responsibility. The staff may learn of non-hydrometeorological incidents from EM offices or other alerting officials by any one of a number of traditional methods, including by telephone or the National Warning System (NAWAS), a voice network managed by DHS and accessible in all WFOs. NWEMS received from IPAWS are automatically disseminated as text products over NWS dissemination systems without editing by NWS staff. However, for NWR dissemination, staff are alerted to these messages using the red banner alert.

The field office staff may frequently learn of an incident when a “red flag banner” showing the

title of the NWEM automatically opens up on their AWIPS workstations. The staff should then display the NWEM text product and expeditiously review it in the NWR browser Pending window on AWIPS. This review is conducted to ensure the correct pronunciation by the NWR Voice Improvement Processor automated voice of names of people, places and technical aspects of the incident. If the pronunciation and/or other aspects of the automated broadcast are not accurate or suitable, the staff should manually record the NWEM for broadcast on NWR as necessary.

The proper insertion of the NWEM in the appropriate broadcast product suite and the correct replacement by future messages for the same event are important staff duties for providing an effective NWR message broadcast. For example, the most urgent NWEMs requiring immediate action, such as toxic spills, nuclear incidents, etc., all under the NWEM "warning" (W) category, should be included in the NWR "Exclusive" product suite. Somewhat less urgent NWEMs, such as for AMBER Alerts or other NWEMs under the category "emergency" (E) should be included in the NWR "High" product suite. For this and all other aspects of NWR, see NWSI 10-1710, *"NOAA Weather Radio Dissemination"*, and appropriate AWIPS and NWR Broadcast Message Handler (BMH) Mod Note(s) and Maintenance Note(s).

5.3.4.3 WCM Duties

In addition to the operational field office duties, the WCM (or designee as determined by the office's Meteorologist in Charge) from each field office has a primary role in the outreach, awareness for HazCollect, and coordination with the regional HazCollect focal point(s). The WCM has the following duties:

a. receives the COG registrant's information to become a HazCollect participant from DIS;

b. communicates any concern about the suitability of a COG's or COG member's HazCollect access to Region, the AFS Analysis and Mission Support Division and DIS HazCollect points of contact for investigation and action;

c. provide information to COGs about IPAWS, HazCollect and recommended NWEM writing style; and

d. alerts DIS of COG registrant information changes for approved COGs if the COG Administrator (or designee) does not take similar action.

NOTE: If, at any time, any WFO has concern about the appropriateness of a COG's access to HazCollect, that concern should be communicated expeditiously to the designee who has overall management responsibility of the HazCollect program for the respective region as well as the Analyze, Forecast, and Support Office (AFS) designee and Office of Dissemination (DIS) HazCollect Manager. AFS, with assistance from the regional designee and DIS, will investigate and evaluate the information presented to determine the appropriate course of action.

6 HazCollect Infrastructure and End-to-End Dataflow in Detail

6.1 NWEM Origination

NWEMs (text and codes in standard data fields) for HazCollect dissemination are originated from IPAWS-authorized COGs using IPAWS compatible alert authoring software within the government and emergency management community (see lower-left corner of Figure 2).

