Oregon Office of Emergency Management

IPAWS Emergency Alert Messaging

May 29 – 30, 2018

After-Action Report and Improvement Plan

07/31/2018

This After-Action Report (AAR) is focused solely on the activities of the Oregon Office of Emergency Management (OEM) for the May 29, 2018 Emergency Alert Messaging sent via the Integrated Public Alert Warning System (IPAWS). Strengths to maintain and areas needing improvement were gathered from OEM staff who worked this event.

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EXECUTIVE SUMMARY

On Tuesday evening, at 8:29 p.m. on May 29, 2018, the Oregon Office of Emergency Management (OEM) sent a message via the Integrated Public Alert Warning System (IPAWS) to the general public to inform them of a water advisory for vulnerable populations in specific Oregon counties (Linn, Polk, Marion) and the Salem area. This after-action report highlights the actions taken leading up to this message and subsequent response involved with the messaging pertaining to this alert. Highlights of this document include the following:

Overall Successes:

- Water advisory information was sent via the IPAWS system to the affected areas.
- OEM operational staff were able to activate and staff the Emergency Coordination Center (ECC) within minutes of the request to return to work.
- Participating agencies (Marion County and City of Salem) were present in the ECC to assist communicating to key stakeholders.
- Social media posts were timely in correcting the messages sent out via the Wireless Emergency Alert (WEA) system.
- Clear direction was given on which groups to reach out to during activation.
- The state situation report standard was utilized for this event, ensuring consistency with prior event situation reporting.

General Areas of Improvement:

- While information was sent out via the IPAWS system, the messages sent via WEA did not include relevant information, was truncated and did not provide clear guidance for actions the public should take during the event.
- The information between the WEA message and the Emergency Alert System (EAS) message did not match. The second WEA message did not reference the first WEA message, leading to confusion on how many alerts existed.
- There is no policy, procedure, or system in place to contact critical staff during events in which traditional communications methods are inoperable. Established system of ECC team protocols were not followed for activating the ECC.
- A common script for communicating information out to Public Safety Answering Points, sheriff's offices, and local/tribal emergency managers was not developed.
- Transition from OEM Executive Leadership event management to ECC Activation was fragmented.
- Contact information for critical stakeholders was not up-to-date and did not provide direction on how to contact them after-hours.
- There was a lack of a common location to view the status and current actions associated with the event for staff not involved in the initial response.

Bottom Line:

- OEM staff took action in support of our local partners, however, we lacked the knowledge of and experience with the system we were using to flawlessly execute that action, causing confusion and anxiety to much of the public that received the Wireless Emergency Alert
- Additional training and process clarification is needed for OEM to effectively provide alert and warning information via IPAWS, and corrective actions began immediately following the alert on May 29, 2018.

INCIDENT OVERVIEW

Incident Name	**IPAWS Emergency Alert Messaging**
Incident Dates	**05/29/2018 – 05/30/2018**
Scope	The initial request for assistance by the local jurisdiction was received on 5/29/18 at 1:10 p.m. The event lasted until 12:21 a.m. on 5/30/18. Please refer to the chronology for more details.
Mission Area(s)	Response
Core Capabilities	Public Information and Warning Operational Coordination Operational Communications Situational Assessment
Objectives	1. Support Marion County and the City of Salem by sending out an emergency alert to notify potentially impacted citizens of a water advisory regarding water sources fed from the Detroit Reservoir. 2. Make contact with public safety officials to provide insight to the emergency alert message. 3. Coordinate with local partners on messaging.
Threat or Hazard	Unsafe drinking water for vulnerable populations
Lead Agency	Oregon Office of Emergency Management
Participating Organizations	Oregon Office of Emergency Management City of Salem Emergency Management Marion County Emergency Management Oregon Emergency Response System
Point of Contact	Daniel Stoelb 3225 State Street #115, Salem OR 97301 503-378-3234 daniel.stoelb@state.or.us

How the System Works

The Wireless Emergency Alerts (WEA) are a component of the Integrated Public Alert Warning System (IPAWS). As shown in figure 1 below, the IPAWS architecture includes the alerting authorities (who can send the alert), the alert aggregator and gateways (FEMA servers that route the messages to the appropriate channels), the alert dissemination channels (systems that receive the alert and distribute it to providers), and what devices receive the alert based upon the dissemination channel.

