

Executive Summary

The U.S. Federal Emergency Management Agency (FEMA) has issued policy guidance indicating that the Integrated Public Alert and Warning System (IPAWS) may be used by a State, Tribal, and Local government as a primary or back-up means of public alerting and notification; refer to FEMA memorandum, “IPAWS Implementation Guidance,” dated September 13, 2017.

FEMA has recognized fixed sirens, route alerting, tone alert radios, and National Oceanic and Atmospheric Administration (NOAA) weather radio as approved primary and back-up alert systems. The Emergency Alert System (EAS), NOAA weather radio, and route alerting are approved notification systems. Off-site response organizations may submit alternative systems for approval if they can document that the system meets the design objectives specified above. Off-site response organizations may use alternative systems that have not received FEMA approval concurrently with approved systems to augment the alert and notification process.

The Integrated Public Alert and Warning System (IPAWS) is a modernization and integration of the nation’s alert and warning infrastructure that will save time when time matters; when protecting life and property. Federal, State, territorial, local, and Tribal alerting authorities may choose to use IPAWS and may also integrate local systems that use Common Alerting Protocol (CAP) standards with the IPAWS infrastructure. IPAWS will give public safety officials an effective way to alert and warn the public about serious emergencies using the IPAWS-EAS (Emergency Alert System), the Commercial Mobile Alert System, IPAWS-WEA (Wireless Emergency Alerts), and other public alerting systems from a single interface.

FEMA has published a strong encouragement of the integration of IPAWS with off-site alert and notification plans. As IPAWS is adopted nationwide, technical and planning assistance is available for State, territorial, local, and Tribal alerting authorities.

EAS is a national public warning system that requires television and radio broadcasters; cable television systems; wireless cable systems; satellite digital audio radio service providers; direct broadcast satellite service providers; and wireless video service providers to offer to the President the communications capability to address the American public during a national emergency. The system also may be used by state and local authorities to deliver important emergency information such as AMBER (missing children) alerts and emergency weather information targeted to a specific area. This definition comes from the Federal Communications Commission website at <https://www.fcc.gov/consumers/guides/emergency-alert-system-eas>

Since 2018, Manitowoc County has implemented an integrated Alert and Warning plan using a concurrent IPAWS and EAS activation for all emergency hazards except for nuclear emergencies. This Alert and Notification System (ANS) design evaluation signals the change, upon approval by the signatory agencies; from the former ANS design report to one where Manitowoc County will implement IPAWS/WEA as the primary ANS (Alert and

Notification System) method used and is activated by the Manitowoc County Joint Dispatch Center (JDC) (24/7 warning point) or the Manitowoc County Emergency Operations Center (EOC). Manitowoc County is authorized to activate IPAWS-WEA on behalf of Kewaunee County.

Manitowoc County will activate IPAWS-WEA and IPAWS-EAS simultaneously as the primary means of alerting people within the community. This system uses the internet to deliver the emergency messages to IPAWS OPEN, which is monitored by local broadcasters. The County has two Internet Service Providers (ISP) identified to connect to the internet. Furthermore, The County is confident that if there were an event that would eliminate the use of IPAWS through a total system failure, it would be a major one; route alerting would be the only reasonable backup means of notification to the public. The IPAWS system is considered to be of “public safety grade” by Manitowoc County Emergency Management due to its connective reliability and robust backup systems.

As mentioned above, IPAWS/EAS is initiated at the same time as the IPAWS/WEA. In the former ANS design report, the timing relationship between the activation of ANS and EAS has been defined in a way to ensure there was time for the public to hear the warning and then get to a broadcast device to receive a message. This relationship was crucial because the alerting means did not “tell” the public anything other than “go tune in for more information.” This change in design eliminates the emphasis on this time relationship between ANS and EAS because the user will be getting the alert and directions on what to do all in one device. However, in keeping with the former ANS design report, additional follow-up special news bulletins and evacuation instructions will continue to be re-broadcast every 15 minutes by the broadcasters.

Backup EAS activation methods for Manitowoc and Kewaunee County are outlined below. Manitowoc County and Kewaunee will use commercial telephones to communicate with the broadcasters to request manual EAS activation. If that fails, the primary broadcaster is equipped with a two-way VHF radio and tone alert radio that can be used to communicate with the Manitowoc County Joint Dispatch Center (24/7 warning point) or the Manitowoc County Emergency Operations Center (EOC) using the County’s public safety radio system. If that fails, Manitowoc County will send a responder to drive to the radio station to deliver the message in person. Kewaunee County will send a responder to drive to the radio station to deliver the message in person.

Previously, public alerts were made using a combination of outdoor sirens that were activated using radio signal and the EAS was activated using telephone notifications to the broadcaster with a tone alert radio as backup. These sirens were designated as all hazards sirens which included a nuclear emergency. IPAWS has been used simultaneously in Manitowoc County for all Hazards since the county became an alerting authority.

Manitowoc County recognizes Presidential Executive Order 13407, and has committed to modernize their public alert and warning system to ensure maximum capability with FEMA as a partner in meeting the objectives the President outlined. With significant advancements that the FEMA IPAWS program office has made since the E.O. 13407 was issued, Manitowoc County has found that a key objective within the E.O. – “ensure that

under all conditions the President can communicate with the American people” - can be reasonably linked to the “Capable of essentially alerting 100% of the EPZ” objective known within the REP program.

The use of IPAWS/WEA allows for distributing alerts and notifications quickly and efficiently through a variety of modes and based on a variety of risk factors, such as proximity to a disaster and will continue to broadcast the alert to new people when they enter the area the alert was defined for (the County limits). Further, people with functional needs will have a broader range of adaptive devices they have available to them to receive an alert in the manner they need.

This report is provided by Point Beach Nuclear Plant Emergency Preparedness group on behalf of Manitowoc County Emergency Management, Kewaunee County Emergency Management, Wisconsin Emergency Management to FEMA and describes the Alert Notification System used by Manitowoc and Kewaunee County, Wisconsin. The design report contains information for FEMA to conduct a review and determine its acceptability.

Section 1: Alert and Notification System Plan

This section is comprised of the information that is provided to satisfy planning standards E and F found in both 44 CFR 350.5(a) and 10 CFR 50.47(b) and the associated NUREG-0654/FEMA- REP-1 evaluation criteria which focuses on the administrative means of the system(s).

Licensing Obligation

There are no licensing obligations between the licensee and local jurisdictions. Regulations in 10 CFR Part 50, Appendix E, Section IV.D.3 specify that a licensee is required to have the capability to notify off-site response organizations within 15 minutes after declaring an emergency under the licensee's emergency plans and procedures. Procedures have been established for notification by Manitowoc County, Kewaunee County, and the State of Wisconsin. In accordance with the FEMA Radiological Emergency Preparedness Program Manual, Planning Standard E–Notification Methods and Procedures, means to provide early notification and clear instruction to the residents in the pre-identified Point Beach Nuclear Plant Emergency Planning Zone have been established. The Manitowoc County Emergency Operations Center located within the Manitowoc County Joint Dispatch Center (JDC) have Standard Operating Procedures to notify and warn officials and general public of emergency and disaster events that occur in Manitowoc County.

Description of System

Means

Manitowoc and Kewaunee County have entered into an MOU for Manitowoc County to provide IPAWS alerting for both Manitowoc and Kewaunee Counties. For the purposes of this document, when discussing the activation of the IPAWS system, note that JDC will activate IPAWS for the entirety of the Point Beach Nuclear Plant's Emergency Planning Zone, which includes Kewaunee and Manitowoc counties.

IPAWS ensures the US President can alert and warn the public under any condition. Additionally, IPAWS provides Federal, state, territorial, tribal, and local warning authorities the capabilities to alert and warn their communities of all hazards impacting public safety and well-being via multiple communication pathways. FEMA upgrades the alert and warning infrastructure so that no matter what the crisis, the public will receive life-saving information via at least one path. The Integrated Public Alert and Warning System (IPAWS) allows public safety officials, at all levels of government, to send effective and reliable alerts and warnings over multiple communication pathways to the entire community, including Americans with disabilities, the elderly, children, individuals with access and functional needs, and limited English proficiency, before, during, and after an emergency. Manitowoc County incorporates IPAWS into the Counties' existing public warning structure through a Memorandum of Agreement (MOA), which governs the relationship between the state-level Collaborative Operating Groups (COG), Manitowoc County COG, and FEMA. IPAWS provides Manitowoc County with the capability to integrate alert and warning systems with

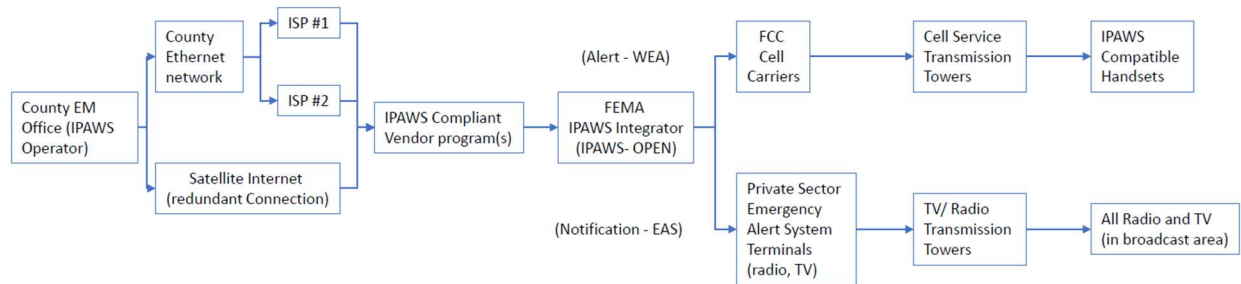
the national alert and warning infrastructure. Consequently, IPAWS increases the capability and options available to state and local officials, by which life-saving information can be distributed during a crisis, providing people with the information they need to protect themselves, their families, their communities, and their property. IPAWS allows Manitowoc County to send non-siren related alert and notifications and emergency alert system messages using an integrated approach through IPAWS. For this reason, the Manitowoc County previously adopted IPAWS as a concurrent, supplementary, alerting method (ANS) and primary emergency alert system (EAS). Through testing of the reliability of the IPAWS system, Manitowoc County will use IPAWS to activate alert and warning as a primary means of public alerting. In the event of failure of the above systems, route alerting will be used as a backup means of notification using emergency responders. The specific identification of means are:

Primary Alerting Method: IPAWS – WEA

Primary Notification Method: IPAWS - EAS

- The use of the IPAWS Compliant Vendor Program to access the following systems:
 - Emergency Alert System (EAS): the message dissemination pathway that sends warnings via broadcast, cable, satellite, and wireline services.
 - Wireless Emergency Alert (WEA): the message dissemination pathway that broadcasts alerts and warnings to cell phones and other mobile devices.

Below Is a functional block diagram outlining the IPAWS system described in detail below.



The Common Alerting Protocol (CAP) is a digital format for exchanging emergency alerts that allows a consistent alert message to be disseminated simultaneously over many different communications systems. FEMA worked with the Organization for the Advancement of Structured Information Standards (OASIS) to develop a standardized international technical data profile that defines a specific way of using the standard for the purposes of the Integrated Public Alert and Warning System (IPAWS).