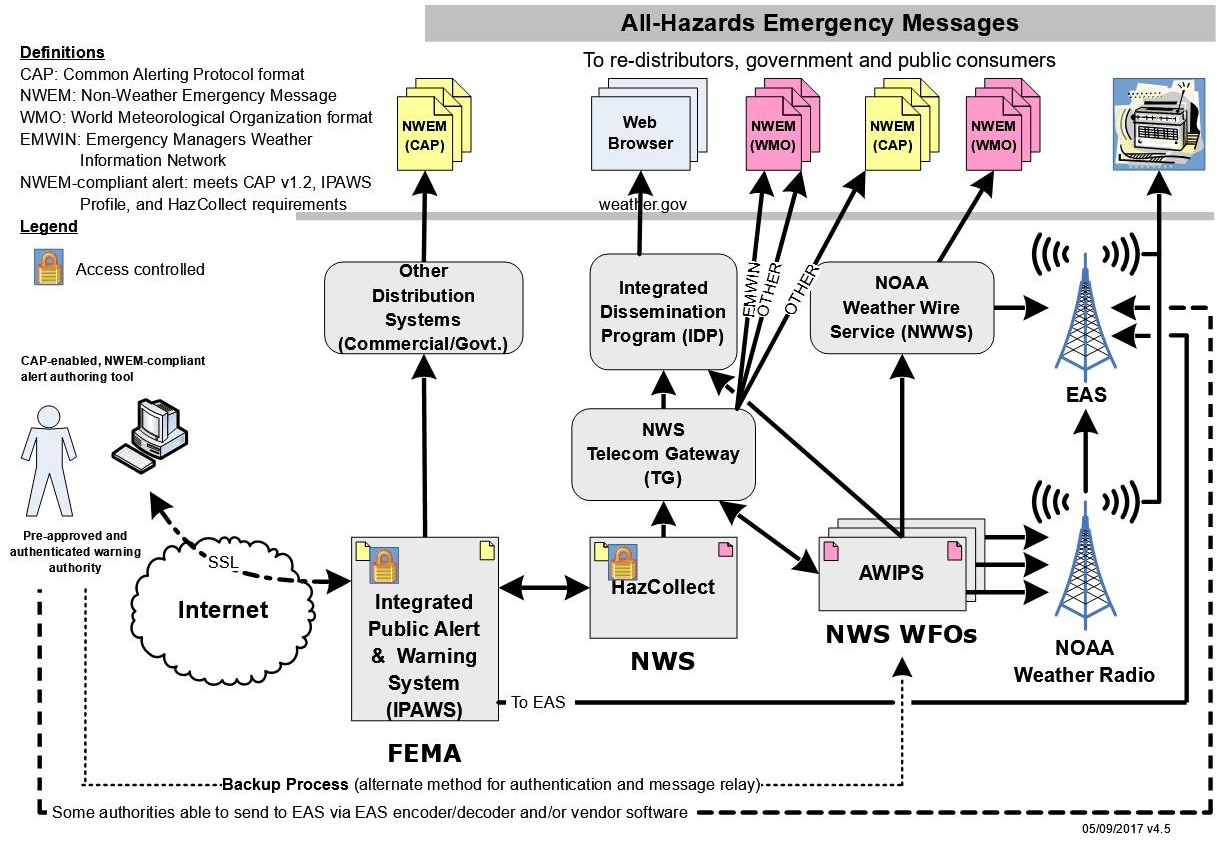

Figure 2. Emergency Message Data Flow

6.2 NWEM Posting

NWEMs are posted to IPAWS for relay to HazCollect and other government and non-government systems which provide dissemination to the general public. Posting also allows the NWEM be sent to other COGs, as stipulated in their operations plans and configured in their alert authoring software. The NWEM data fields are posted to FEMA's centrally located IPAWS for further processing before being transmitted to the HazCollect system.

6.3 IPAWS

The centrally located IPAWS automatically:

a. authenticates and authorizes the originating COG;
b. confirms the digital signature of the originating COG; and

c. sends the CAP-formatted message to the NWS's centrally located HazCollect system for second level authorization.

If the message fails authorization at the HazCollect system, an appropriate failure message is returned through IPAWS to the COG attempting to enter the NWEM.

6.4 HazCollect System

The centrally located HazCollect system receives the CAP-formatted message from IPAWS and provides the following:

a. automated authorization of the NWEM's geographic areas;
b. conversion of the geographic areas to the appropriate Universal Geographic Codes (UGCs); and
c. conversion of the CAP format into the World Meteorological Organization (WMO) message format for distribution through the NWS's AWIPS and other NWS systems. See Appendix D for NWEM product examples.

The HazCollect system automatically sends back to IPAWS one of the following two status messages, indicating that either:

a. the NWEM was successfully sent to NWS systems for distribution or
b. the NWEM was not authorized and not distributed.

IPAWS also returns a similar message to the COG which generated the alert.

6.5 NWS Systems Disseminating NWEM Products

The HazCollect system then automatically delivers the NWEM products to NWS dissemination systems including AWIPS, the NWS Telecommunications Gateway (NWSTG), and the NWS web server farm for subsequent dissemination to the public. The following distribution methods are used.

6.5.1 Local radio broadcasts from each NWR station in the NWR network

AWIPS at each NWS field office sends text information, including NWEMs, to BMH where it is converted automatically into a broadcast-ready transmission and sent to the NWR stations. Through the use of Specific Area Message Encoding (SAME), the message is transmitted from NWR stations to the EAS broadcast stations. NWR broadcast occurs after a quick visual review by NWS staff in the Pending window of the NWR browser on AWIPS for any needed technical and pronunciation corrections and adjustments to ensure intelligible NWR broadcast for relay to EAS. Message review will be completed expeditiously and will be only for grammatical, format and pronunciation corrections and adjustments necessary for broadcast.