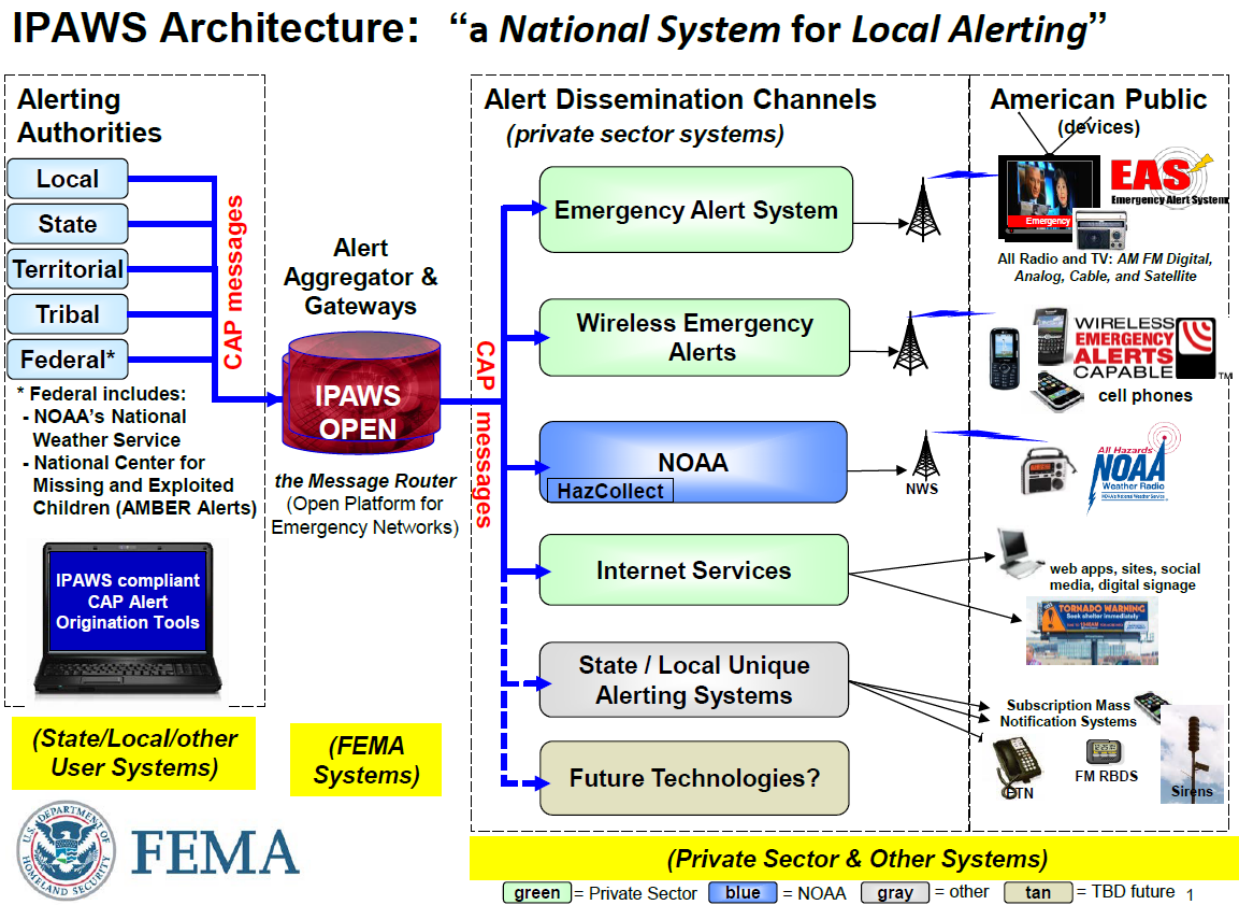


Figure 1: IPAWS Architecture, FEMA

All messages sent to IPAWS must follow a common format, called the Common Alerting Protocol (CAP). Messages sent to IPAWS are entered in using a CAP alert origination tool. The CAP alert origination tool that the Oregon Office of Emergency Management (OEM) utilizes is called DASDEC, a hardware and software product of Digital Alert Systems. This system is accessible within an internet browser and is supported by the FEMA-approved vendor, Monroe Electronics. OEM maintains the hardware and applies updates from the vendor when released.

The types of alerts DASDEC can send via IPAWS is based upon the approved Oregon State Emergency Alert System Plan, dated February 22, 2017. According to the plan, "entities generating messages using the CAP must first be certified by the Office of Emergency Management in Salem, and then approved by the Federal Emergency Management Agency

(FEMA). This agreement will specify the event codes that can be used and a memorandum of interoperability."

The event codes agreed upon by the State Emergency Communications Committee (based upon the 2017 plan) are as follows:

- Civil Emergency (CEM) – used by the governor or his or her staff for extreme conditions that would affect a large segment of the state's population.
- Child Abduction Emergency (CAE) – amber alerts launched only by the Oregon State Police (OSP).
- Required Monthly Tests (RMT) – used to test the system statewide.
- Administrative Message (ADM) – used to forward non-critical emergency messages to the radio and television stations. Administrative messages are considered non-critical emergency messages and are not broadcast or forwarded to the public.
- Required Weekly Tests (RWT) – originators are encouraged to schedule random or scheduled tests to ensure the operational status of the system. OEM's tests are every Thursday at 11:00 a.m.

Event codes listed in DASDEC that are not in the plan but are able to be used are as follows:

- Telephone Outage Emergency (TOE) – used to notify the public of alternate phone numbers in the event of the primary notification number, such as 911 being unavailable.
- Practice Demo Warning (DMO) – used to test the system between OERS and Oregon Public Broadcasting (OPB) to evaluate audio quality.

In order to gain access to the DASDEC system, an individual must take the FEMA training on the IPAWS system. Once that is completed, the training certificate is then sent to the system administrator at OEM and they set up a DASDEC account for access. OEM manages the users on their own DASDEC system.

