

Annex A: Communications and Warning

I. Purpose

This annex identifies the procedures and resources used to provide interagency communications between responders and to provide warning to all county residents in the event of a disaster. Communications and warning systems and processes comply with standards set in Executive Order 13407: Public Alert and Warning System.

II. Situation and Assumptions

Communications are a critical part of any emergency or disaster response and recovery effort. However, it is assumed that communications will fail during an emergency or disaster because of the impacts of those events. Traditional methods of communications, such as phone, email, and radio may not be available and thus, responders must be able to use alternate methods of communications as needed to maintain command and control of the incident.

A warning period will be available for most emergencies or disasters, although the amount of lead-time will vary from hazard to hazard. Proper use of alert and notification systems will save lives, reduce injuries, and protect property.

All drills and exercises using communications and warning systems include a message content check.

III. Concept of Operations

A. Facilities

a. Joint Dispatch Center

The Manitowoc County Joint Dispatch Center (JDC) is located at 1024 S 9th St, Manitowoc, WI. The JDC serves as the public safety answering point (PSAP), dispatch center, and warning center for all police, fire, and emergency medical services in Manitowoc County, including all cities, villages, and towns.

The JDC is staffed 24/7 with between 3-5 telecommunicators and at times a supervisor working in 3 shifts. Total staffing for the center includes 21 full-time dispatchers and 3 full-time supervisors.

The JDC contains 5 consoles plus 1 supervisor console that are all capable of answering 911 and non-emergency telephone calls, providing two-way radio communications and patching on multiple frequencies, activating city and village sirens, and computer aided dispatch (CAD) with access to law enforcement databases. Two siren controllers are also located in the main dispatch center for activating the nuclear power plant sirens. An additional 911 and non-emergency telephone answering console is located in an adjacent conference room with limited two-way radio communications capabilities.

The console radios in the JDC are capable of public safety 800 MHz and VHF two-way communications on both encrypted and non-encrypted radio systems for all law enforcement, fire, and emergency medical services (EMS) radio systems in the county, interoperability channels, and WISCOM. The consoles utilize a combination of direct access into the radio system via microwave links, wire circuits, and transmitters located on the roof of the building. The console radios are also capable of simulcasting and patching across multiple radio systems simultaneously. A detailed list of radio communications channels available on the consoles can be found in Attachment 1 of this Annex.

The JDC is equipped with a dedicated EMNet phone used to communicate with the Point Beach Nuclear Plant using a redundant internet and satellite connection.

The JDC receives internet connectivity via two internet service providers and is housed in the same location as the primary computer aided dispatch (CAD) servers to ensure connectivity with dispatch and law enforcement databases.

The JDC is equipped with several tools to receive warnings and monitor for situational awareness, including:

- A National Warning System (NAWAS) phone.
- An Emergency Alert System (EAS) decoder monitoring IPAWS-OPEN, a local primary broadcast station, and participating local station, and two NOAA Weather Radio broadcast feeds.
- Television with cable TV.

Equipment and systems in the JDC are tested or used at least monthly.

In the event of a 911 system failure, switches in the JDC can be turned to relay 911 calls to the Brown and Sheboygan County dispatch centers where the calls would be answered and then relayed back to Manitowoc via traditional telephone or via radio on the Point to Point frequency.

The JDC is a concrete building with special windows designed to withstand extreme wind events due to severe weather.

The JDC runs on commercial power from Manitowoc Public Utilities and has backup power via a battery based uninterruptible power system (UPS) and diesel generator with onsite storage of approximately 72 hours of diesel fuel. The generator is maintained and fueled by the Department of Public Works.

The backup JDC location is the Manitowoc County Sheriff's Department, 1025 S 9th St, Manitowoc, WI, and is equipped with one fully functional console and an additional telephone console capable of answering 911 and non-emergency calls. The city, village, and nuclear plant sirens can also be sounded from the backup location. The backup center is served by a separate diesel generator.

b. Emergency Operations Center

The Manitowoc County Emergency Operations Center (EOC) is located at 1024 S 9th St, Manitowoc, WI and consists of several rooms on the 1st floor, 2nd floor, and basement of the facility. The EOC is capable of providing a communications and coordination space for approximately 25 agencies.