6.5.2 Text Product Transmission

The Integrated Dissemination Program (IDP) is NWS's centrally located primary information system. IDP acquires, processes, and disseminates messages and products from the NWS worldwide. It interfaces with users and other government agency and international systems and distributes the NWEM products, as well as all other NWS text products. In addition, AWIPS and the IDP distribute text products to the NWWS and Emergency Managers Information

Network (EMWIN).

7 Outreach and Training

These interrelated functions are conducted by the NWS, FEMA and the respective federal/state/local emergency management groups.

7.1 National Weather Service

DIS leads the HazCollect outreach effort and coordination. Information is accessible from the HazCollect web site at: http://weather.gov/hazcollect/.

7.2 FEMA IPAWS Program Management Office (PMO)

The FEMA IPAWS PMO provides the training and outreach and overall guidance for dissemination of NWEMs including the effective creation and transmission of NWEMs. Information is accessible from the IPAWS web site at: http://www.fema.gov/integrated-public-alert-warning-system or by sending an email to ipaws@fema.dhs.gov.

Appendix A
Non-Weather Emergency Message (NWEM) Events and Code

1. Introduction

This Appendix includes a list of the NWEM Events and their respective codes in alphabetical order. Only these event names and codes can be used in the creation and dissemination of NWEM products.

Most "Warning" events have codes that end in "W," all "Watch" events have codes that end in "A," and all "Emergency" events have codes that end in "E." These are the codes for real-time NWEMs. The "Administrative Message" that uses code "ADR" has been adopted for follow-up messages to initial W and E NWEMs. (If the ADR were not used, using the original W or E code for follow-up information would cause the original W or E message to be erased on certain communications systems. Also, using the W or E as follow-up could trigger a new, separate broadcast of the event on EAS stations, which is neither desired nor the intent of the EAS process.)

Important Note: The other codes (marked with an asterisk [*]) in the list in section 3 below not ending in A, W, or E, generally are for administrative, demonstration or testing purposes and are not used to provide real-time alerts of hazardous situations. The CEM and EVI are warning related codes, but they pre-date the nomenclature described above, so they do not end in W.

2. Authority

The Federal Communications Committee (FCC) on February 22, 2002, adopted a Report and Order (FCC-02-64) giving local and state EAS committees the option of using these event codes for non-weather related events. The HazCollect program has adopted these officially sanctioned event codes as the only ones to be used in the production and dissemination of NWEMs, with the exceptions for the codes with asterisks, as noted above.

3. NWEM Events and Codes

See NWSI 10-518, Non-Weather Related Emergency Products Specification, Appendix C, for comprehensive definitions, descriptions and examples of these events.

Non-Weather Emergency Events	Codes
Administrative Message	ADR
Avalanche Watch	AVA
Avalanche Warning	AVW
Child Abduction Emergency	CAE
Civil Danger Warning	CDW
Civil Emergency Message	CEM
Demonstration Message	DMO*
Earthquake Warning	EQW
Evacuation Immediate	EVI
Fire Warning	FRW
Hazardous Materials Warning	HMW

Law Enforcement Warning	LEW
Local Area Emergency	LAE
National Information Center	NIC*
National Periodic Test	NPT*
Network Message Notification	NMN*
911 Telephone Outage Emergency	TOE
Nuclear Power Plant Warning	NUW
Radiological Hazard Warning	RHW
Required Monthly Test	RMT*
Required Weekly Test	RWT*
Shelter in Place Warning	SPW
Volcano Warning	VOW

* These codes are used for administrative, demonstration or testing purposes.

Appendix B
References

Introduction

This appendix lists the relevant Internet web sites that provide more comprehensive information and descriptions related to the HazCollect system.