Provided below are the procedures for how DASDEC operates and interacts with the IPAWS system:

1. User logs into DASDEC application via a web browser.
2. Information is keyed into the system.
    a. Specific dropdowns within the application include the type of alert, alert duration, distribution location (where the alert needs to be sent to), message text (for EAS), instructions text, WEA text (if applicable), and audio settings.
    b. Depending on the type of alert, a WEA may be enabled.
        i. WEA messaging is enabled for the following types of alerts:
            1. Amber Alert
            2. Civil Emergency

ii. WEA text is restricted to a 90 character limit.

iii. In order to send non-default text to the WEA, a manual over-ride text box must be filled out. Otherwise, default text includes the alert type and "in this area until" specified time (based upon alert duration) with "Prepare for Action" (or execute action in the case of amber alerts) and the sender details.

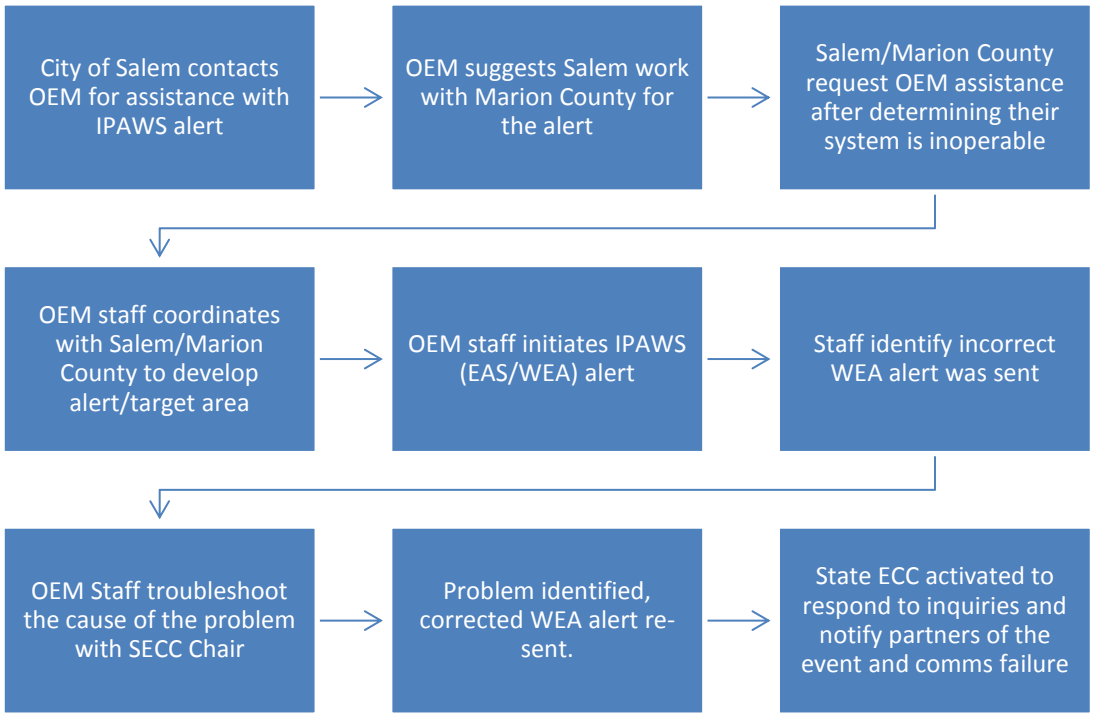
3. Once the "SEND" button is pressed, the system prompts the user to make sure that they want to send the message.
4. After confirmation, the message text information is then sent to the IPAWS Open system for review and subsequent routing.
5. The sender information is then reviewed by the IPAWS Open system to verify that the sender is an authorized sender.
6. Once validated, the message is then sent to the recipients specified in the application, which is based upon Federal Information Processing Standards (FIPS) codes (unique numeric codes by county jurisdiction).
7. The message is sent to those carriers that exist within the specific FIPS code areas and are pre-defined based upon how those cell towers are registered with the Federal Communications Commission (FCC). All cell towers within the FIPS jurisdiction are sent the message.

    a. In some cases, these cell towers may cover additional areas, which will cause a "bleed over" affect to where individuals outside the jurisdiction may receive the message.

    b. Because IPAWS is an opt-in system for carriers, some devices on specific cell networks may not receive the WEA message.

CHRONOLOGY OF EVENTS

In order to reflect the incident, staff members involved in the effort were surveyed to better illustrate the timeline of events. The results of this survey are included in the chronology below.



5/29/2018

1310 Email from Communications Officer to Operations and Preparedness Section Manager, Operations and Preparedness Section Team Lead, Preparedness Planner/Government Liaison that stated the City of Salem's Emergency Manager contacted him to indicate they may need OEM/OERS to send out IPAWS messages alerting the public regarding poor drinking water for infants in the Salem area, related to Detroit Lake being impacted by toxic algae blooms. The OEM Communications Officer redirected him [Salem Emergency Manager] to first use the Marion Area Multi-Agency Emergency Telecommunications (METCOM) public safety answering point (PSAP) if applicable. The OEM Communications Officer asked for someone to reach out to the Salem Emergency Manager and make sure he is coordinating public alerting with Marion County. The Operations and Preparedness Section Manager later directed the Operations and Preparedness Section Team Lead to reach out to the City of Salem's Emergency Manager.

1428 Email from the Operations and Preparedness Section Team Lead to the City of Salem's Emergency Manager (with cc to the Marion County Emergency Manager) to indicate OEM does not get directly involved in accessing IPAWS for public safety messaging unless the county involved does not have the capability to coordinate that action. OEM works directly with the counties and not individual municipalities on these types of issues. Moreover, OEM communications are generally restricted to incidents that are real time and have a potential for

immediate impact on public health and safety. The Operations and Preparedness Section Team Lead requested the City of Salem Emergency Manager get in contact with the Marion County Emergency Manager and develop a joint strategy for message dissemination as this issue unfolds. It is appropriate that such messaging be coordinated through the county and not at the state level.