The EOC has 25 laptops on the County's network are available to agencies in the EOC. Position specific logins can be used to access files and position specific email accounts. County employees may login to these laptops using their County login to access their unique County emails. The EOC receives internet from two internet service providers. As a backup, the EOC has an additional wireless hotspot for use in the event of a failure of the County's network.

The EOC uses a combination of wired and wireless phones using IP and traditional CENTREX lines. A total of 23 wireless IP phones on the County phone system are assigned to various positions within the EOC. Additionally, the public facing Emergency Management phone numbers are available via wired IP phones. As a backup, a single extension is maintained using a traditional "copper" CENTREX line in the event of an IP phone system failure as well as a portable satellite phone and several cellular phones.

The EOC has two IP conference phones, one on the 1st floor and one on the 2nd floor, with access to a toll-free conference line. The 2nd floor has a video camera for use with a variety of video conferencing services.

The EOC has several televisions and projection screens for displaying a variety of information for situational awareness.

The EOC is equipped with a dedicated EMNet phone used to communicate with the Point Beach Nuclear Plant using a redundant internet and satellite connection.

The EOC is equipped with several two-way radio communications assets as follows:

- Public safety 800 MHz and VHF two way radios capable of two-way communications on both encrypted and non-encrypted radio systems for all law enforcement, fire, and emergency medical services (EMS) radio systems in the county, interoperability channels, and WISCOM.
- Amateur radio (also known as ham radio) VHF/UHF radios capabilities for two-way radio communications on local and regional repeaters in Wisconsin.
- Amateur radio (also known as ham radio) & federal Shared Resources (SHARES) HF capabilities for two-way radio communications with the State of Wisconsin Emergency Operations Center and the Federal Emergency Management Agency.

The EOC is equipped with several tools to receive warnings and monitor for situational awareness, including:

- A National Warning System (NAWAS) phone.
- An Emergency Alert System (EAS) decoder monitoring IPAWS-OPEN, a local primary broadcast station, and participating local station, and two NOAA Weather Radio broadcast feeds.

The EOC also has a number of field deployable communications assets, including:

- A cache of VHF two way radios.
- A cache of 800 MHz two way encrypted radios.
- A field deployable VTAC36 repeater.
- Two field deployable patching gateways capable of both 800 MHz and VHF patches.

The EOC is a concrete building with special windows designed to withstand extreme wind events due to severe weather.

The EOC runs on commercial power from Manitowoc Public Utilities and has backup power via a diesel generator shared with the JDC with onsite storage of approximately 72 hours of diesel fuel. The generator is maintained and fueled by the Department of Public Works.

The backup EOC location is the Manitowoc County Heritage Center, 1701 Michigan Avenue, Manitowoc, WI. The secondary backup EOC location is Lakeshore Technical College, 1290 North Avenue, Room P114, Cleveland, WI. The secondary backup EOC at Lakeshore Technical College is equipped with a backup generator while the primary backup EOC does not have a backup generator; however, the primary backup is on the County network to support the use of laptops and VOIP telephones from the primary EOC.

c. Mobile Command Post

The Manitowoc County Mobile Command Post (MCP) is located at the Valders Fire Department, 103 Eisenhower St, Valders, WI 54245. The MCP serves as a field platform for the Incident Command Post and provides the communications assets necessary for both command and control on-scene and coordination with the Joint Dispatch Center (JDC) and Emergency Operations Center (EOC).

The MCP is equipped with several two-way radio communications assets as follows:

- Public safety 800 MHz and VHF two way radios capable of two-way communications on both encrypted and non-encrypted radio systems for all law enforcement, fire, and emergency medical services (EMS) radio systems in the county, interoperability channels, and WISCOM.
- A cache of VHF two way radios.
- A cross band repeater for 800 MHz and VHF for interoperability patching.
- Amateur radio (also known as ham radio) VHF/UHF radios capabilities for two-way radio communications on local and regional repeaters in Wisconsin.

The MCP is equipped with a Cradlepoint device for cellular internet.

The MCP is equipped with two iPhones and an iPad for cellular communications.

The MCP is equipped with a laptop computer and multi-function printer.

The MCP is powered via a shoreline or on-board diesel generator that runs off the vehicles diesel supply.

B. Communications

The County maintains a countywide 800 MHz and VHF radio system for use by public safety agencies and the Joint Dispatch Center (JDC). The system is maintained by the Public Works Department and policy on the radio system is set by the Emergency Services Department.