Web Site References

a. National Response Framework:
https://www.fema.gov/media-library/assets/documents/117791

b. National Response Framework, Emergency Support Function Annexes:
https://www.fema.gov/media-library/assets/documents/25512

c. Federal Information Processing Standard (FIPS) Codes:
https://www.census.gov/geo/reference/codes/cou.html

d. OASIS Standard "Common Alerting Protocol Version 1.2"
http://docs.oasis-open.org/emergency/cap/v1.2/CAP-v1.2-os.pdf

e. OASIS Specification "Common Alerting Protocol, v. 1.2 USA Integrated Public Alert and Warning System Profile Version 1.0"
http://docs.oasis-open.org/emergency/cap/v1.2/ipaws-profile/v1.0/cap-v1.2-ipaws-profile-v1.0.pdf

f. Weather Forecast Office (WFO) Information on the NOAA/NWS Management Information Retrieval System (MIRS), which provides NWS field office locations, addresses and contact information:
http://www.nws.noaa.gov/mirs/

g. NWS HazCollect web site:
http://www.nws.noaa.gov/os/hazcollect/

h. FEMA Integrated Public Alert and Warning System:
http://www.fema.gov/integrated-public-alert-warning-system

i. FEMA News Release - FEMA Announces Adoption of New Standard For Emergency Alerts
http://www.fema.gov/news-release/2010/09/30/fema-announces-adoption-new-standard-emergency-alerts

Appendix C
Acronyms

AFS	Analyze, Forecast, and Support Office
AWIPS	Advanced Weather Interactive Processing System
BMH	Broadcast Message Handler
CAP	Common Alerting Protocol
COG	Collaborative Operating Group
CTA	Call to Action
DIS	Office of Dissemination
DHS	Department of Homeland Security
DM	Disaster Management
DST	Dissemination Systems Team
EAS	Emergency Alert System
EM	Emergency Management or Emergency Manager
EMWIN	Emergency Managers Weather Information Network
FCC	Federal Communications Commission
FEMA	Federal Emergency Management Agency
FIPS	Federal Information Processing Standards
HazCollect	All-Hazards Emergency Message Collection System
HSA	HazCollect System Administrator
IDP	Integrated Dissemination Program
IPAWS	Integrated Public Alert and Warning System
MIRS	Management Information Retrieval System
NAWAS	National Warning System
NCF	Network Control Facility
NCO	National Centers for Environmental Prediction Central Operations
NOAA	National Oceanic and Atmospheric Administration
NWEM	Non-Weather Emergency Message
NWR	NOAA Weather Radio All Hazards
NWS	National Weather Service
NWSH	National Weather Service Headquarters
NWSI	National Weather Service Instruction
NWSTG	National Weather Service Telecommunications Gateway
NWWS	NOAA Weather Wire Service
OCP	Office of Central Processing
SAME	Specific Area Message Encoding
TG	Telecommunications Gateway (NWS)
UGC	Universal Geographic Code
WCM	Warning Coordination Meteorologist
WEA	Wireless Emergency Alerts
WFO	Weather Forecast Office
WMO	World Meteorological Organization

Appendix D
NWEN Product Format Examples

The official NWEM NWS/WMO product format consists of plain language text and codes, following the rules in NWSI 10-1701, "*Text Product Format and Codes*," NWSI 10-1702, "*Universal Geographic Code (UGC)",* and NWSI 10-518, and *"Non-Weather Related Emergency Products Specification,"* which provides specific details on NWEM products, including definitions, formats and more examples. A few modifications to this format for NWEMs are found in the examples and explanatory notes below.

The following format and examples apply to NWEMs.

Notes:
(1) The Broadcast Instruction line, "BULLETIN – EAS ACTIVATION REQUESTED", is the same for all NWEMs, and is inserted automatically by the HazCollect system.
(2) The "Information Source" line is inserted automatically by the HazCollect system, as supplied by the originating COG via its initial registration with the NWS to be a HazCollect participant (see section 4).
(3) The EM (or other) operators will not see either of the above lines in notes 1 or 2 when creating the NWEM since these lines are inserted after the NWEM is posted.
(4) The (optional) headline(s), a free text field, should be made as direct and actionable as possible while remaining short. CAP limits headline length to 160 characters. The OASIS CAP standard suggests 160 characters as a useful target limit for headline length.
(5) The free-text narrative section is limited to 200 words for all NWEM products by the HazCollect software to accommodate the 2-minute maximum audio length imposed by the EAS.
(6) Any follow-up NWEM to an initial NWEM shall use the title "ADMINISTRATIVE MESSAGE/FOLLOW UP STATEMENT" and the code "ADR." (See example 3 above.)
(7) The Test format example (and all NWEM test products) includes the same automated text, "…THIS IS A TEST MESSAGE. DO NOT TAKE ACTION BASED ON THIS MESSAGE…," inserted automatically before and after the test narrative text line(s) by the toolkit software.