1536 The Operations and Preparedness Section Manager received call from City of Salem Emergency Manager to ask about contacting OERS and getting OERS number for water contamination issues.

1606 Message from OERS indicating that City of Salem emergency management has declared an unsafe water advisory for the Polk and Marion Counties that use the Santiam watershed. Boiling the water will not help. Children under 5, immunocompromised persons, along with pregnant and nursing mothers. Caller is working with the Marion County Emergency Manager, who requested him to get an OERS number. They will be sending out an IPAWS message and sending out a press release. They will be working with the local PSAP, METCOM, also for the information relay process.

1820 After receiving the text from OERS indicating she [Operations and Preparedness Section Manager] call him, the Operations and Preparedness Section Manager contacted the Marion County Emergency Manager. The Marion County Emergency Manager indicated they were unable to log in to send an IPAWS message. During this conversation, he also indicated that he had sent it to everyone that he was aware of through their normal distribution channels, with IPAWS being the lone exception. He asked if OEM could send the IPAWS message on their behalf. The Operations and Preparedness Section Manager agreed to send the message.

1824 The Operations and Preparedness Section Manager called the OEM Information Technology Lead and asked him to confirm we could send the alert. He said they could and indicated that OERS could send it as well.

1826 The Operations and Preparedness Section Manager called OERS and asked if OERS could send the alert. They discussed and decided the OEM Information Technology Lead could send it for Marion County as the OEM Information Technology Lead was more experienced with the system. The Operations and Preparedness Section Manager then called the OEM Information Technology Lead and asked him to send the alert. He indicated he could send the alert at 2000.

1836 The Operations and Preparedness Section Manager sent an email to OERS, Executive Duty Officers, OEM Information Technology Lead, and others (as Support Duty Officers for their situational awareness) to indicate that she was working with the Information Technology Lead and OERS to send out IPAWS on behalf of Marion County.

1838 The Marion County Emergency Manager supplied text for the IPAWS alert. This was a single line of text that included a website link for details.

1856 The Operations and Preparedness Section Manager forwarded information received from the Marion County Emergency Manager to OEM Information Technology Lead and OERS. Afterwards, the Operations and Preparedness Section Manager sent an email to OERS to notify them that OEM would send the IPAWS alert out on behalf of Marion County.

1918 OERS sent an email to the Operations and Preparedness Section Manager to let her know they were uncomfortable with sending out the IPAWS message due to the destination being locked and pre-determined. OERS had also checked with Oregon State Police (OSP) dispatch to confirm that they could not send out just any IPAWS alert, and they could not. The Operations and Preparedness Section Manager later sent an email to the OEM Information Technology Lead to make sure the message the Marion County Emergency Manager sent would work with IPAWS.

1932 The OEM Information Technology Lead suggested to the Operations and Preparedness Section Manager that OEM should include more detail in the message as those that will see it on the TV would not normally have internet in their houses. The Operations and Preparedness Section Manager later instructed the OEM Information Technology Lead that we should send what the Marion County Emergency Manager wanted us to send.

2002 The Operations and Preparedness Section Manager called the OEM Information Technology Lead and discussed adding information to the message with text from Marion County's website with more detailed information. The updated text was discussed over the phone and based upon the website information.

2014 The OEM Information Technology Lead sent the Operations and Preparedness Section Manager an email confirmation of the IPAWS alert that did not go through. They spoke and the OEM Information Technology Lead indicated that he would reach out to the Oregon State Emergency Communications Committee Chair to diagnose the problem. The issue pertained to the alert type being a warning as the agency does not have the ability to send out warnings, only emergency alerts. The OEM Information Technology Lead then changed the alert type for the message from a civil warning to a civil emergency and discussed with the Operations and Preparedness Section Manager prior to sending.

2029 Alert sent, which was passed to the Emergency Alert System (EAS) and WEA. The alert appeared correctly on TV, but was truncated on cellular devices (see figure 2 for image of the alert). Immediately afterwards, calls were received by multiple staff and others (including the media) indicating the message was incomplete on the phones, and overall confusion as to the context of the message.

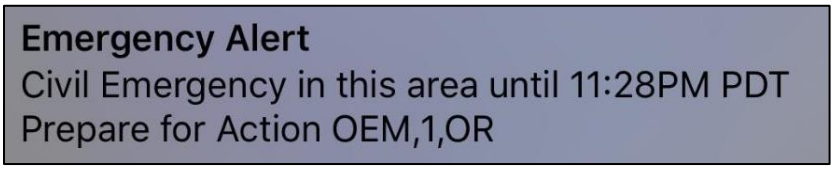


Figure 2: Initial Wireless Emergency Alert Message

2030 The OEM Deputy Director contacted the Operations and Preparedness Section Manager to determine what was happening. He asked her to work with the OEM Information Technology Lead to resend another message. She informed him that the OEM Information Technology Lead had worked with the State Emergency Communications Committee Chair to diagnose a problem earlier with the failure to send the first message. The OEM Deputy Director indicated he would call the OEM Information Technology Lead to direct him further.