Software vendors who provide alerting software must be approved by DHS and complete an agreement with FEMA. FEMA maintains an IPAWS approved developer list on their webpage (www.fema.gov). The IPAWS Developer List includes the names of third-party organizations that have executed a Memorandum of Agreement (MOA) with the Federal Emergency Management Agency (FEMA). Alert Origination Software

Providers have successfully demonstrated their IPAWS capabilities to FEMA. Manitowoc County subscribes to a IPAWS Compliant Vendor Program.

The IPAWS Compliant Vendor Program is designed to deliver emergency messages to IPAWS-OPEN, which is an aggregator system for IPAWS. IPAWS-OPEN receives and authenticates messages transmitted by alerting authorities and routes them to IPAWS-compliant public alerting systems. CAP compliant messages are then sent to a number of Alert Dissemination Channels, increasing the probability of reaching the public.

IPAWS Compliant Vendor Program

The IPAWS Compliant Vendor Program is activated at the Manitowoc County JDC or EOC. There is a backup satellite internet connection that is independent to the wide area network for Manitowoc County.

In the event of a complete failure of the IPAWS Compliant Vendor Program in Manitowoc County, the County can contact Wisconsin Emergency Management via the 24/7 Duty Officer and request that they submit an alert to IPAWS-OPEN on behalf of Manitowoc County Emergency Management for both Manitowoc County and Kewaunee County. The alert will be read over the phone or delivered electronically to the Duty officer.

IPAWS Compliant Vendor Program has a 24/7 support center that can be contacted via telephone to launch an alert on the Counties behalf. Since the messages are prescreened, drafted, and saved, the Manitowoc County Emergency Management staff will communicate the scenario to the IPAWS Compliant Vendor Program operator to ensure the proper message is selected and launched.

Backup Alerting and Notification Method: Route Alerting

Route Alerting is the preexisting approved method for alerting and notifying the public for a total system failure of the primary alerting method would remain as it currently prescribed in county policies. Route Alerting Manuals have been updated to alert evacuation subareas. These route alerting manuals are maintained by Manitowoc and Kewaunee Counties and are maintained in the Communication and Warning Annex of the respective county emergency plans.

First, if IPAWS has an issue, Manitowoc County will exhaust all means to access the system by executing the mutual aid agreements with Wisconsin Emergency Management, which is an IPAWS Alerting Authority for the area.

If the outage is not related to the ability to send a message, but rather due to a known cellular tower issue, then route alerting will be assessed for that area.

If all methods fail, the county will initiate a complete route alerting protocol to cover the warned area based on the protective action decision (PAD). Depending on the PAD, route alerting may take more than 45 minutes to complete.

Methods:

Primary activation center:

The primary activation center for Manitowoc County IPAWS activation is the Manitowoc County Joint Dispatch Center. The primary operators of are the emergency management staff and the dispatch supervisors as outlined in Appendix 2.

The site has a backup emergency power supply for a loss of power to the building.

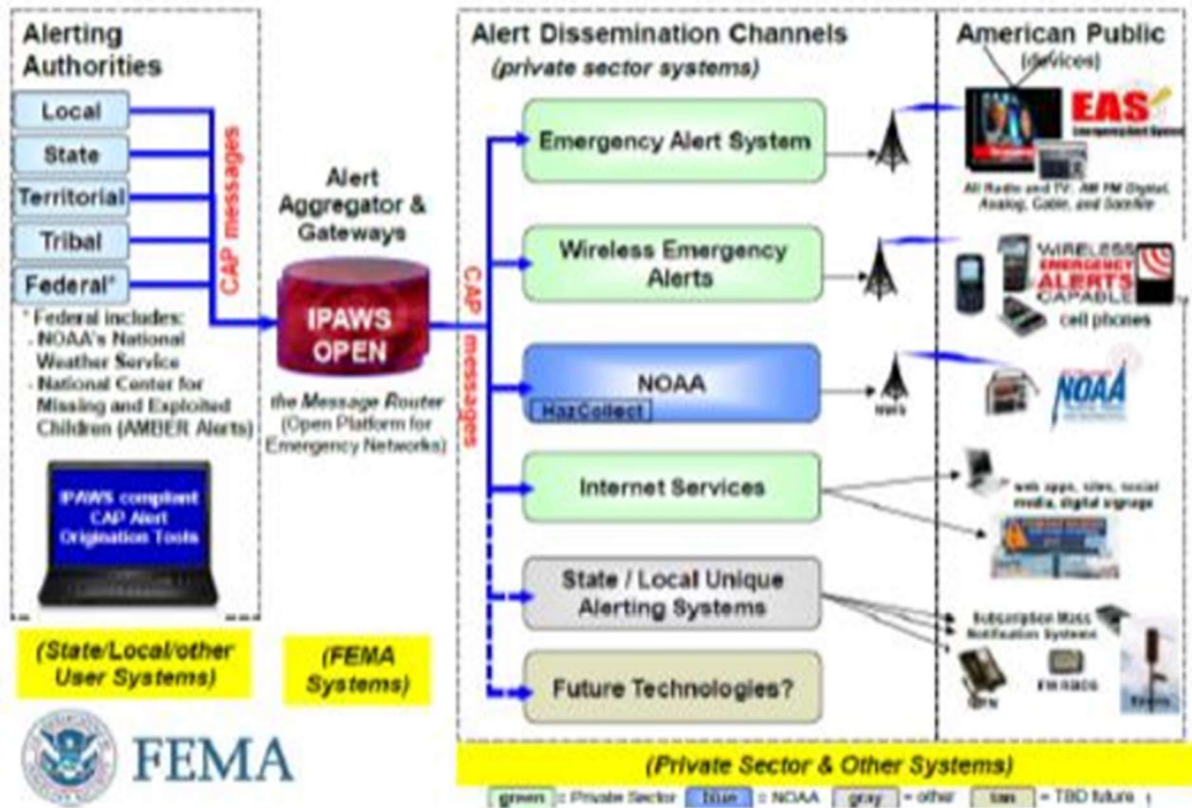
Secondary Activation Center:

Wisconsin Emergency Management utilizes FEMA approved alert originating software in a CAP format to send emergency messages through IPAWS. WEM has the capability for issuing IPAWS alerts for the Emergency Planning Zone.

IPAWS Utilization:

The county will use Integrated Public Alert and Warning System (IPAWS) to alert the public of events due to emergencies at Point Beach Nuclear Plant. IPAWS provides public safety officials an integrated gateway to send alert and warning messages to the public using the Emergency Alert System (EAS), Wireless Emergency Alerts (WEA), internet services, social media and other public alerting systems, all from a single interface. Some alerts may be selected to broadcast to one alerting technology, while other alerts may be selected to go to numerous alerting technologies. To alert the public during a nuclear event, IPAWS activation will include, but is not limited to; WEA and EAS channels, as outlined in the graphic below.

IPAWS Architecture: "a National System for Local Alerting"



These communication methods are described in the public information postcard delivered to the emergency planning zone residents. The functional needs section recommends residents register with the county. The lists are maintained by the counties where these individuals can be contacted separately to assess their need for assistance with evacuating.

If Manitowoc County cannot make the IPAWS alert from any of the various methods of activating their system, they may request Wisconsin Emergency Management to activate their system in Madison to broadcast the alert on behalf of Manitowoc County to the emergency planning zone.

IPAWS – Emergency Alerting System (EAS)

The Emergency Alert System (EAS) provides specific procedures for the commercial broadcast media to disseminate emergency information to the general public in specified statewide operational areas via broadcast, cable, satellite, and wireline radio and television channels. The FCC license for EAS stations is contingent upon the stations providing alert and notification for emergency situations.

The change in the Manitowoc County Emergency Operations Plan promotes the use of the IPAWS as the primary system to activate the EAS system concurrently with the connected alerting methods. The EAS activation codes are broadcast directly to the radio station's EAS system. The radio station's system is programmed to identify the

priority of the emergency message being sent. For nuclear warnings, they are set at the highest priority and their system is designed to interrupt broadcasting to air the message without any human interaction being necessary. The system will report back the success indicators for broadcast to the county's IPAWS terminal. JDC is also able to validate successful activation of IPAWS by monitoring local broadcasts at their activation facility.

The majority of the commercial broadcast stations in Manitowoc County are owned and operated by Seehafer Broadcasting Corp, which operates multiple participating national (PN) stations from its studio in Manitowoc. These stations include WOMT, which is the flagship local radio station for news and information. WOMT has been actively participating in exercises with Manitowoc County since the construction of the Point Beach Nuclear Plant and maintains a relationship with the County to broadcast a wide variety of public safety messages. As a PN station, their stations (including WOMT) monitor the IPAWS internet feed as well as the local primary (LP) stations (WPNE and WTAQ/WIXX) for EAS alerts. In the event that an internet failure causes a failure of the IPAWS feed in Manitowoc, the LP stations in Green Bay would still receive the alert and broadcast it to be relayed by the PN station WOMT.

WOMT possesses two-way and tone alert radios as a backup means of receiving EAS messages directly from Manitowoc County without the use of IPAWS. Airing messages through this backup means requires a broadcast staff member to activate EAS and air the emergency message that was recorded using the tone alert radio.

WOMT is one of the highest-powered AM stations in the area and will automatically broadcast a nuclear emergency alert message. This station has coverage over the entire emergency planning zone (EPZ).

IPAWS-EAS will also activate radio stations in Kewaunee County that cover the EPZ.

IPAWS-EAS messages are located in the Manitowoc County Emergency Operations Plan, EAS Message Manual. EAS messages are located in the Kewaunee County Emergency Operations Plan, EAS Message Manual. These messages are reviewed by both counties to ensure consistent messages across both counties in case backup alerting methods need to be used.

IPAWS – Wireless Emergency Alerts (WEA)

The Warning, Alert and Response Network (WARN) Act established Wireless Emergency Alerts (WEA) in 2008 and it became operational in 2012. The WARN Act directed the FCC to adopt technical and operational requirements for WEA service. Wireless carriers that participate in WEA must adhere to the FCC's WEA rules.

WEA are short emergency messages from authorized public alerting authorities that can be broadcast to any WEA-enabled mobile device in a locally targeted area. WEA messages are broadcast from cellular towers in the designated alert area to any WEA enabled mobile devices that communicate with the cell tower during the alert duration.

All the major U.S. cell carriers are participating in WEA on a voluntary basis. Consumers do not need to sign up for this service.

WEA alerts are broadcast to the geographic area affected by an emergency. This means that if an alert is sent to the PBNP 10 Mile EPZ, WEA-capable mobile devices in that zone can receive the alert, even if they are roaming or visiting from another state. In other words, a customer visiting from Milwaukee would be able to receive alerts in the EPZ so long as the person has a WEA-enabled mobile device in the alert zone. The major advantage to using WEA as a primary alerting means comes from the ability to send alerts beyond the 10 mile EPZ if protective action becomes necessary to those areas. Further, targeted alerts may be sent along evacuation routes to redirect traffic if impediments to evacuation exist. Participating providers must deliver the alerts to the area specified by the alert originator with no more than a 1/10 of a mile overshoot as of December 2019.