NWEM Format
The NWEM format uses symbolic characters and applies to all operational NWEMs that are relayed in the contiguous U.S., Hawaii, and Puerto Rico. (The NWEM format for the Alaska Region is the same, except that the UGC uses the zone, or "Z," form, rather than the county, or "C," form.)

Product Format	Format Line Description
WOUSii cccc ddhhmm	*(WMO Heading)*
nnnxxx	*(AWIPS ID)*
stC001-002-003-004-005>015-ddhhmm-	*(UGC: **C** & Product expiration)*
	(blank line)
BULLETIN - EAS ACTIVATION REQUESTED	*(Broadcast Instruction-automated)*
Non-Weather related Emergency Message	*(Product name)*
COG Name City State	*(Requesting COG)*

RELAYED BY NATIONAL WEATHER SERVICE City State	*(NWS Relaying Office)*
time am/pm time_zone day mon dd yyyy	*(Issuance time/date)*
	(blank line)
...[Headline(s)]...	*(Optional)*
	(blank line – optional)
"The following message is transmitted at the request of (the COG Name)"	*(Information Source)*
	(blank line)
[Narrative Text – typically multiple lines]	(narrative text-begins) .
.	
[Narrative Text]	(narrative text-ends)
	(blank line)
$$	*(UGC Delimiter)*
Operator ID	(*Operator Security Code*)

Example NWEMs

These examples follow the standardized NWEM format similar to that used by NWS operational products and adhere to the format described above.

Initial NWEM Example: Initial Shelter-in-Place Warning

Product Format	Format Line Description
WOUS44 KLCH 140927	*(WMO Heading)*
SPWLCH	*(AWIPS ID)*
LAC019-141700-	*(UGC: **C** & Product expiration)*
	(blank line)
BULLETIN - EAS ACTIVATION REQUESTED	*(Broadcast Instruction-automated)*
SHELTER IN PLACE WARNING	*(Product name)*
CALCASIEU PARISH OFFICE OF EMERGENCY PREPAREDNESS LAKE CHARLES LA	*(Requesting COG)*
RELAYED BY NATIONAL WEATHER SERVICE LAKE CHARLES LA	*(NWS Relaying Office)*
412 AM CDT WED MAY 14 2003	*(Issuance time/date)*
	(blank line)
THE FOLLOWING MESSAGE IS TRANSMITTED AT THE REQUEST OF THE CALCASIEU PARISH OFFICE OF EMERGENCY PREPAREDNESS.	*(Information Source)*
	(blank line)
THE CALCASIEU PARISH OFFICE OF EMERGENCY PREPAREDNESS HAS ISSUED A SHELTER IN PLACE WARNING FOR ALL AREAS WITHIN 3 MILES OF THE CONOCO PLANT. THERE HAS BEEN A RELEASE OF SULPHER DIOXIDE AND HYDROGEN FROM THE CONOCO PLANT.	*(Narrative Text-begins)*
THE DIRECTION OF THE WIND IS LIGHT AND VARIABLE AT THE PRESENT TIME. WINDS FROM THE SOUTH AROUND 5 MPH ARE EXPECTED AROUND 7 AM.	
SHELTER-IN-PLACE MEANS PROTECTING YOURSELF WHERE YOU ARE AND STAYING THERE UNTIL GIVEN FURTHER INSTRUCTIONS OR THE ALL-CLEAR.	

SHELTER-IN-PLACE WARNING ACTIONS
1. GO INSIDE
2. CLOSE ALL DOORS
3. TURN OFF ALL VENTILATION SYSTEMS
4. TUNE TO LOCAL NEWS MEDIA FOR FURTHER INFORMATION

A GRAPHICAL PRESENTATION OF THE SHELTER-IN-PLACE CAN BE FOUND ON THE NWS WEB SITE AT WWW.SRH.NOAA.GOV/LCH. *(Narrative Text-ends)*
(blank line)
$$ *(UGC Delimiter)*
3315604GW/IPAWSOPEN_205555 (*Operator ID Security Code*)

Follow-up NWEM Example: Follow-up Shelter-in-Place Warning

The follow-up NWEM to the initial NWEM is given the product type title "ADMINISTRATIVE MESSAGE/FOLLOW UP STATEMENT" and uses the ADR (Administrative Message) code.