2040 The OEM Deputy Director contacted the OEM Information Technology Lead to ask what happened. The OEM Information Technology Lead indicated he had called the State Emergency Communications Committee Chair and they had indicated that a second message did not need to be sent. The OEM Deputy Director directed the OEM Information Technology Lead to craft a new message to correct the messaging.

2042 The OEM Deputy Director contacted the State Emergency Communications Committee Chair to determine why he had said a second message was not necessary. The State Emergency Communications Committee Chair had seen the EAS message and thought that civil emergency was the appropriate designation. He told the OEM Deputy Director that there was no regulation preventing us from doing another message. The OEM Deputy Director indicated that we needed to send another message to correct the one sent out already, and the State Emergency Communications Committee Chair indicated it was appropriate to send another message.

2048 Message from OERS indicating "FYI OEM (NOT ME) ISSUED A CIVIL EMERGENCY FOR HIGH TOXIN LEVELS IN TAP WATER FOR MARION, POLK AND LINN COUNTIES. HOWEVER, IT APPEARS TO HAVE GONE OVER MANY COUNTIES. ALL AGENCIES ARE OVERLOADED. OERS HAS 120 CALLS PENDING."

2052 The OEM Director called the OEM Deputy Director to indicate he was coming to the Emergency Coordination Center (ECC). The OEM Deputy Director indicated status of sending out another message.

2053 The OEM Deputy Director instructed the Operations and Preparedness Section Manager to report to the ECC and that he [OEM Deputy Director] was working with OEM Information Technology Lead to send another message.

2056 The OEM Deputy Director instructed one of the OEM Public Information Officers to come to the ECC. She said that she was focused on creating a FlashAlert message to correct the message and would come as soon as the FlashAlert was sent.

2059 The OEM Director directed to activate the ECC and reach out to all PSAPs, sheriff's offices, and local/tribal emergency managers to correct messaging and coordinate with partners. The OEM Director called the Marion County Emergency Manager directly and asked he come to the ECC to assist.

2100 Updated WEA message sent out indicating water emergency and to view the City of Salem's website for more information (figure 3).

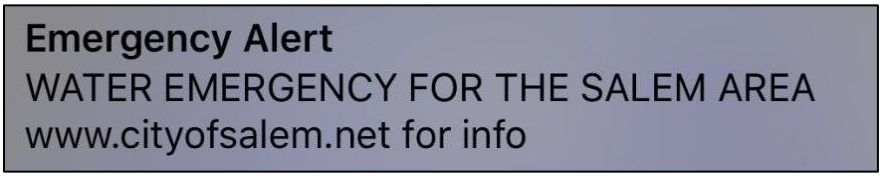


Figure 3: Corrected Wireless Emergency Alert Message

2100 The OEM Information Technology Lead analyzed the issue as to why the first message didn't appear correctly on cellular devices and determined this was due to the manual text over-ride section on the form not being filled out on the first WEA message.

2102 The OEM Deputy Director asked the OEM Information Technology Lead to come to the office and asked him to document the EAS/WEA message procedures, to also include the timeline, procedures, and narration. Facebook post from OEM stating the alert was in regard to Salem drinking water on behalf of Marion County and to refer to the City of Salem website.

2113 The OEM Deputy Director and the Operations and Preparedness Section Manager decided to call in staff to work in the ECC to assist with contacting PSAPs, sheriff's offices, and local/tribal emergency managers.

2114 OregonOEM post on Twitter stating "The emergency alert sent from @OregonOEM was in regard to the drinking water notice in Salem. For more information visit @cityofsalem."

2120 The OEM Deputy Director asked the second OEM Public Information Officer, to report to the ECC. They subsequently contacted OMD Public Affairs to assist determining next steps for communications. Additionally, they worked social media and media calls.

2122 The Marion County Emergency Manager arrived at the building to assist.

2139 FlashAlert release sent to clarify the message that was sent out via WEA.

2146 Staff started arriving in the ECC and began work contacting identified parties. The OEM Deputy Director asked the Operations and Preparedness Section Lead and the Operations and Emergency Program Coordinator to work on the situation report for the event.

2209 The OEM Deputy Director sent message to OEM staff, locals list, PSAPs, OERS Council about the situation.

2213 Facebook post from OEM sharing the message from City of Salem regarding clarification of the messaging sent out via WEA.

2219 Twitter post from OregonOEM stating the "Emergency Alert Message at 8:29 PM was to support the water service area for the Detroit Water Reservoir. The system unfortunately removed the details of this message and reverted to the default material. A repaired message was sent at 9:00 PM."

2228 Twitter post from OregonOEM sharing the clarification message from Next Door.

2301 The OEM Director and both OEM Public Information Officers created and posted a Facebook video to describe the issue in more detail and to correct the messaging that was sent out via WEA. This message was subsequently shared to FlashAlert, Twitter, and Next Door.

5/30/2018

0012 Situation report released for the event.

0021 The OEM Information Technology Lead sent email documenting the screenshots of the DASDEC system and where the text box needed to be filled out with information for WEA (manual text over-ride).

0028 Federal Communications Commission (FCC) operations center asked questions based upon error reported on the news pertaining to IPAWS/WEA/EAS. This message was later responded to at 1000 to document that the WEA message reverted to default messaging and was a technical issue related to procedures and not an issue with the device or software.