Authority:

In the event of a rapidly escalating incident where orders have not been given, however the licensee recommends prompt action, the Manitowoc County Joint Dispatch Center Supervisor on-duty or on-call has full authority to activate the public warning system as described in this document.

In times where the JDC supervisor can get the advice and consent from the Emergency Management Director (EMD) or designee, such as when the emergency operations center is fully activated, they may be ordered by the EMD or designee to activate the system. This also includes the County Executive for continuity purposes.

Administration:

Administration and care of the IPAWS system is assigned to Manitowoc County Emergency Management with the Manitowoc County Information Technology department as a supporting agency. The specific person responsible is the Manitowoc County Emergency Management Director.

The IPAWS Compliant Vendor Program contracts are maintained by Manitowoc County. The maintenance and administration of the IPAWS Compliant Vendor Program is housed in the Manitowoc County Emergency Operations Plan, Communication and Warning Annex.

Requirements/ Function:

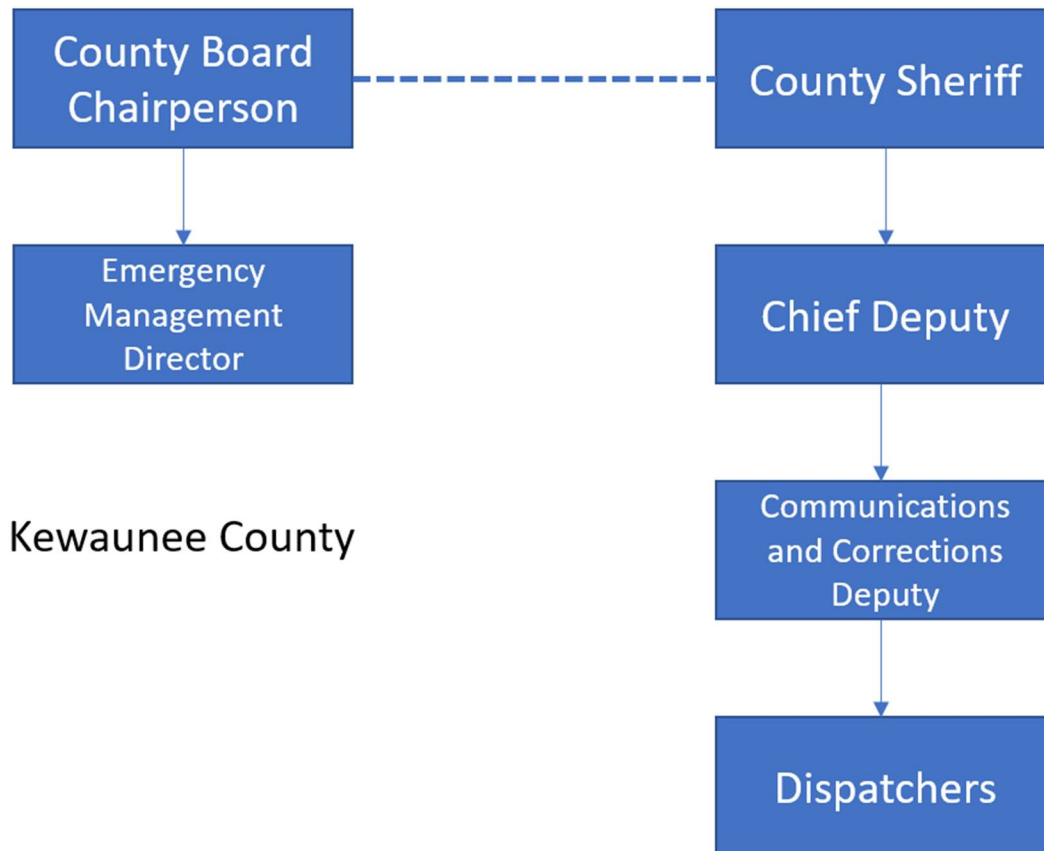
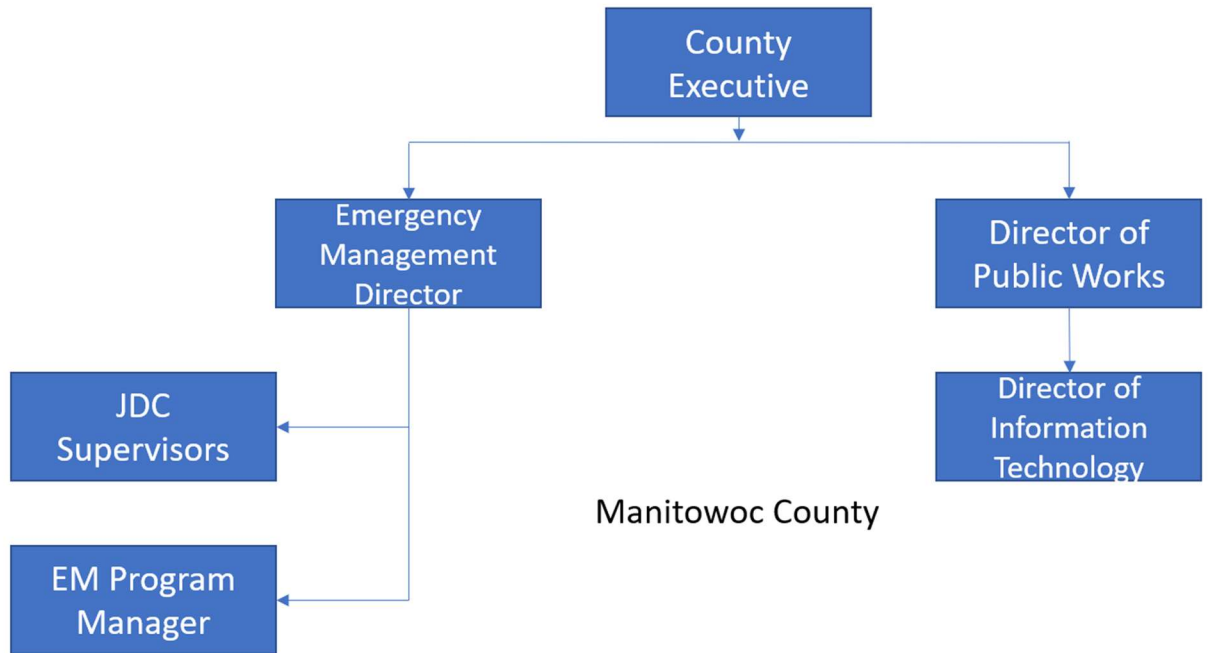
The subsystems of Manitowoc County's Prompt Notification System: IPAWS-WEA and IPAWS-EAS, and the backup subsystems are used as an effective way to alert and notify Manitowoc and Kewanee County residents living within the Emergency Planning Zone about serious emergencies.

Operations:

- Activation Procedure(s) – The steps to activating the systems are provided in staff training and the Manitowoc County Communication and Warning Annex. The process is outlined as follows:
 - after receiving an order to activate the system, the IPAWS origination software is opened by the JDC operator.
 - JDC operator selects a prescribed template from the Communication and Warning Annex based upon the area being ordered to take action and the action to be taken (evacuate/shelter etc.).
 - JDC operator then will review the script for accuracy and add the date and time of the order.
 - JDC operator will have a peer review the script for accuracy and send the message through a two-step confirmation process.
 - JDC operator will then validate the IPAWS functioned by reading the reports in the system and verify it was broadcast by receiving the alert on the EAS decoder monitoring WOMT.

The system will be activated during an emergency situation that poses an extraordinary threat to life safety. Conditions to be considered in determining whether an emergency message is warranted include: severity, timing and whether other means of disseminating messages are inadequate to ensure rapid delivery.

- Process(es) – This process remains unchanged. The Senior elected official of Manitowoc or Kewaunee County or other County staff responsible for making a protective action order will review the recommendations and data from the licensee. They will validate based upon the projected dose data provided by the plant that PAGs are likely to be exceeded and will make the decision to order an evacuation or shelter based upon the licensee's data and recommendation. The county Emergency Management Public Information Officer may modify and review the message to present it to the senior authority in charge of the EOC for approval. They then transmit this message to the JDC Supervisor, regardless of which county gives the order to activate the system. The JDC then activates the system using the process described above. See below for organization charts for both counties.



Security and Privacy:

A Roster of IPAWS Security Certificates, expiration dates and recertification schedule, suitably secure computer or means to initiate ANS is maintained by Manitowoc County Emergency Management. All security certificates are maintained electronically in the IPAWS Compliant Vendor Software, including all activations.

Appendix 2 of this document shows a current list of personnel by name and title who have access to the IPAWS Compliant Vendor Software. Emergency Management Department personnel and JDC Supervisors are allowed access to the software, as directed by the Emergency Management Director.

The IPAWS Live Digital Certificate for Manitowoc County was last renewed on 03/04/2019 and is renewed every 3 years with the County's MOU with FEMA IPAWS. The IPAWS program office reissues the certificate to the Manitowoc County Emergency Management and the IPAWS/EAS system vendor is responsible for installing the certificate into the County's platform. Security and privacy criteria are defined in the user MOU and are met by Manitowoc County as a condition of continued use. Logical/cyber security is used to secure the web-based system. All databases are maintained on a non-public server. There are no dedicated hardware components.

Login and password policies are established and maintained by the Manitowoc County IT department.

Training and Quality Assurance:

Initial staff training for the JDC/EM staff includes FEMA course IS-247 and any additional training requirements for IPAWS access. The training is included in the JDC supervisor initial training program for onboarding. Additionally, all activation staff are required to demonstrate proficiency before they are granted permission to use the systems.

Public Outreach and Education:

IPAWS is promoted nationally. During Presidential Tests, significant awareness was brought to the existence of the system. Also, operationally, many alerts do go out to the public and they are becoming more aware of how it functions (similar events like AMBER alerts, unfortunately, are launched often in the area).

All residents living within Manitowoc and Kewaunee Counties living in the pre-identified Point Beach Nuclear Plant Emergency Planning Zone, annually receive emergency informational material that has been reviewed by the Manitowoc and Kewaunee County Emergency Management Directors. This material is developed and distributed by PBNP. In the PBNP material, all of these alerting methods are described to keep the public informed of the warning systems used by the County.

Specific verbiage on how residents will be notified of an emergency at PBNP is printed and distributed in these annual mailers, and posted on PBNP, Manitowoc County, and Kewaunee County websites. This information consists of the following:

- How one will be informed of an emergency
- What to do in an emergency
- A reminder to set cell phones to receive alert notifications
- List of radio and TV stations that broadcast EAS messages
- What to do if a resident is special needs or does not have the capability to receive alerts.

The counties promote these systems on their respective webpages.

Annual mailers are scheduled for December of each year.

Messaging:

Public Messaging:

The procedures for the decisions to alert the public and the process remains unchanged. Policies are already in place for the activation of IPAWS and route alerting and they remain unchanged. The only procedural change made is to divert the warning staff from activating sirens. This is located in the Manitowoc County Emergency Operations Plan, Communication and Warning Annex.