The Cities of Manitowoc, Two Rivers, and Kiel maintain their own VHF radio systems for use by the fire service as well as for a VHF backup for their law enforcement entities on the County 800 MHz system.

Law enforcement entities in Manitowoc County primarily use encrypted radios on the 800 MHz system. Fire services and emergency medical services (EMS) primarily use a non-encrypted VHF system. However, the Joint Dispatch Center (JDC) and Mobile Command Post (MCP) has access to both systems and can provide interoperability via:

- Dispatcher relays of critical information.
- Patches between the County encrypted 800 MHz system and VHF system.
- Assignment of a common interoperable channel for on-scene communications between law enforcement, fire, and EMS, such as VLAW31 or MARC.

The JDC maintains the capability to monitor and patch the County system to the following VHF interoperable channels as needed during an emergency or disaster:

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|------------------|-----------|
| ▪ IFERN | ▪ VLAW31 |
| ▪ MARC1 | ▪ WISCOM |
| ▪ MARC2 | ▪ VCALL10 |
| ▪ MARC3 | ▪ VTAC11 |
| ▪ MARC4 | ▪ VTAC12 |
| ▪ NATSAR | ▪ VTAC13 |
| ▪ WEM Car | ▪ VTAC14 |
| ▪ Point to Point | ▪ VTAC36 |

A cache of radios, gateways, and portables repeaters are stored in the Mobile Command Post (MCP) and Emergency Operations Center (EOC). See associated sections above for more details.

A cache of communications equipment, including portable radios, repeaters, and communications trailers, are available through Wisconsin Emergency Management (WEM). A listing of these resources are available in the State Emergency Response Resource Guide kept in the Emergency Operations Center (EOC).

Public safety radio systems, landline telephone, cellular telephone, fax, and internet based communications are supplemented by the Radio Amateur Civil Emergency Services, which uses amateur radio (also known as ham radio) to provide two-way radio communications. The County maintains a VHF RACES repeater at the Franklin tower site with a call sign W9RES.

C. Alert and Notification

The Joint Dispatch Center (JDC) and the Emergency Services Director or designee are responsible for monitoring warnings and potential threats and relaying those warnings to the public via alert and notification systems as appropriate.

a. Warning Sources

The Joint Dispatch Center (JDC) serves as the primary warning center for the County and monitors the following sources for warnings and potential threats 24/7:

- Transaction Information for the Management of Enforcement (TIMES) System – A special data feed automatically prints weather and other emergency bulletins at each console in the JDC.
- Emergency Alert System (EAS) – A special decoder monitors the internet and several local broadcast stations for EAS messages and sounds an alarm in the JDC when a message is received for Manitowoc County.
- National Warning System (NAWAS) Phone – A dedicated open wire phone system used to connect Manitowoc County to various federal, state, and local warning centers to receive warnings of an enemy attack, nuclear detonation, technological emergency, or natural disaster, including weather alerts.
- EMNet Phone – A dedicated internet and satellite phone system that allows the Point Beach Nuclear Plant to contact the JDC when an emergency is declared at the plant.
- Television Broadcasts – A television with a Comcast cable feed is displayed 24/7 in the JDC to monitor breaking news and cable TV based EAS messages.
- 911 or Non-Emergency Lines – First indications of emergencies or disasters are often received via community members or facilities calling 911 or non-emergency lines to request help or report an incident.

b. Alert and Notification Methods

The Joint Dispatch Center (JDC) and or the Emergency Services Director or designee activate alert and notification systems 24/7. The County maintains a number of alert and notification systems that should be used together to complement each other as part of an alerting strategy. The following alert and notification systems are available:

- Sirens – A network of sirens exists throughout Manitowoc County that are maintained by individual municipalities, but are sounded by the JDC. A listing of sirens can be found in Attachment 2 of this Annex.
- Route Alerting – Fire service or law enforcement vehicles equipped with public address (PA) systems can be used to alert specific geographic areas by driving a route and announcing the threat on a their vehicle based public address system. Specific plans for route alerting around the Point Beach Nuclear Plant can be found in Annex H, Attachment 4.