ANALYSIS OF CORE CAPABILITIES

Objective	Core Capability	Performed without Challenges (P)	Performed with Some Challenges (S)	Performed with Major Challenges (M)	Unable to be Performed (U)
Support Marion County and the City of Salem by sending out an emergency alert to notify potentially impacted citizens of a water advisory for water sources fed from the Detroit Reservoir.	Public Information and Warning			X	
Make contact with public safety officials to provide insight to the emergency alert message.	Operational Coordination		X		
	Operational Communications		X		
	Situational Assessment		X		
Coordinate with local partners on messaging.	Operational Coordination		X		
	Operational Communications		X		
	Situational Assessment		X		

Ratings Definitions:

- Performed without Challenges (P): The targets and critical tasks associated with the core capability were completed in a manner that achieved the objective(s) and did not negatively impact the performance of other activities. Performance of this activity did not contribute to additional health and/or safety risks for the public or for emergency workers, and it was conducted in accordance with applicable plans, policies, procedures, regulations, and laws.
- Performed with Some Challenges (S): The targets and critical tasks associated with the core capability were completed in a manner that achieved the objective(s) and did not negatively impact the performance of other activities. Performance of this activity did not contribute to additional health and/or safety risks for the public or for emergency workers, and it was conducted in accordance with applicable plans, policies, procedures, regulations, and laws. However, opportunities to enhance effectiveness and/or efficiency were identified.
- Performed with Major Challenges (M): The tasks and activities associated with the capability were completed in a manner that achieved the objective(s), but some or all of the following were observed: demonstrated performance had a negative impact on the performance of other activities; contributed to additional health and/or safety risks for the public or for emergency workers; and/or was not conducted in accordance with applicable plans, policies, procedures, regulations, and laws.
- Unable to be Performed (U): The tasks and activities associated with the capability were not performed in a manner that achieved the objective(s).

Table 1. Summary of Core Capability Performance

The following sections provide an overview of the performance related to each exercise objective and associated core capability, highlighting strengths and areas for improvement.

Core Capability: Public Information and Warning

Description: Deliver coordinated, prompt, reliable, and actionable information to the whole community through the use of clear, consistent, accessible, and culturally and linguistically appropriate methods to effectively relay information regarding any threat or hazard, as well as the actions being taken and the assistance being made available, as appropriate.

Applicability to Event: The messages sent out via WEA and EAS were analyzed based upon how they met this core capability.

Strengths

The partial capability level can be attributed to the following strengths:

Strength 1: The water advisory information was sent to TVs in and around the affected jurisdictions and appeared as entered within the DASDEC system.

Strength 2: Wireless Emergency Alerts were sent to customers and functioned as programmed in the DASDEC system.

Areas for Improvement

The following areas require improvement to achieve the full capability level:

Area for Improvement 1: The message sent out via WEA did not include relevant information, was truncated and did not provide clear guidance for actions the public should take during this event.

Analysis: There was unfamiliarity with how information should be input into specific sections of the form within the DASDEC system, including the default text over-ride for the wireless emergency alert. There is a need for training on this system to ensure information submitted into the online form conveys the appropriate information to be sent out. OERS did have a set of procedures, but those procedures were for AMBER alerts only and did not catch the issue with the WEA text over-ride. Additionally, there is currently no means to test a WEA or EAS message. Any information sent via the DASDEC system is "live" and sent to all relevant parties based upon the type of alert sent. According to the FCC, they will be implementing end-to-end testing of this capability by May of 2019.

Area for Improvement 2: Staff and the general public were confused as to why this type of alert was sent out via the IPAWS system.

Analysis: There is a lack of clarification on when or if OEM is required to alert the community as well as what might signal action on OEM's behalf to alert the general public. There is a lack of policy and procedures on when and how to use the system to send out emergency alerts. OEM has no defined alert or warning authority per Oregon Revised Statute 401. Neither does OERS per Oregon Administrative Rules Chapter 104 Division 40.

Area for Improvement 3: Information appearing on the EAS message were difficult to read or the text scrolled across the screen too fast for the general public to understand the message.

Analysis: Messages sent via EAS are required to run twice with an alert tone. These messages are displayed using scrolling text on the television screen. Additionally, there is currently no means to test a WEA or EAS message. Any information sent via the DASDEC system is "live" and sent to all relevant parties based upon the type of alert sent. According to the FCC, they will be implementing end-to-end testing of this capability by May of 2019.

Area for Improvement 4: The information between the WEA message and the EAS message did not match. The second WEA message did not reference the first WEA message, leading to confusion on how many alerts existed.

Analysis: The SECC Chair did not see the WEA message that was sent out – only the EAS message and what type of alert was sent. Based upon the EAS message and the type of alert, they indicated that a second alert was not necessary. In this case, the proper alert type was selected, but the system default text was sent over the WEA transmission as nothing was entered into the default text over-ride on the DASDEC system. Additionally, no protocols or procedures currently exist for how to correct a message sent with incorrect information and due to space limitations (only 90 characters allowed), reference information was difficult to include without obstructing the overall message.

Core Capability: Operational Coordination

Description: Establish and maintain a unified and coordinated operational structure and process that appropriately integrates all critical stakeholders and supports the execution of core capabilities.

