

HazCollect Fact Sheet

Background

- **National Response Framework Communications Support Function:** The National Weather Service (NWS) developed HazCollect to help make NOAA communications assets interoperable and available for disseminating pre-and post-disaster alerts and warnings in support of governments at all levels—Federal, state, city/county, tribal—under the National Response Framework Emergency Support Function #2 Communications Annex. Further information may be found at <http://www.weather.gov/os/hazcollect/>.
- **Disaster Management E-Government Initiative:** One of the original federal E-Gov initiatives, the Federal Emergency Management Agency (FEMA) Disaster Management (DM) program enables the platform-independent sharing of incident related information between responding organizations through use of a standard alert format together with a collection of Web services that route the alert to its destination. HazCollect is a specialized application of Disaster Management program interoperability capabilities. Further information may be found at <http://www.disasterhelp.gov/disastermanagement/haz/>.
- **Emergency Alert System:** The Emergency Alert System (EAS) is comprised of local broadcasters who utilize specialized equipment to receive and transmit emergency messages over television, radio and cable TV, in accordance with Federal Communications Commission rules and state and local EAS plans. Typically, EAS participants monitor and relay warnings issued by NWS, and will include those relayed by HazCollect. Further information may be found at <http://www.fcc.gov/pshs/services/eas/>.
- **Other Public and Private Systems:** Other public and private systems monitor and relay NWS and EAS alerts and warnings to the public, typically by subscription services. The HazCollect infrastructure is available for public and private sector third parties to utilize, and a number of commercial services are currently in early stages of development.

System Advantages

- **Through automation, extends existing NWS and EAS warning capabilities to “All Hazards:”** The same system that has been used to broadcast severe weather warnings can now be used more efficiently to broadcast warnings issued by federal, state, city/county, and tribal authorities. While weather-related warnings remain the responsibility of NWS, messages pertaining to other types of hazards are known as “Non-weather Emergency Messages (NWEMs). Examples of the types of hazards where NWEMs would be appropriate include wildfires, hazardous materials releases, terrorist incidents, public health emergencies, AMBER alerts and others.
- **Increases the number and types of available communications channels, beyond radio and TV:** Risk communication research confirms that the more communication channels that are used to deliver an emergency alert, the more likely it is to be received and appropriate response action taken. HazCollect opens additional communication channels, such as NOAA Weather Radio All Hazards (NWR) and other text-based systems to warning authorities not using existing manual transcription service.
- **The HazCollect option will improve the speed and accuracy of emergency message dissemination:** The use of HazCollect is not mandated; it represents one more tool in the public official’s toolbox. Until HazCollect, authenticated government authorities could send an NWEM to their local Weather Forecast Office via facsimile, email, telephone, etc. for manual entry, potentially creating transcription errors and delays. While the manual method may still be used, the automated process will ensure more rapid and accurate public alerting.

- **Provides no- or low-cost access for those areas of the country who cannot afford specialized equipment:** Smaller jurisdictions, such as rural counties, may not be able to afford dedicated equipment or services to generate EAS messages. Authorized HazCollect users need only a computer and an Internet connection; software and infrastructure is provided by the Disaster Management program free of charge.
- **Provides support to the nation's governors for statewide or regional warning:** In recent years, the FCC has extended participation the Emergency Alert System by mandating broadcast of alerts issued by state governors, as state EAS plans are updated. The transmission of locally originated warnings remains optional for the broadcaster. HazCollect provides the infrastructure to rapidly disseminate statewide or multi-county emergency messages.
- **HazCollect will ultimately interoperate with other national systems currently in development:** FEMA is charged with the implementation of the Integrated Public Alert and Warning System (IPAWS) under provisions of [Executive Order 13407](#), and in support of the [W.A.R.N. Act of 2006](#), passed by Congress. The IPAWS initiative is guided by recent FCC rulemaking pertaining to changes for the Emergency Alert System, and implementation of a new, Commercial Mobile Alert Service (CMAS). All of these systems will be based on the Common Alerting Protocol (CAP), the format currently used by HazCollect, ensuring future interoperability.