Product Format	Format Line Description
WOUS44 KLCH 141028	*(WMO Heading)*
ADRLCH	*(AWIPS ID)*
LAC019-141100-	*(UGC: **C** & Product expiration)*
	(blank line)
BULLETIN - EAS ACTIVATION REQUESTED	*(Broadcast Instruction-automated)*
ADMINISTRATIVE MESSAGE/FOLLOW UP STATEMENT	*(Product name)*
CALCASIEU PARISH OFFICE OF EMERGENCY PREPAREDNESS LAKE CHARLES LA	*(Requesting COG)*
RELAYED BY NATIONAL WEATHER SERVICE LAKE CHARLES LA	*(NWS Relaying Office)*
526 AM CDT WED MAY 14 2003	*(Issuance time/date)*
	(blank line)
THE FOLLOWING MESSAGE IS TRANSMITTED AT THE REQUEST OF THE CALCASIEU PARISH OFFICE OF EMERGENCY PREPAREDNESS.	*(Information Source)*
	(blank line)
THE CALCASIEU PARISH OFFICE OF EMERGENCY PREPAREDNESS HAS ISSUED AN ALL-CLEAR FOR THE SHELTER-IN-PLACE WARNING PREVIOUSLY ISSUED FOR CALCASIEU PARISH ADJACENT TO THE CONOCO PLANT.	*(Narrative Text-begins)*
IT IS NO LONGER NECESSARY TO SHELTER-IN-PLACE	*(Narrative Text-ends)*
	(blank line)
$$	*(UGC Delimiter)*
3308219GW/IPAWSOPEN_205555	(*Operator ID Security Code*)

Test Format
This format differs only in that an automated headline announcing the product is only a test is inserted at the beginning and end of the narrative text. This format is used when COGs are providing an NWEM product for purposes of testing communications systems, etc. This example is a Test Follow-up Statement.

Product Format	Format Line Description
WOUS41 KALY 021608	*(WMO Heading)*
ADRALY	*(AWIPS ID)*
NYC001-021623-	*(UGC: **C** & Product expiration)*
	(blank line)
BULLETIN - EAS ACTIVATION REQUESTED	*(Broadcast Instruction-automated)*
TEST…ADMINISTRATIVE MESSAGE/FOLLOWUP STATEMENT…TEST	*(Product name)*
ALBANY COUNTY OFFICE OF EMERGENCY MANAGEMENT ALBANY NY	*(Requesting COG)*
RELAYED BY NATIONAL WEATHER SERVICE ALBANY NY	*(NWS Relaying Office)*
1208 PM EDT FRI SEP 2 2005	*(Issuance time/date)*
	(blank line)
…THIS IS A TEST MESSAGE. DO NOT TAKE ACTION ON THIS MESSAGE…	*(Automated Headline- not optional)*
	(blank line)
…TEST…THIS IS TEST SITUATION TR26…TEST	*(Headline-optional)*
	(blank line)
THE FOLLOWING MESSAGE IS TRANSMITTED AT THE REQUEST OF THE ALBANY COUNTY OFFICE OF EMERGENCY MANAGEMENT.	*(Information Source)*
	(blank line)
THIS IS A TEST…OF A NEW CAPABILITY TO RELAY NON-WEATHER RELATED MESSAGES USING NATIONAL WEATHER SERVICE SYSTEMS.	*(Narrative Text-begins)*
IF THIS WERE REAL…THE INFORMATION HERE WOULD DESCRIBE WHAT THE SITUATION WOULD BE… WHO WOULD BE AFFECTED…WHAT THEY SHOULD DO… AND WHERE YOU COULD GET ADDITIONAL INFORMATION.	
	(blank line)
THIS IS JUST A TEST…WE APOLOGIZE FOR ANY INCONVENIENCE.	*(Narrative Text-ends)*
	(blank line)
…THIS IS A TEST MESSAGE. DO NOT TAKE ACTION ON THIS MESSAGE…	*(Automated Headline- not optional)*
	(blank line)
$$	*(UGC Delimiter)*
3328518HL/IPAWSOPEN_205555	(*Operator ID Security Code*)