Applicability to Event: The messages and communications sent between staff for coordinating the initial response and initially staffing the Emergency Coordination Center were analyzed based upon how they met this core capability.

Strengths

The partial capability level can be attributed to the following strengths:

Strength 1: OEM operational staff were able to activate and staff the Emergency Coordination Center within minutes of the request to return to work.

Strength 2: Participating agencies (Marion County and City of Salem) were present within the Emergency Coordination Center to assist communicating to key stakeholders.

Strength 3: OEM management staff was present within the Emergency Coordination Center, which provided support for staff.

Areas for Improvement

The following areas require improvement to achieve the full capability level:

Area for Improvement 1: There is no policy, procedure, or system in place to contact critical staff during events in which traditional communications methods are inoperable.

Analysis: There is no established policy or procedure for notification of staff during emergency events. A procedure for notification of staff utilizing a system separate from work-assigned cellphones and policy that is agreed upon by both management and staff should be developed to ensure timely notification of critical staff during events. Additionally, providing context for why the ECC is activating should be a key component of the notification message. OEM currently has the capability to utilize the Everbridge notification system, but this is not fully implemented due to lack of staff and resources to effectively utilize the application.

Area for Improvement 2: Established system of red and blue ECC team protocols were not followed for activating the ECC.

Analysis: Staff were queried based upon their availability and location to the ECC for quickly setting up the ECC. Those staff that were closest and could report quickly were called in to work in the ECC. ECC teams are not currently built based upon physical residence of those associated staff. ECC teams are rotated on a monthly basis for day and night shifts.

Core Capability: Operational Communications

Description: Ensure the capacity for timely communications in support of security, situational awareness, and operations by any and all means available, among and between affected communities in the impact area and all response forces.

Applicability to Event: The messages and communications sent between ECC staff and local agencies for clarifying the situation were analyzed based upon how they met this core capability.

Strengths

The partial capability level can be attributed to the following strengths:

Strength 1: Email and text responses and information were sent out to staff and leadership in a timely manner.

Strength 2: Message correction social media posts were timely in correcting the messages sent out via WEA.

Strength 3: Clear direction from management on who to contact during the ECC activation.

Areas for Improvement

The following areas require improvement to achieve the full capability level:

Area for Improvement 1: A common script for communicating information out to relevant parties was not developed.

Analysis: Communication of critical information requires consistent messaging. When tasked with communicating information out to relevant parties, ESF 14 (Public Information) needs to be involved with crafting an appropriate message.

Area for Improvement 2: Transition from OEM Executive Leadership event management to ECC Activation was fragmented.

Analysis: When staff were called back to the ECC for work assignments, executive leadership at OEM indicated they were activating the ECC. However, after the ECC was activated, individual staff assignments were still directed by executive leadership as opposed to the ECC manager. Additionally, decisions involving new objectives or tasks were given to the public information officers without involving the ECC manager. When high-level executives, agency heads, and staff occupy the ECC, information should be funneled through (and to) the ECC manager on duty to ensure consistency and appropriately involve decision-makers within the ECC.

Area for Improvement 3: Contact information for critical stakeholders was not up-to-date and did not provide direction on how to contact them after-hours.

Analysis: A lack of a proper point of contact for sheriff's offices led to a lack of understanding for who needed to be contacted during initial outreach efforts. A review of the sheriff's office lists should be done on a regular basis to ensure contact information is up to date. Additionally, since this event occurred in the evening, many emergency management staff and personnel were not available at their typical desk phone, causing many local emergency managers and their staff to be confused as to the status of the situation that evening. Procedures are required to ensure that the proper contact information is utilized during after-hours events.

Core Capability: Situational Assessment

Description: Provide all decision makers with decision-relevant information regarding the nature and extent of the hazard, any cascading effects, and the status of the response.

Applicability to Event: The communications sent between staff, leadership, and local agencies for clarifying the situation were analyzed based upon how they met this core capability.

Strengths

The partial capability level can be attributed to the following strengths:

Strength 1: The state situation report standard was utilized for this event, ensuring consistency with prior events situation reporting.

Strength 2: OEM Public Information Officers actively engaged Oregon Military Department Public Affairs staff, City of Salem, and Marion County for assistance during the event, which helped ensure timely response of critical information to news media, local jurisdictions, and the general public.

Areas for Improvement

The following areas require improvement to achieve the full capability level:

Area for Improvement 1: There were text-based inaccuracies in the situation report created for the event.

Analysis: The footer text did not include the appropriate information referencing the event details.

Area for Improvement 2: There was a lack of a common location to view the status and current actions associated with the event for staff not involved in the initial response.

Analysis: Currently, information is posted to social media and other relevant channels. However, there is a lack of clarification to staff on where they can look to find more details about an ongoing event and any associated actions currently taking place to address the issue. For this event, actions assigned to individual staff did not involve supplemental agency assignments (or actions/missions as they would be found within the OpsCenter crisis management application). Instead, verbal direction was given during the event without documentation of what the tasks were for staff assigned to work the event. Additionally, this event did not feature an ECC Action Plan (EAP) that listed objectives for the event.