Technology Components

- **User Interface:** NWEM authoring software provides the capability for the user to compose and transmit an emergency message at the desktop. FEMA provides NWEM authoring functionality within the Disaster Management Interoperability Services (DMIS) Desktop Tools locally residing client software, available to government authorities from the Disaster Management program. This functionality is not enabled until the user has been authorized by the NWS for HazCollect access. An NWEM is a specialized form of CAP alert, ensuring interoperability with other CAP-compliant systems. Other NWEM authoring software is expected to be available in the future from private sector third parties.
- **Internet:** The user transmits the NWEM via secure Internet connection to the DM Open Platform for Emergency Networks (DM-OPEN) server. The DMIS Desktop Tools system utilizes a Virtual Private Network (VPN) for security. Commercial systems may use similar secure networks.
- **DM-OPEN Server:** The DM-OPEN Server validates that the message has been originated by an authorized, participating organization (known as a Collaborative Operating Group or COG), and relays the message to the HazCollect server. DM-OPEN's HazCollect Application Programming Interface (API) is available for use by third party systems.
- **HazCollect Server:** The HazCollect server validates whether the sender has been authorized for HazCollect, and is specific to the geographic region for which the warning has been issued, to the county level in most parts of the country. The HazCollect server also appends NWS-specific text and relay information to the message. The message is then relayed to the NWS Telecommunications Gateway.
- **NWS Telecommunications Gateway (TG):** The Telecommunications Gateway is the point of entry into the NWS family of dissemination systems, including:
 - **NOAA Weather Wire Service (NWWS):** This system is typically monitored by government agencies, news wire services and EAS participants, and provides a pathway to broadcast NWS transmitted messages over television and radio.

- **Advanced Weather Interactive Processing System (AWIPS)/Console Replacement System (CRS):** The NWS TG also routes the NWEM to the appropriate Weather Forecast Office(s) where the message is converted to audio for broadcast on NWR.
- **NOAA Weather Radio All Hazards (NWR):** NWR is comprised of 1000 transmitters, covering all 50 states, adjacent coastal waters, Puerto Rico, the U.S. Virgin Islands, and the U.S. Pacific Territories. NWR receivers are widely available, and 280,000 have been distributed to public and non-public schools, day care facilities, and school district offices since 2005. Most models available today provide an audible alarm capability to alert the owner to the most urgent messages during nighttime hours. Coupled with assistive devices, the NWR receivers can alert individuals with sensory impairment. NWR is also the NWS's primary entry point into EAS.

User Requirements

- **Computer, Internet connection, NWEM authoring software:** The DMIS Desktop Tools client requires a Windows Operating System environment. Access to DM-OPEN is limited to official response organizations, whose identity is confirmed by the FEMA Disaster Management program during an initial application process.
- **Warning authority:** Access to HazCollect is limited to those response organizations with responsibility for warning; therefore, a separate HazCollect application is required. Warning authority is generally determined based on emergency plan documents developed under FCC rules, state and local emergency management plans, AMBER Alert plans, and other hazard specific authorities.
- **Complete NWEM training:** In order to ensure that the HazCollect system and its appropriate use are well understood, completion of a brief self-paced training course titled "HazCollect Principles and NWEM Best Practices" is required for application approval. A series of reusable Job Aids is provided with the course material.
- **Complete the application process:** Both the initial DM application and the subsequent HazCollect application are completed online. Applicants are encouraged to coordinate with their [local Weather Forecast Office](#) during the process.

On the Web:

National Weather Service HazCollect Web Site:
<http://www.weather.gov/os/hazcollect/>

FEMA Disaster Management Web Site HazCollect Information:
<http://www.disasterhelp.gov/disastermanagement/haz/>

Information for Third Party Developers:
<http://www.disasterhelp.gov/disastermanagement/haz/dev.shtm>

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