Maintenance:

Maintenance is met through the standard Manitowoc County information technology systems policy on all county computers.

Additionally, maintenance agreements are maintained with the origination provider regarding the maintenance of the software. The vendor is required to meet specifications as directed by the FEMA IPAWS program office and demonstrate acceptance criteria is maintained to maintain access to the IPAWS OPEN system. The vendor is responsible under service contract to provide software updates, maintain data integrity, and prevent logical security. Manitowoc County maintains contracts and IT personnel to address identified faults as they occur.

To activate and send an IPAWS - EAS message using this system, a user must first have a unique user password issued to them after demonstrating proficiency through training.

IPAWS and phone carriers are overseen and monitored by FEMA and the Federal Communications Commission.

Section 2: Design Report

Licensing Obligation:

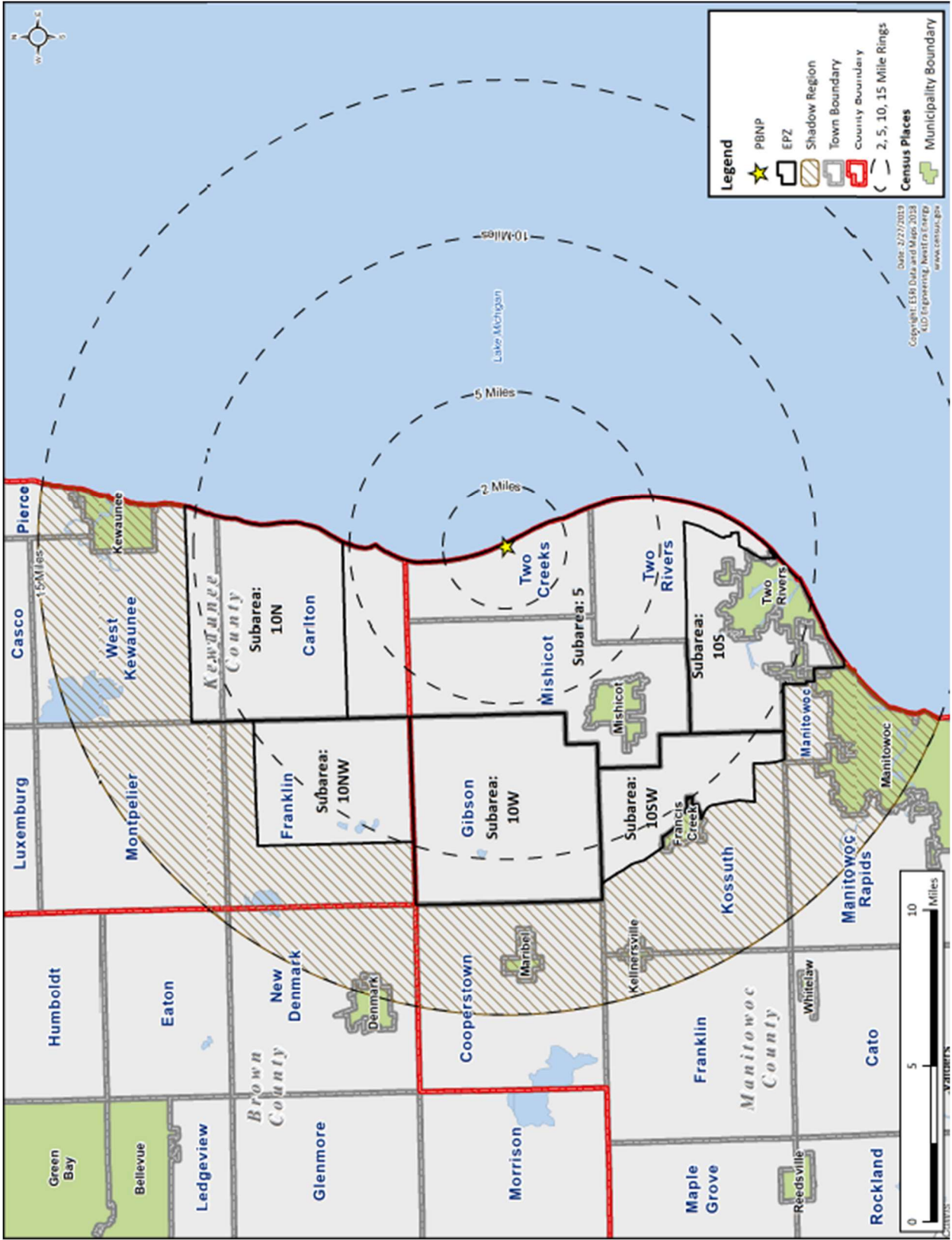
The Point Beach Emergency Plan (EP) was developed in accordance with 10CFR50, paragraph 50.47 and Appendix E, Regulation Guide 1.101 and generally follows NUREG 0696 and 0654. The document was designed to coordinate with the Manitowoc County Emergency Operations Plan, the Kewaunee County Emergency Operations Plan, and Wisconsin Emergency Response Plan for incidents involving commercial nuclear power. These plans govern the offsite response organizations in response to events at Point Beach Nuclear Plant.

There is no obligation to use any particular Alert and Notification System in the PBNP EP. The language in the PBNP EP leaves open the ability to use any ANS process. Specifically, EP 7.0 section 10.0 explains the Prompt Notification system for the public which states

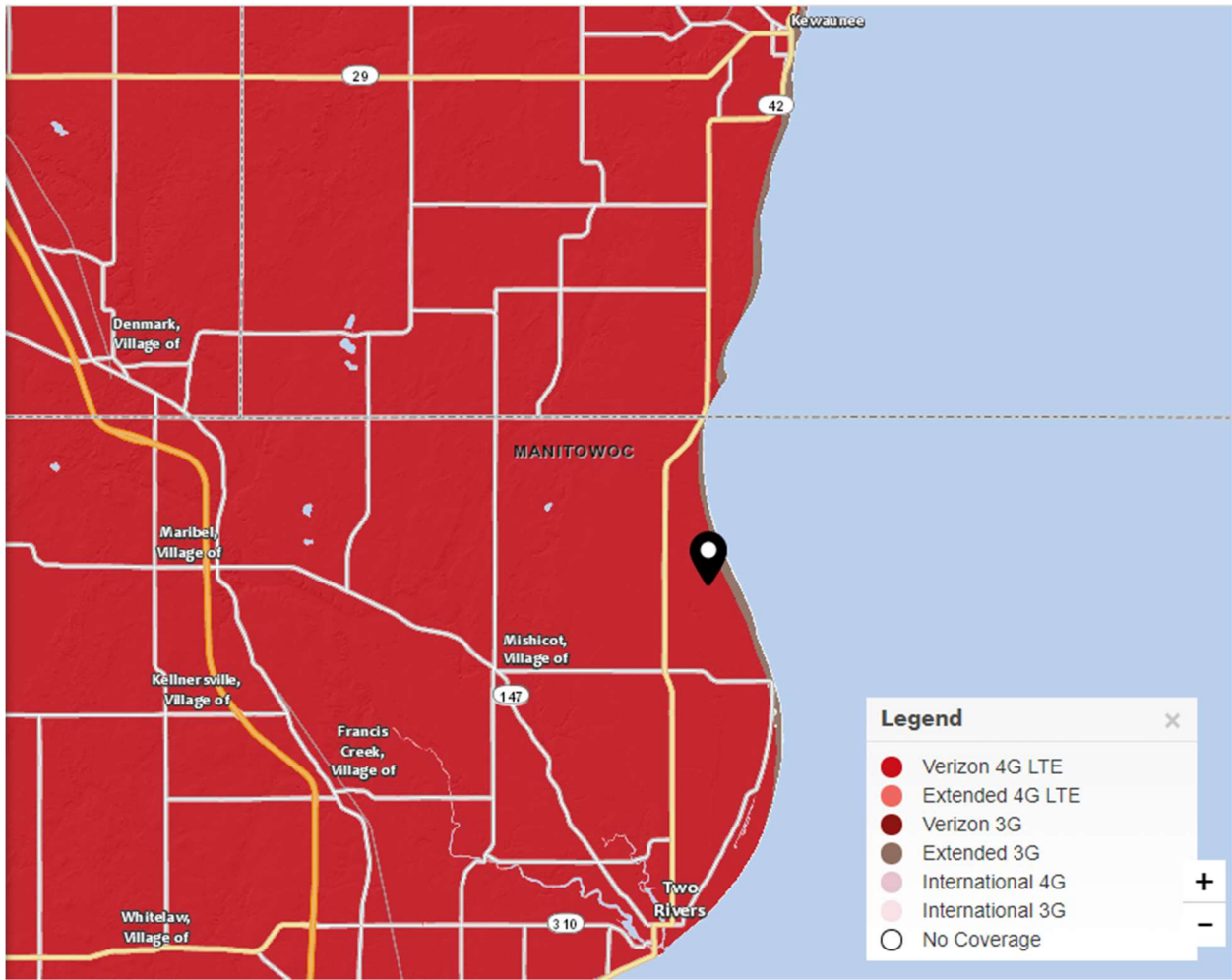
“The system is designed to provide notification of the public within 10 miles of Nextera Energy Point Beach.”

System Coverage:

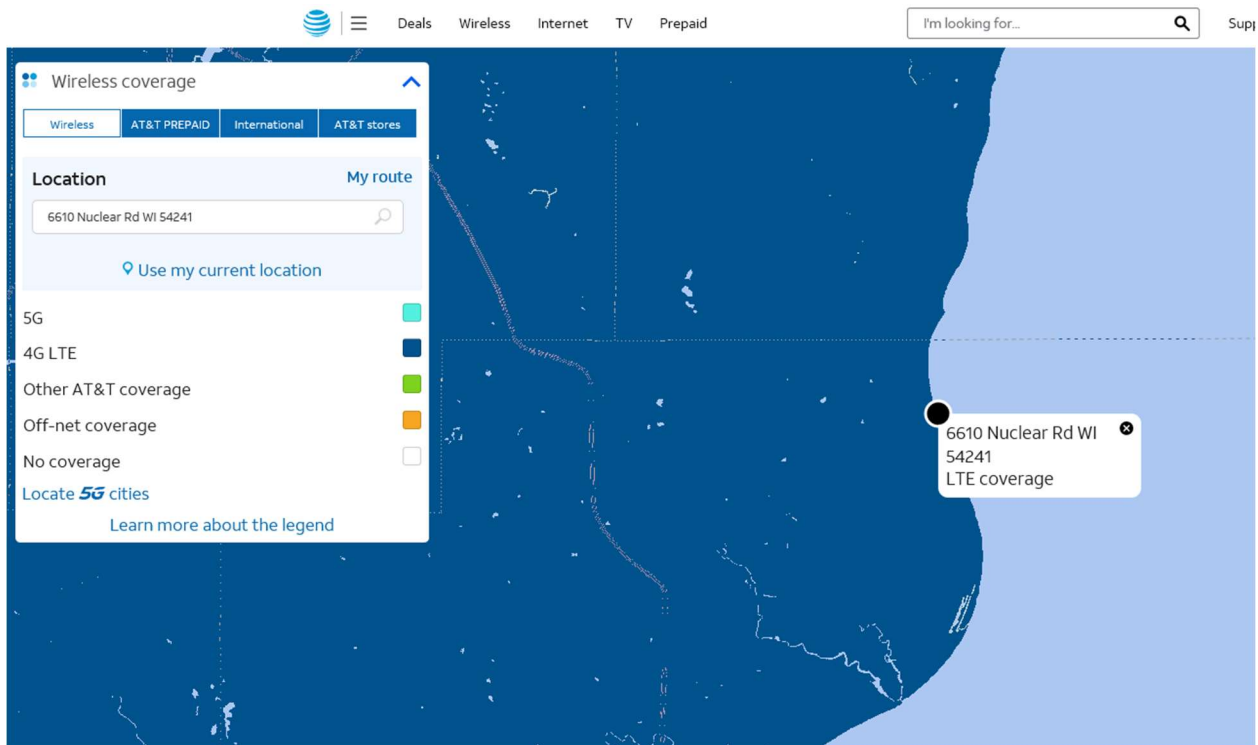
- Population: Manitowoc and Kewaunee counties are lightly populated. The total population for the emergency planning zone covering both counties is 20954 persons (2010 census). This is documented in the Evacuation Time Estimate, 2019 update.
- The population centers in the Emergency Planning Zone and their appropriate populations as broken down by subzone is as follows:



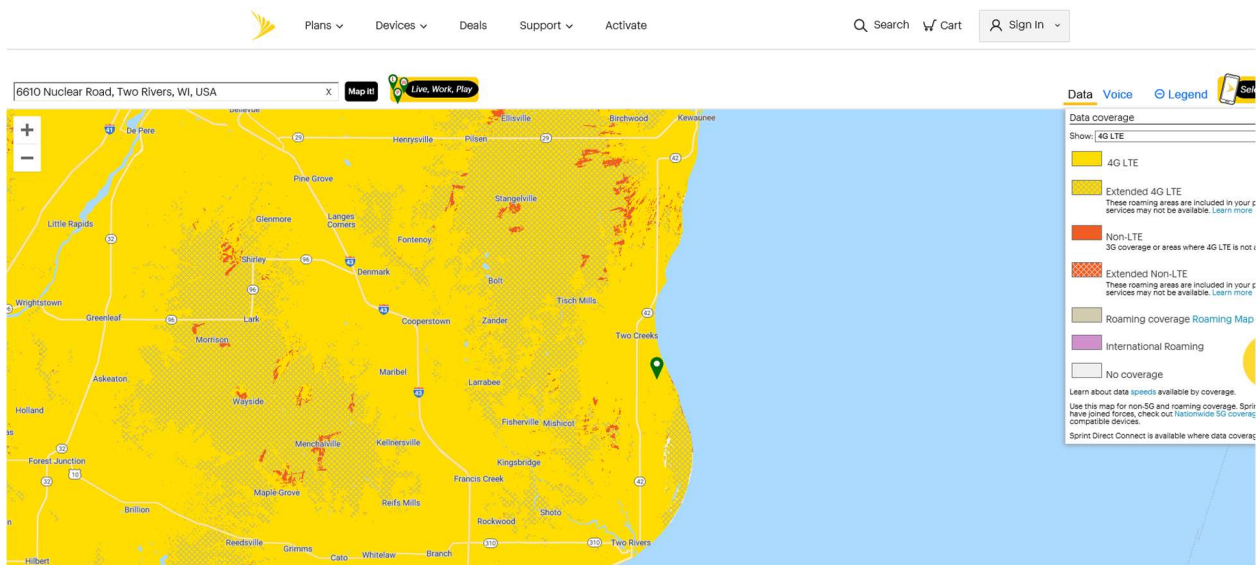
- The Emergency Planning Zone is covered by multiple wireless phone companies. A selection of their coverage areas are provided below:
 - Verizon



- AT&T



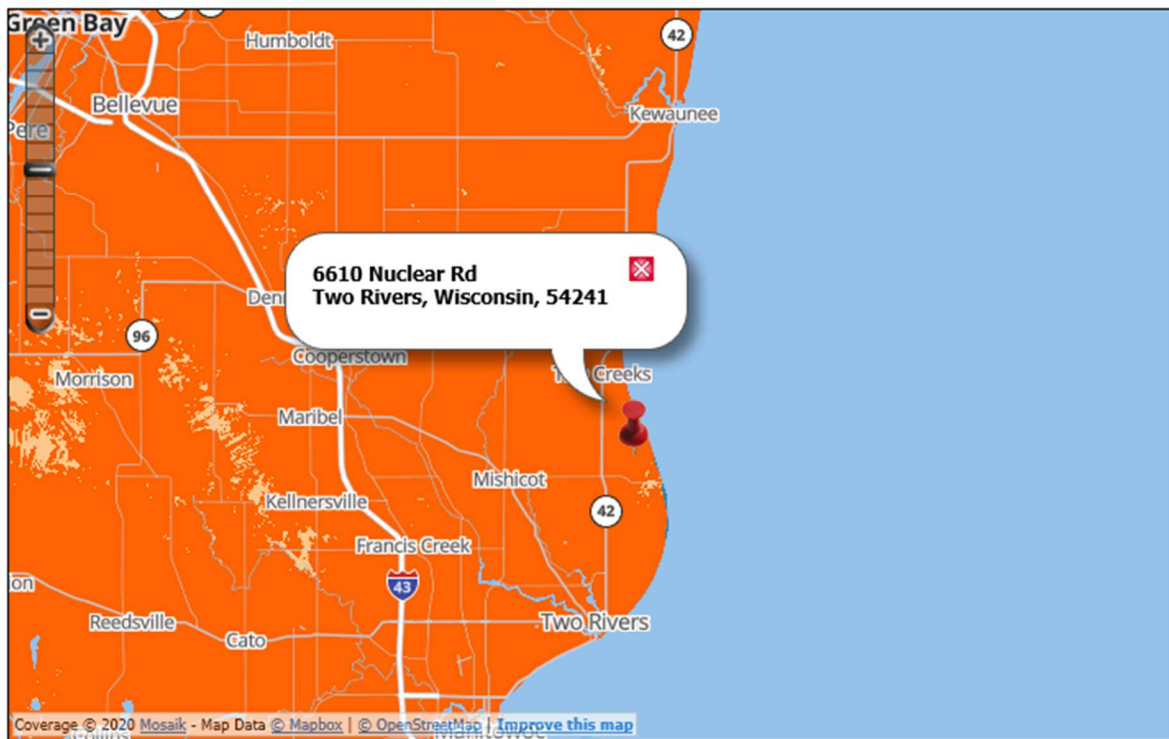
○ Sprint/T-Mobile



○ Cellcom

Coverage Map

Location search



Voice & Messaging	Mobile Data
<input checked="" type="checkbox"/> Domestic Voice & Messaging <input type="checkbox"/> Canada & Caribbean Voice	<input checked="" type="checkbox"/> 4G LTE <input type="checkbox"/> Good* <input type="checkbox"/> Moderate*

- Geographic area: The map above shows the PBNP EPZ covering portions of both Manitowoc and Kewaunee Counties and selected area beyond the 10 mile EPZ. The PBNP EPZ is the area of concern for the Alert and Notification System. The entire EPZ is covered by Manitowoc County IPAWS/WEA and IPAWS/EAS. Manitowoc County is authorized to activate IPAWS for Kewaunee County.
- Means: The entire PBNP EPZ is covered by IPAWS/WEA, IPAWS/EAS.
- Primary method: IPAWS-WEA and IPAWS-EAS

- Secondary method: Route Alerting

Population/ Demographics:

Literacy:

According to US Department of Education National Center for Education Statistics (PIAAC, 2020), breaks down literacy rates into three levels, with level 1 being the lowest. Level 1 rate is defined as “Adults at this level can be considered at risk for difficulties using or comprehending print material. Adults at the upper end of this level can read short texts, in print or online, and understand the meaning well enough to perform simple tasks, such as filling out a short form, but drawing inferences or combining multiple sources of text may be too difficult. Adults who are below level 1 may only be able to understand very basic vocabulary or find very specific information on a familiar topic. Some adults below level 1 may struggle to even do this and may be functionally illiterate.”

Persons failing under the Level 1 criteria are as follows:

- 22% Nationwide
- 15% in Wisconsin
- 15% of Manitowoc County
- 14% of Kewaunee County

As there are no studies done specifically on the EPZ, county data must be used.

Disabilities and Access/ Functional Needs:

IPAWS is a nationally supported system that has been involved with ensuring CAP compliant messages are assessable to a host of adaptive devices that those with access or functional needs are dependent upon. WEA by its nature of being individual and not device targeted, uses the devices the individual maintains for their daily lives to communicate with family and friends. There are no identified English deficient populations in the 10 mile EPZ requiring translations.

In the PBNP public information material, all of the alerting methods are described to keep the public informed of the warning systems used by the counties. In the material, the functional needs section directs those with need to contact Manitowoc County or Kewaunee County Emergency Management to allow the County to determine if the person anticipates they will have an issue receiving an alert with the understanding that they would be sent through IPAWS. This will assist in identifying those who do not possess any of the equipment needed to receive an alert and allow the County to determine who needs personal delivery of a message. A draft example of the public information material is attached to the submittal.

Transient Populations:

Motels within the pre-identified Point Beach Nuclear Plant Emergency Planning Zone have emergency notification information available, including information on receiving IPAWS/WEA alerts. The procedures for Lake Michigan warning will remain unchanged,

with it being accomplished through existing cooperative agreements for assistance between Wisconsin Emergency Management and the US Coast Guard. Transient populations in any of these areas described above will be notified by IPAWS-WEA. The WEA messaging will “latch” at a tower site and if a person enters the area during the active time set for the alert, that has not yet received warning yet; even after the alert has been sent for several minutes or hours, will receive a WEA alert when they enter the defined area of the alert.

Ingestion:

For the intermediate phase, when relocation may be necessary, the same communications methods explained above for early phase alerting will be used. Follow up communication will be widely disseminated through media partners. The majority of orders pertaining to ingestion will be accomplished by the Wisconsin Department of Agriculture, Trade and Consumer Protection. The EAS and IPAWS systems would not normally be used to communicate ongoing follow up information if the media is covering the event.

Interoperability:

The primary subsystem of the Manitowoc County IPAWS Compliant Vendor Program Alert System (IPAWS-WEA, IPAWS-EAS) are activated simultaneously. Backup subsystems (are all activated independently of each other.

Management/Administration:

Manitowoc County Emergency Management is responsible for the management, administration, maintenance, testing and repair of these systems. System documentation is maintained by Manitowoc County Emergency Management as required by the Manitowoc County Emergency Operations Plan, Communication and Warning Annex.

Security and Privacy:

Logical/cyber security is used to secure Prompt Notification Systems web-based systems. All databases are maintained on a non-public server. User access and passcodes are provided to staff members who will need to use the subsystems for operation, management, and training. Messages will be reviewed for Personally Identifiable Information for maintaining privacy information related to the notification system. User ID and Password policy is set by Manitowoc County IT policies.