- Emergency Management Pagers – The County maintains pagers in various locations throughout the county, including schools, businesses, medical facilities, nursing homes, public places, and government offices. These pagers are activated by the JDC to alert individuals in these locations of severe weather or other hazards, including nuclear power plant incidents. A listing of locations with pagers can be found in Attachment 3 of this Annex.
- Mass Telephone Notification – The County maintains mass telephone notification capabilities through RAVE Mobile Safety, which allows voice and text messages to be sent to landlines and registered cell phones within a specific geographic area. The Emergency Services Director or designee may send mass notifications using the RAVE website.
- Facebook – A Facebook page for Manitowoc County Emergency Services (@ManitowocESD) is maintained and serves as a valuable method for notifying the public. **As of 2020, the page has over 7,000 local followers.**
- Emergency Alert System (EAS) & Information Broadcasts – Local broadcast stations may be automatically interrupted to broadcast EAS messages using the Integrated Public Alert & Warning System (IPAWS) module through RAVE by the Emergency Services Director, Emergency Services Program Manager, or JDC Supervisors at the request of the Emergency Services Director, Sheriff, or County Executive. Alternatively, if RAVE Mobile Safety is unavailable, the Wisconsin Emergency Management (WEM) Duty Officer can be contacted to activate IPAWS on the County's behalf or the EAS can be activated by contacting the radio stations directly and emailing, faxing, via two-way radio, or sending a courier with a copy of the EAS message to be broadcast. Follow up informational broadcasts cannot be sent via IPAWS and must be emailed, faxed, communicated via two-way radio, or sent via courier to the station. Messages should be peer reviewed for accuracy prior to sending if staff and time allows. The station must be contacted each time a message is sent to confirm it has been broadcast and whether or not it replaces a previous informational broadcast.

The following contacts should be used for the radio station:

- Seehafer Broadcasting (*WCUB/WOMT/WQTC/WEMP/WLKN/WLTU*)
 - Primary Contact Number: 920-374-4208
 - Secondary Contact (Jim Medley): 715-218-8812
 - Tertiary Contact (Tim Strews): 920-323-9966
 - Station Fax: 920-682-1008
 - Station Email: news@womtradio.com and news@cupradio.com
 - In the event of a telephone failure, the studio can be reached via two-way radio from the JDC or EOC on Manitowoc County Fire Service Working Channel 2 (MCFS Work 2) with a backup of VTAC14.
- WGBW
 - Primary Contact Number: 920-863-1234
 - Secondary Contact (Mark Heller): 920-629-1680 or 920-905-8638
 - Station Email: wgbw@lsol.net

Seehafer broadcasting does not have a backup generator at its studio or any of its transmitters and therefore, WGBW would be relied on as a backup broadcast station. Note: Seehafer Broadcasting plans to install a generator at their studio and WOMT transmitter site in January 2021.

Additional administrative information regarding IPAWS can be found in Attachment 5 of this Annex.

- Wireless Emergency Alerts (WEA) – Short text messages may be sent to every cell phone in a specific geographic area using the IPAWS module through RAVE by the Emergency Services Director, Emergency Services Program Manager, or JDC Supervisors at the request of the Emergency Services Director, Sheriff, or County Executive. Alternatively, if RAVE Mobile Safety is unavailable, the Wisconsin Emergency Management (WEM) Duty Officer can be contacted to activate IPAWS on the County’s behalf. Messages should be peer reviewed for accuracy prior to sending if staff and time allows. Additional administrative information and detailed procedures regarding IPAWS can be found in Attachment 5 of this Annex.
- NOAA Weather Radios (NWR) – The National Weather Services (NWS) maintains a nationwide network of NWR transmitters. Individuals can purchase weather radios for their homes that automatically sound an alert tone and play emergency messages. The Emergency Services Director or designee may request that the NWS send a message to weather radios in Manitowoc County by calling 920-497-8771.
- Marine Radio – The United States Coast Guard (USCG) may be requested to send a broadcast to mariners on Lake Michigan using marine radio. The Emergency Services Director or designee may request that the USCG send a message to mariners in Manitowoc County by calling 414-747-7190.

c. Severe Weather Alert & Notification Strategy

The Joint Dispatch Center (JDC) will automatically activate the sirens countywide if any of the following occur:

- A Tornado Warning is issued for any part of Manitowoc County
- A tornado or funnel cloud is reported by a reputable source, such as law enforcement officer, firefighter, or emergency medical service personnel
- At the direction of the Emergency Services Director or designee

The Joint Dispatch Center (JDC) will activate the sirens in the City of Manitowoc at the request of the City of Manitowoc Fire Department Officer in Charge or City of Manitowoc Police Department Shift Commander for a Severe Thunderstorm Warning issued for any part of the City of Manitowoc.