EMERGENCY SUPPORT FUNCTION ACTIONS

ESF 5 – Information and Planning: Oregon Office of Emergency Management (OEM)

- OEM sent an emergency alert to impacted areas on behalf of the City of Salem and Marion County to notify individuals potentially impacted by toxins found in the water supplies fed from the Detroit Reservoir.
- OEM coordinated with the SECC Chair on troubleshooting the IPAWS/EAS/WEA system.
- OEM coordinated with local and tribal emergency management, PSAPs, FEMA, OERS Council partners, and local sheriff's offices to provide insight on WEA message.
- OEM created procedures to document how to operate the state's IPAWS system.

ESF 14 – Public Information: Oregon Office of Emergency Management (OEM)

- OEM PIOs responded to a rash of calls regarding the "civil emergency" alert sent over WEA and the EAS at approximately 2050.
- Posted clarification on OEM social media at 2114.
- Distributed a FlashAlert at 2139 with updated information about the alert and social media was posted with correct and full alert information.
- OEM PIOs coordinated with OMD PIO on messaging plan on their way to the ECC.
- Upon activation of the ECC, OEM Director taped a video of information/apology for the truncated message along with an explanation of how the truncated message occurred and information about the City of Salem water issue. Video sent over FlashAlert and posted to social media (Facebook, Twitter, Nextdoor).
- Facilitated communication with City of Salem and Marion County PIOs for coordination of messaging.
- Developed talking points for speaking with the media.
- Began developing communication strategy for the duration of the event.
- Continued taking media throughout the night and into the next morning.

APPENDIX A: IMPROVEMENT PLAN

This IP has been developed specifically for the Oregon Office of Emergency Management as a result of May 29-30, 2018 IPAWS Emergency Alert Messaging from 05/29/2018 – 05/30/2018.

Issue	Core Capability	Recommendation	POETE Element	Responsible ESF	Timeframe
1: WEA message truncated and did not include relevant information	**Public Information and Warning**	Develop standard operating guidelines for entering messages using the current system. Develop training on how to utilize the system and how it integrates with the existing IPAWS system.	**Planning, Training, Exercise**	**ESF 5/OEM**	**Q 4, 2018**
2: Who sends alerts		Develop policy and procedures on who can send an alert and when the alerts are warranted.	**Planning**	**ESF 5/OEM**	**Q 4, 2018**
3: Difficulty reading and understanding EAS messages		Test the EAS and WEA message capability. Determine proper protocols/procedures for use in creating messages for the general public.	**Planning, Training, Exercise**	**ESF 5/OEM**	**Q 4, 2018**
4: WEA message correction process		Develop policy, training, and procedures on how to correct a WEA or EAS message sent via IPAWS.	**Planning, Training, Exercise**	**ESF 5/OEM**	**Q 4, 2018**
1: Communicating with operations staff during busy periods	**Operational Coordination**	Develop policy, training, procedures on how to utilize other means to contact staff during an emergency. Research should include utilizing currently accessible systems, such as Everbridge.	**Planning, Training, Exercise**	**ESF 5/OEM**	**Q 4, 2018**
2: ECC team staffing protocols		Conduct analysis of how to structure teams to best serve based upon staff location and availability.	**Planning**	**ESF 5/OEM**	**Q 4, 2019**
1: Common script for communication	**Operational Communications**	Develop procedure and training for crisis communications.	**Planning, Training, Exercise**	**ESF 5/OEM**	**Q 1, 2019**
2: Leadership to ECC Activation Transition		Develop training for ECC activation, how that process flows, and how information within that structure flows to include relevant ECC positions.	**Planning, Training, Exercise**	**ESF 5/OEM**	**Q 4, 2019**
3: Contact list updates		Create procedure and process for updating contact lists, including sheriff's offices and relevant points of contact for key stakeholders and how to notify them after-hours.	**Planning**	**ESF 5/OEM**	**Q 2, 2019**

Issue	Core Capability	Recommendation	POETE Element	Responsible ESF	Timeframe
1: Situation report editing	**Situational Assessment**	Refresh ECC staff on how to complete the situation report. Coordinate with staff to determine ways for automation of the situation report.	**Planning, Training, Exercise**	**ESF 5/OEM**	**Q 4, 2019**
2: Common location for status of response		Coordinate with ECC staff to determine proper methods to track the status of an incident within existing systems (OpsCenter) as well as improvements to how internal information is processed and tracked.	**Planning, Training, Exercise**	**ESF 5/OEM**	**Q 4, 2019**

APPENDIX B: INCIDENT PARTICIPANTS

Participating Organizations
Federal
Federal Communications Commission
Federal Emergency Management Association
U.S. Department of Homeland Security
State
Oregon Department of State Police
Oregon Emergency Response System
Oregon Office of Emergency Management
Oregon State Emergency Communications Committee
Counties
Marion
Cities
Salem

ACRONYMS

AAR	After Action Report
CAP	Common Alerting Protocol
EAS	Emergency Alert System
ECC	Emergency Coordination Center
ESF	Emergency Support Function
FCC	Federal Communications Commission
FEMA	Federal Emergency Management Agency
FIPS	Federal Information Processing Standards
IP	Improvement Plan
IPAWS	Integrated Public Alert and Warning System
METCOM	Marion Area Multi-Agency Telecommunications
OEM	Oregon Office of Emergency Management
OERS	Oregon Emergency Response System
OMD	Oregon Military Department
OSP	Oregon State Police
PIO	Public Information Officer
PSAP	Public Safety Answering Point
SECC	State Emergency Communications Committee
WEA	Wireless Emergency Alerts