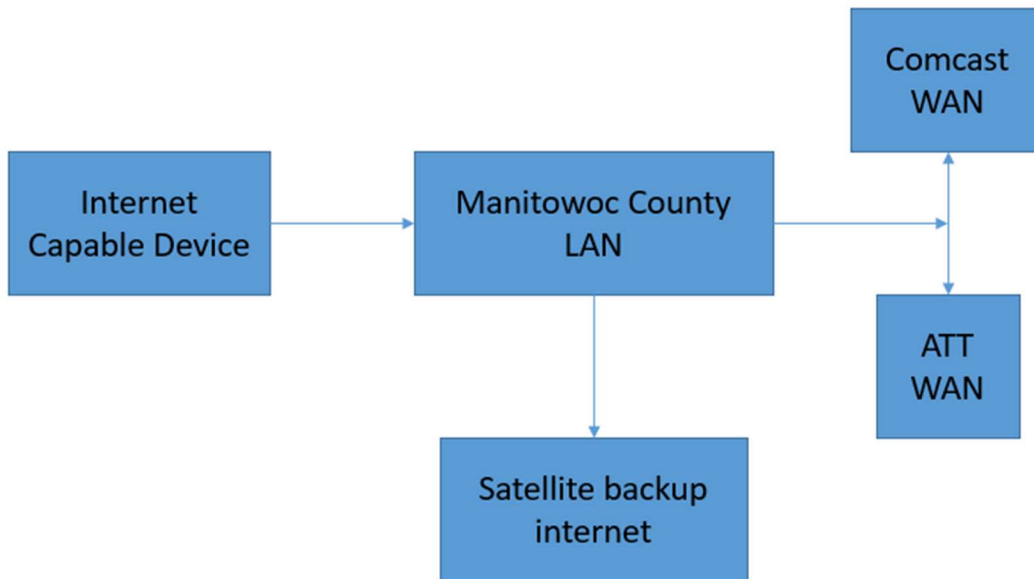
Availability/ reliability:

IPAWS-WEA is reported by FEMA to have a 94 percent or greater reliability/availability. (FEMA, 2018)

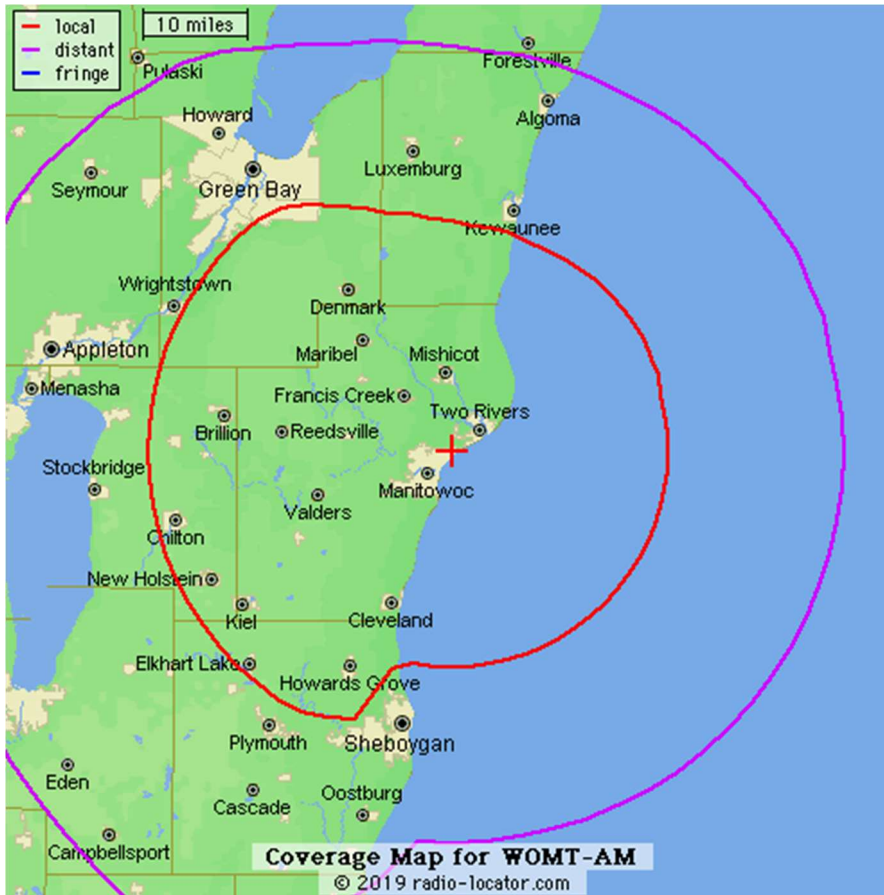
The Manitowoc County IPAWS compliant software vendor has high uptime approaching 100% across multiple data centers with 24x7 system testing and monitoring, organized

with geo-redundancy and managed by two Network Operations Centers and 24x7 support teams.

The Manitowoc County JDC and EOC uses internet from the county IT infrastructure that is served by two internet service providers (currently Comcast and AT&T; ISP names are here for visual purposes only and can be changed). Additionally, a satellite internet connection is available as a backup resulting in nearly 100% reliability of the connection short of a national internet failure. See below for a simplified diagram of internet connectivity.



Broadcast adequacy of WOMT-AM coverage area is shown in the map below:



Testing:

Manitowoc County has a testing certificate from FEMA that allows access to the IPAWS test lab in a “non-live” environment. This training environment allows staff to send incident specific messages for training and everything looks as if it were real, but the alert will remain in the testing lab and not air to the community. On a monthly basis, the JDC staff perform proficiency testing and validate their tests through the IPAWS Message Viewer in this testing mode. Maintenance/ upkeep is met through the standard Manitowoc County information systems (IS) policy on all county computers. Additionally, maintenance agreements are maintained with the origination provider regarding the maintenance of hardware and software. The vendor is required to meet specifications as directed by the FEMA IPAWS program office and demonstrate acceptance criteria is maintained to maintain access to the IPAWS OPEN system. The vendor is responsible under service contract to provide software updates, maintain data integrity, and prevent logical security issues.

To activate and send an IPAWS/EAS message using this system, a user must first have a unique user password issued to them after demonstrating proficiency through training.

Finally, it is important to note that the IPAWS program office requires a monthly validation of proficiency by sending a test scenario through the demonstration (not-live)

IPAWS environment. If successful validation is not demonstrated, then the IPAWS office will terminate the user agreement per their policies and procedures.

On an annual basis, the Primary or Secondary Alert Center must perform an actual notification using IPAWS-WEA or IPAWS-EAS covering a portion of or all of the EPZ. This notification can be performed using any of the following methods:

- Activation of the system for a real event – AMBER Alert, Silver Alert, weather activity, flooding imminent, bridge out, or any other use of the system for a real public notification.
- Full scale test activation of the system using an FCC waiver
- Test activation of the system using the “Local/State Test” feature, not requiring an FCC waiver.

When an activation is being credited for this validation, contact the FEMA IPAWS office to receive a copy of the IPAWS log.

Quality Assurance:

See section 1.

Description/ Performance:

- Physical requirements:
 - IPAWS Subsystem components:
 - Electronic device connected to the internet (desktop computer, phone, etc.)
 - Manitowoc County Local Area Network
 - Manitowoc County Wide Area Network provider (ISP)
 - IPAWS compliant alert origination software
 - IPAWS – OPEN subsystem
 - IPAWS – WEA subsystem
 - Wireless phone carriers
 - End User
 - Route Alerting components:
 - Vehicle
 - Public address systems
 - Flashing warning lights
 - Radio systems
 - Clear, official vehicle markings

Administrative Components:

The Manitowoc County Executive is an elected official and is the head of the executive branch in the county. The Manitowoc County Emergency Management Director is a direct report to the County Executive. The Emergency Management Director’s direct reports (Emergency Program Manager and JDC Supervisors) are charged with operating IPAWS in an emergency.

PBNP has established communication links between the station's emergency response facilities and County, State and Federal emergency response organizations.

Initial and subsequent notifications are made from the station to Manitowoc County, Kewaunee County, and the state via a 24 hour warning point for each group within 15 minutes of a classification of an emergency. The station uses multiple communication methods to reach the warning points.

The decision to activate IPAWS is made between the Emergency Management Directors of Manitowoc and Kewaunee County with input from Wisconsin Department of Health Services and Point Beach Nuclear Plant's protective action recommendation. When a Protective Action Decision is made, the Manitowoc County Emergency Management Director or designee will direct JDC to activate IPAWS for the Emergency Planning Zone.

The JDC maintains a 24 hour capability to receive, authenticate, and disseminate notification/ warning to the public with the Emergency Planning Zone. Authenticated notifications are disseminated to the public in a timely manner of receipt of the directive from the Emergency Management Director.

The Manitowoc County Executive is an elected position and provides oversight of the Emergency Management office. The Emergency Management Director has the authority to operate, maintain, ensure proper configuration, and take corrective action over the Manitowoc County notification system.

Operational Components:

- Activation Procedure(s) – The steps to activating the systems are provided in staff training and the Manitowoc County Communication and Warning Annex. The process is outlined as follows:
 - after receiving an order to activate the system, the IPAWS origination software is opened by the JDC operator.
 - JDC operator selects a prescribed template from the Communication and Warning Annex based upon the area being ordered to take action and the action to be taken (evacuate/shelter etc.).
 - JDC operator then will review the script for accuracy and add the date and time of the order.
 - JDC operator will have a peer review the script for accuracy and send the message through a two-step confirmation process.
 - JDC operator will then validate the IPAWS functioned by reading the reports in the system and verify it was broadcast by receiving the alert on the EAS decoder monitoring WOMT.

- The system will be activated during an emergency situation that poses an extraordinary threat to life safety. Conditions to be considered in determining whether an emergency message is warranted include: severity, timing and whether other means of disseminating messages are inadequate to ensure rapid delivery.

- Timing – IPAWS is capable of activation in less than five minutes, according to the WEA Timing Observations documentation from the 2018 National IPAWS WEA Test. This information was provided by FEMA Technological Hazards Division.
- Process(es) – This process remains unchanged. If the County Executive or other County staff responsible for making a protective action order, they will review the recommendations and data from the licensee. They will validate based upon the projected dose data provided by the plant that PAGs are likely to be exceeded and will make the decision to order an evacuation or shelter based upon the licensee’s data and recommendation. Regardless of who gives the order to activate the system, the County Emergency Management Public Information Officer modifies and reviews the message to present it to the senior authority in charge of the EOC for approval. They then transmit this message to the JDC Supervisor. The JDC then activates the system using the process described above.

Verification:

Manitowoc County will report in the Annual Letter of Certification documents the following information:

- Verification of reliability/ availability and changes as reported by the Manitowoc County IPAWS vendor
- Documentation of IPAWS activation (FEMA HQ IPAWS Log, or similar)
- Verification of IPAWS certification
- Verification of system training
- Verification of system testing
- Verification of WEA coverage maps using any local cellular provider map showing full area coverage
- Verification of maintenance of IPAWS reliability/ availability and changes as reported by FEMA
- On an decennial basis, verify literacy rates for the counties incorporating the EPZ. (See Population/ Demographics - literacy section for 2020 data)

Annual Letter of Certification data is available at any time to be inspected by any government agency (FEMA/NRC). Annual Letter of Certification is compiled by WEM and is provided to the utility and counties upon completion.