The Emergency Alert System (EAS) and NOAA Weather Radios (NWR) are automatically activated for Tornado Warnings and Severe Thunderstorm Warnings with no action necessary by the County.

The Manitowoc County Emergency Services Facebook page is automatically updated with Tornado and Severe Thunderstorm Warnings through the ReadyWarn service with no action necessary by the County.

Route alerting is generally not used for severe weather, even in the event of a siren failure, because of the risks posed to responders.

d. Non-Weather Alert & Notification Strategy

Strategies for severe weather alert and notification are well established and largely automated. However, non-weather related alert and notification strategies, such as those for hazardous materials incidents, wildland fires, infrastructure or utility failures, acts of violence, or acts of war, are less established. The following considerations should be used when determining the alert and notification strategy for these emergencies or disasters:

- The public must be notified when there is a known, immediate threat to life safety. However, careful consideration should be given to the type of alerting mechanism used and the frequency with which it is used as alerting mechanisms used too frequently are often ignored with time.
- Consideration should be given to the impacts or secondary effects of instructions given in alerts and notifications. For example, instructing the public to avoid travel in one area may force people into another, equally hazardous area.
- The geographic scope of the incident should be considered when selecting an alert strategy. For incidents with a large geographic area the following could be used:
 - Sirens
 - Wireless Emergency Alerts (WEA)
 - Emergency Alert System (EAS) & Information Broadcasts
 - NOAA Weather Radio (NWR)

For incidents with a small geographic area the following could be used:

- Route Alerting
- Mass Telephone Notification
- Wireless Emergency Alerts (WEA)
- When sirens are used for non-weather events, there must be prompt follow-up with notifications to inform citizens why the sirens sounded since most people assume sirens sound due to weather. These follow up notifications can take place via Emergency Management Pagers, Facebook, Wireless Emergency Alert (WEA), Emergency Alert System (EAS) & Information Broadcasts, and NOAA Weather Radio (NWR). If EAS or Informational Broadcasts are used, regular contact should be maintained with the radio stations to ensure the messages sent to them have been broadcast, will continue to be broadcast at regular intervals, and that replacement messages have superseded older messages being broadcast.
- Mass Telephone Notifications via RAVE Mobile Safety should not be used over a large geographic area because the number of simultaneous calls can overload the local phone system when it is needed for emergency or disaster related communications and the large number of calls can take several minutes to complete.

- Wireless Emergency Alerts (WEA) via RAVE Mobile Safety can be used for either large or small geographic areas because of the ability to filter where those alerts are sent from very small geographic areas to countywide. However, complex messages may not be appropriate for WEA because of character limitations.

e. Nuclear Plant Alert & Notification Strategy

Special strategies and procedures are in place for notifying the public of a nuclear power plant incident. During these events, the following strategy is used:

- Wireless Emergency Alert (WEA) are the primary method of alerting the public. A WEA message can be sent using the IPAWS module through RAVE by the Joint Dispatch Center (JDC), the Emergency Services Director or designee. The WEA message should ask individuals to tune to local radio for more information and should be coordinated with Kewaunee County. Manitowoc County has dual alerting authority and can send WEA messages into Kewaunee County. Additional administrative information and detailed procedures regarding IPAWS can be found in Attachment 5 of this Annex.
- Route Alerting can also be used as a backup to the Wireless Emergency Alert (WEA) if a WEA message does not send and backup methods for sending a WEA message are unsuccessful. Special plans for Route Alerting during a nuclear power plant incident can be found in Attachment 4 of this Annex.
- Approximately 5 minutes following delivery of a Wireless Emergency Alert (WEA) message, an Emergency Alert System (EAS) message should be sent to local radio stations via procedures outlined in the Alert and Notification Methods section above. Regular contact should be maintained with the radio stations to ensure the messages sent to them have been broadcast, will continue to be broadcast at regular intervals, and that replacement messages have superseded older messages being broadcast.
- Follow up Informational Broadcasts should be sent to the radio stations as needed via email or fax according to the outlined in the Alert and Notification Methods section above.
- Pre-scripted EAS and Informational Bulletins for nuclear power plant incident can be found in the Pre-Scripted Emergency Alert System Manual located in the Emergency Operations Center (EOC).