IPAWS Implementation

In response to the *Memorandum for Regional Assistance Committee Chairpersons dated September 13, 2017 from Harry Sherwood, Chief Policy and Doctrine Branch, Subject: IPAWS*

Implementation Guidance, Point Beach Nuclear Plant (PBNP) formally requests approval from FEMA Regional Administrator to designate Integrated Public Alert Warning System (IPAWS) as the primary component of the Alert and Notification System (ANS) for Public Information and Warning core capability that supports all five Mission Areas under the National Preparedness System for Point Beach Nuclear Plant (PBNP) and Manitowoc County, Wisconsin. We have coordinated this request with Manitowoc County Emergency Management, Kewaunee County Emergency Management, Wisconsin Division of Emergency Management, and FEMA Region VII and have full support and agreement.

Manitowoc County Emergency Management, with the support and agreement of Wisconsin Emergency Management, moved to the IPAWS system to alert residents of emergency situations. IPAWS uses a variety of notification vehicles for distributing emergency messages, including, but not limited to analog, digital and satellite radio and television via the EAS; cell phones and mobile devices via Wireless Emergency Alerts; NOAA All Hazards National Weather Radio via the IPAWS-NOAA gateway; internet applications and websites.

Kewaunee County Emergency Management has entered into a Memorandum of Understanding (MOU) with Manitowoc County Emergency Management allowing Manitowoc County Emergency Management to be the IPAWS Alerting Authority for Kewaunee County for Nuclear Emergencies. This MOU cannot be revised without verification that the changes do not affect this document.

This change resulted in the elimination of sirens being used as means of emergency notification to the public. IPAWS will be tested and maintained as a primary means of notification and backup route alerting will remain the secondary means of notification per 44 CFR 350.

Attached are appendices 1-9 validating items considered and documented in making this change to the PBNP Radiological Emergency Response Plan and supporting procedures as well as the Manitowoc County and State of Wisconsin Radiological Emergency Response Plans and procedures. Each appendix addresses the sections outlined in Mr. Sherwood's letter referenced earlier.

APPENDIX 1 AUTHORITIES

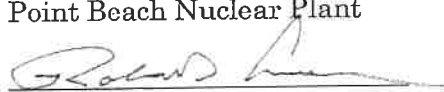
"The determination to use IPAWS is the responsibility and authority of the state, tribal, or local governments, and their elected officials." The following signatures indicate that officials are attesting to the accuracy, completeness, and concurrence of the information contained within this ANS evaluation report. No ANS design, plan, or revision will be considered by FEMA without the state's concurrence.

Name: Robert Craven

Title: Site Director

Agency: Point Beach Nuclear Plant

Signature:



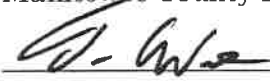
Date: 6/30/2020

Name: Travis Waack

Title: Emergency Management Director

Agency: Manitowoc County Emergency Management

Signature:



Date:

7/6/2020

Name: Tracy Nollenberg

Title: Emergency Management Director

Agency: Kewaunee County Emergency Management

Signature: Tracy Nollenberg Date: 07-08-2020

Name: Dr. Darrell Williams

Title: Administrator

Agency: Wisconsin Emergency Management

Signature:



Date: 7-13-20

Revisions include the following:

PRIMARY ACTIVATION CENTER

The primary activation center of the Manitowoc County IPAWS is the Manitowoc County Joint Dispatch Center. Primary operators are the Joint Dispatch Center supervisor staff.

The site has a backup electrical generator, three days of fuel on-site, and an uninterruptable power supply with surge protection to allow for continuous operation of the facility.

SECONDARY ACTIVATION CENTER

Secondary activation of the local IPAWS area will be via the Wisconsin Emergency Management Duty-Officer, who provides for IPAWS alerting for the state for AMBER alerts and other alerts as needed. Standard Operating Procedures have been developed to incorporate this backup method in the Manitowoc County Emergency Plan

PUBLIC NOTIFICATION SYSTEM

The county will use Integrated Public Alert and Warning System (IPAWS) to alert the public of events due to significant problems at Point Beach Nuclear Plant. IPAWS provides public safety officials an integrated gateway to send alert and warning messages to the public using the Emergency Alert System (EAS), Wireless Emergency Alerts (WEA), internet services, social media and other public alerting systems, all from a single interface.

EMERGENCY ALERT SYSTEM

The Emergency Alert System (EAS) provides specific procedures for the commercial broadcast media to disseminate emergency information to the general public in specified statewide operational areas via broadcast, cable, satellite, and wireline radio and television channels. The FCC license for EAS stations is contingent upon the stations providing alert and notification for emergency situations.

The majority of the commercial broadcast stations in Manitowoc County are owned and operated by Seehafer Broadcasting Corp, which operates multiple participating national (PN) stations from its studio in Manitowoc. These stations include WOMT, which is the flagship local radio station for news and information. As a PN station, their stations (including WOMT) monitor the IPAWS internet feed as well as the local primary (LP) stations (WPNE and WTAQ/WIXX) for EAS alerts. Stations in Kewaunee County will also receive IPAWS-EAS alerts.

WIRELESS EMERGENCY ALERTS

Wireless Emergency Alerts (WEA) are short emergency messages from authorized public alerting authorities that can be broadcast to any WEA – enabled mobile device in a locally targeted area. WEA messages are broadcast from cellular towers in the designated alert area to any WEA- enabled mobile devices that communicate

with the cell tower during the alert duration. All the major U.S. cell carriers are participating in WEA on a voluntary basis.

BACKUP ROUTE ALERTING

Manitowoc County and Kewaunee County will maintain the currently approved backup method – Route Alerting and Notification – as backup to the notification tools mentioned previously.

EMERGENCY INFORMATION

Emergency information is transmitted to the public via the Public Notification System. This includes FEMA's Integrated Public Alert and Warning System (IPAWS) which is an internet – based capability Federal, State, Territorial, Tribal, and local authorities can use to issue critical public alerts and warnings. IPAWS will enable notifications to be sent via Emergency Alert System and Wireless Emergency Alerts (WEA).

APPENDIX 2 PERSONNEL

"Roster of authorized personnel with access should match, alerting personnel and affiliated personnel. (i.e., an alert originator and back-up personnel should be present for each of the shifts and supervisors should have access or familiar with the operation system.)"

Name**	Title
Travis Waack	Emergency Management Director
Kayla Beckerdite	Emergency Management Program Manager
Angela Obry	Joint Dispatch Center Supervisor
Connie Bashaw	Joint Dispatch Center Supervisor
Paul Hacker	Joint Dispatch Center Supervisor

* A Joint Dispatch Center Supervisor is either on-duty or on-call 24 hours a day, 365 days a year.

** Manitowoc County Emergency Management maintains an updated roster of authorized personnel as alerting personnel and affiliated personnel for the use of IPAWS. This includes Emergency Management Department personnel and JDC Supervisors.

APPENDIX 3 TRAINING

"IS-247 or other FEMA training is required for all authorized personnel in order to apply for IPAWS access. Additional training is necessary to use the IPAWS OPEN Developer software chosen by the ORO. Confirm a schedule to practice and maintain proficiency in the software. Have a Testing Certificate (Software) from IPAWS in order to practice with the IPAWS OPEN Developer software."

Manitowoc County has a testing certificate from FEMA. The County tests IPAWS on the first Monday of every month per the monthly testing requirement from FEMA. Each IPAWS authorized personnel perform the test on a rotating basis to maintain proficiency.

APPENDIX 4 MAINTENANCE

"Upkeep of the computer(s) used to access the IPAWS OPEN Developer software, including appropriate software updates, data backup, anti-virus, security passwords, hardware repair and internet connectivity."

This is met through the standard Manitowoc County information technology (IT) policy on all county computers.

APPENDIX 5 SECURITY

"Roster of IPAWS Security Certificates, expiration dates and recertification schedule, suitably secure computer or means to initiate ANS."

Manitowoc County's IPAWS system can be accessed from any computer connected to the internet, in keeping with the purpose of the test and live certificates.

APPENDIX 6

DEMONSTRATION/TRAINING TOOL

"Have the capability of accessing the IPAWS Message-Viewer and demonstrate ORO proficiency by using a vendor blind testing protocol that reports how a message would propagate through the IPAWS OPEN system without requiring an actual end-to-end test."

Manitowoc County verifies each monthly test in the IPAWS OPEN Lab to verify that it would be correctly propagated and displayed on a variety of devices if sent in the live environment.

https://ipawsopen-lab.net/ALERT_SERVICES/postedmessages.php?COGID=300325

APPENDIX 7 TESTING

"Schedule test of the end-to-end capability of the IPAWS OPEN, vendor software and the ORO operated alert & notification systems. This is the same method used currently by REP OROs. The exception is Wireless Emergency Alerts (WEA), credited by the non-REP use of WEA in an actual emergency by any IPAWS Alerting Authority covering the Emergency Planning Zone.

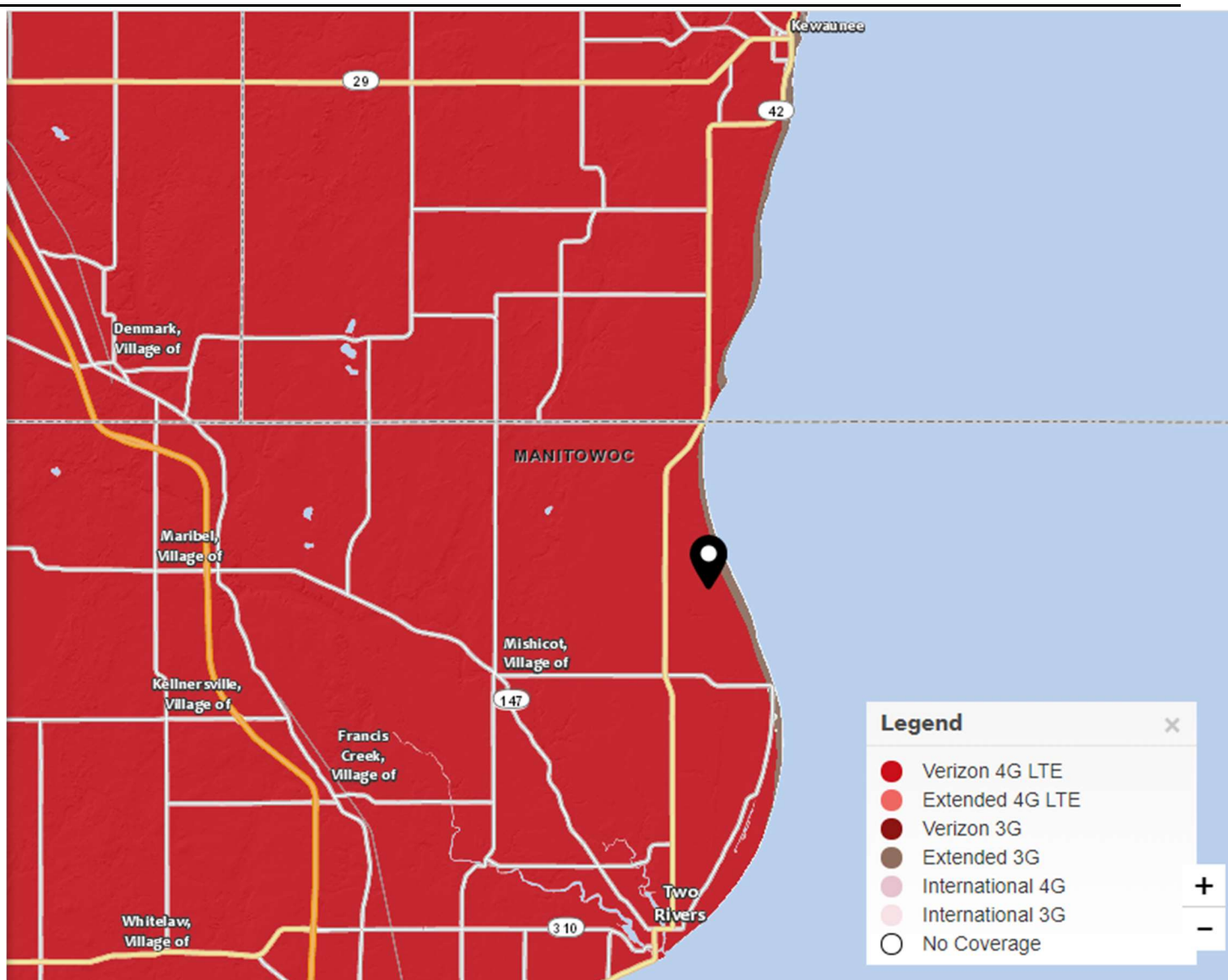
Manitowoc County uses the IPAWS system in test mode each time they are a full participant in a drill or exercise.

On an annual basis, the Primary or Secondary Alert Center must perform an actual notification using IPAWS-WEA or IPAWS-EAS covering a portion of or all of the EPZ. This notification can be performed using any of the following methods:

- Activation of the system for a real event – AMBER Alert, Silver Alert, weather activity, flooding imminent, bridge out, or any other use of the system for a real public notification.
- Full scale test activation of the system using an FCC waiver
- Test activation of the system using the “Local/State Test” feature, not requiring an FCC waiver.

APPENDIX 8 COVERAGE

"The Alert and Warning annex or procedures must clearly define the area and population that covered by the system and by what means. This can be illustrated on a map and/or described in the plans. In communities where IPAWS capability has not been fully developed, its use as a supplemental means of ANS is encouraged in order to facilitate access to the Emergency Alert System and other technologies and to develop proficiency with its use. At a later time, and based on demonstrated capability, OROs may elect to change IPAWS to redundant, backup or primary status."





Wireless coverage

Wireless | **AT&T PREPAID** | International | AT&T stores

Location My route

6610 Nuclear Rd WI 54241

[Use my current location](#)

- 5G
- 4G LTE
- Other AT&T coverage
- Off-net coverage
- No coverage

[Locate 5G cities](#)

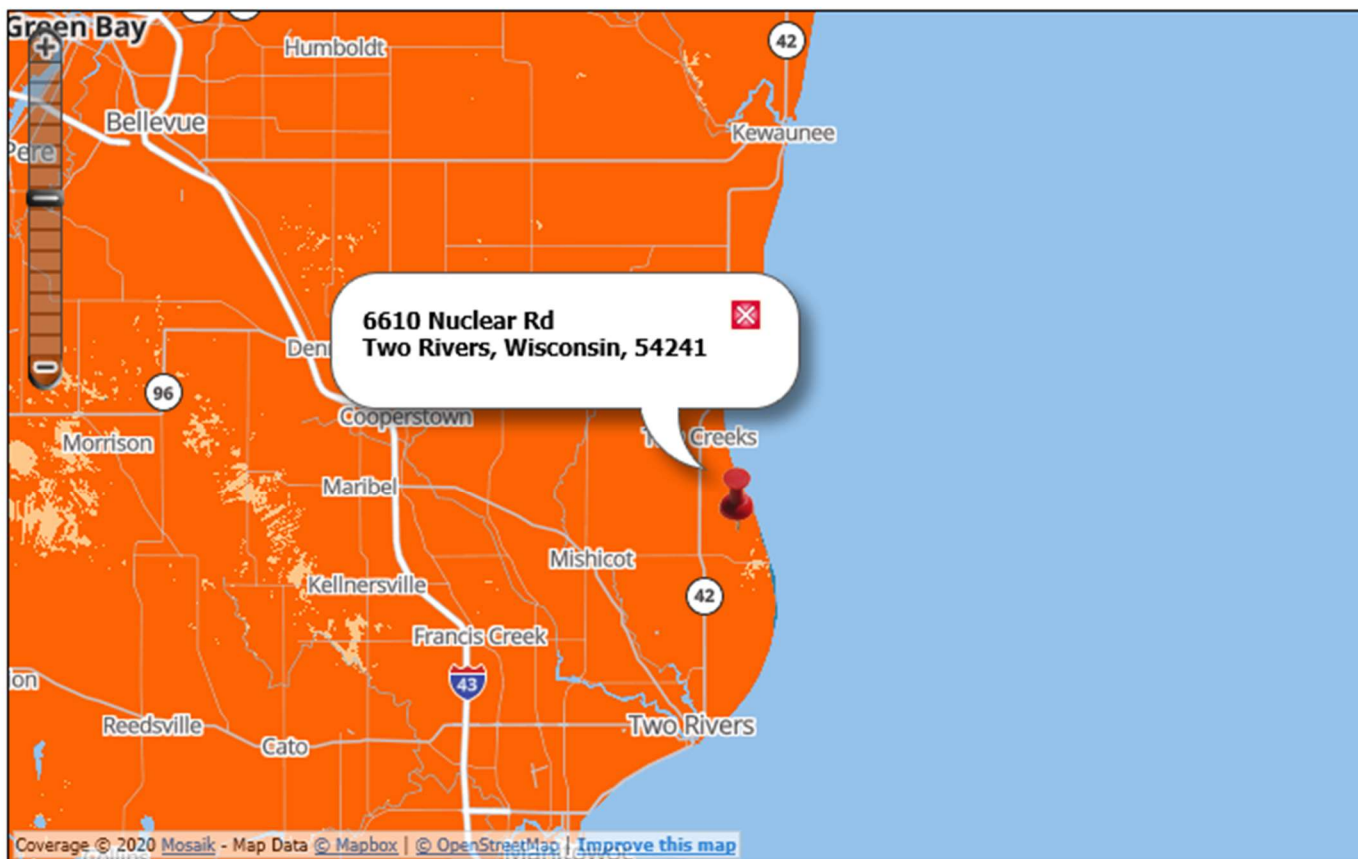
[Learn more about the legend](#)

6610 Nuclear Rd WI 54241

LTE coverage

Coverage Map

Location search



Voice & Messaging	Mobile Data
<input checked="" type="checkbox"/> Domestic Voice & Messaging <input type="checkbox"/> Canada & Caribbean Voice	<input checked="" type="checkbox"/> 4G LTE ■ Good* ■ Moderate*

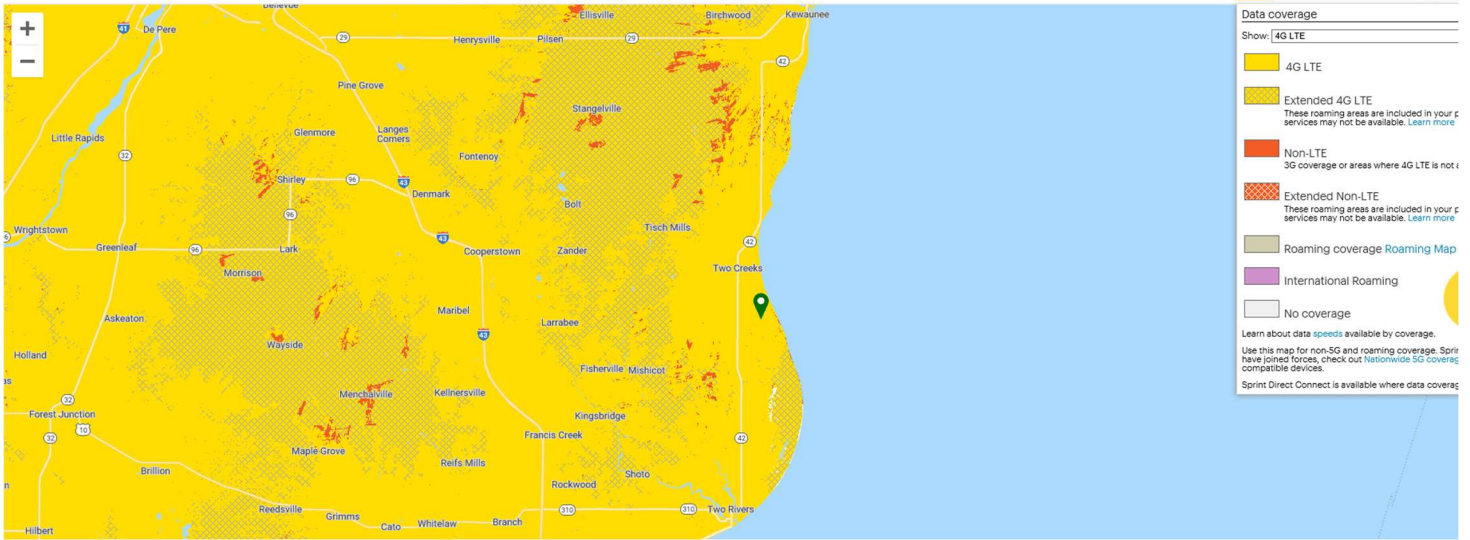


6610 Nuclear Road, Two Rivers, WI, USA

Map It

Live, Work, Play

Data Voice Legend



APPENDIX 9

AGREEMENT AND LICENSING

"Many utilities have agreements in place with State and local governments and due consideration must be given to ensure they are met, where applicable. In addition, Licensees are responsible for ensuring continued compliance and should review the regulatory requirements (i.e., licensing basis) for its plan. Licensees need to understand the licensing basis of their emergency plan program elements and why the elements were incorporated in the plan. In some cases, licensees may have committed to particular program elements in response to site-specific considerations. FEMA will work with the Nuclear Regulatory Commission (NRC), States, OROs and licensees to support continuing compliance."

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This change resulted in the elimination of sirens being used as means of emergency notification to the public. IPAWS will be tested and maintained as a primary means of notification and backup route alerting will remain the secondary means of notification per 44 CFR 350.

References

- FEMA. (2018). *2018 performance report*. Washington, DC: Department of Homeland Security.
- PIAAC, U. (2020, June 18). *US Skills Map: State and County Indicators of Adult Literacy*. Retrieved from Skills Map: <https://nces.ed.gov/surveys/piaac/skillsmap/>