This document outlines the systems and procedures used for Alerts and Warnings.

Area Alert & Warning Annex

Support Annex to local Emergency Operations Plans

Version 2.0 August 2024

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PROMULGATION

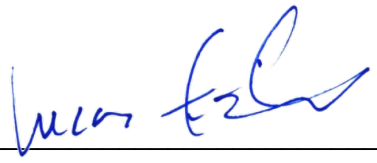
This Emergency Support Function Annex to the County of Yolo Emergency Operations Plan describes how Yolo County will manage an emergency incident or disaster mitigation, preparedness, response, and restoration related to this Emergency Support Function. All Primary and Support agencies identified as having assigned responsibilities in this Emergency Support Function shall perform the emergency tasks described, including preparing and maintaining Standard Operating Guidelines and Procedures and carrying out the training, exercises, and plan maintenance needed to support the plan.

This Emergency Annex plan was developed using the Comprehensive Planning Guide 101 version 3 from the Federal Emergency Management Agency and California's emergency planning guidance documents. Adoption will occur following the established maintenance schedule; however, the plan may be modified in the interim without prior approval and formal adoption under the direction of the Director of Emergency Operations. The revised plan will be relayed digitally to all Primary and Support agencies with assigned responsibilities in this Emergency Support Function. The Primary assigned agency will coordinate the review and update of the plan with the Support agencies as needed at least every three years. This Emergency Support Function plan supersedes any previous versions.

This Emergency Support Function Annex applies to Primary and Support agencies within Yolo County who are assigned responsibilities in Section 4.5 Responsibilities by Emergency Support Function of the All-Hazard Emergency Operations Plan and identified within the Emergency Support Function Annex.

This plan replaces previous annexes of the same or similar title.

The County of Yolo Board of Supervisors chairperson will formally promulgate this annex. The County Ordinance empowers the County Board of Supervisors to review and approve emergency and mutual aid plans.



10/8/2024

Lucas Frerichs — Date:

Chair of the Board of Supervisors

SECTION 1.0: INTRODUCTION

1.1 PURPOSE

This Annex establishes general and specific policies, procedures, and protocols for using Alert and Warning systems in the Yolo County Operational Area (Op Area) during actual or potential emergencies that pose a significant threat to life or property. This plan is a functional annex to the *Yolo County Operational Area Emergency Operations Plan* (EOP).

Timely and effective alerts and warnings are critical to the life safety of Yolo County residents, visitors, and first responders. Residents and visitors must be informed of threats and directed to take appropriate action as quickly and accurately as possible. Therefore, it is necessary to define authorities, responsibilities, and procedures clearly.

The words “alert” and “warning” are often used interchangeably, but in this document, those words are used in distinct ways:

Alert—At the beginning of and during incidents with ongoing immediate threats, Gain the public's attention and draw their attention to a risk or hazard.

Warning – Before the incident – Distribute guidance to prepare for an anticipated incident

Notifications—During and after immediate threats—Instruct immediate protective actions and provide ongoing communications relevant to an event to reduce milling and encourage public action. Convey time-sensitive information on response and recovery-related services.

Community Messaging – A communication that requires no immediate actions and is utilized for information sharing and situational awareness of the community.

1.2 SCOPE

This Annex does not preclude an individual jurisdiction from developing Alert and Warning plans if executed within their respective jurisdiction's authority and boundaries. However, any alert initiated via County systems, by agreement or request, will conform to this Annex.

1.3 ALERT AND WARNING OBJECTIVES

This Annex supports the four key objectives of the Yolo County Alert & Warning program:

1. Proactively warn the public of threats by providing timely, targeted, accurate, and actionable information.

2. Use multiple, redundant, and overlapping alerting systems to ensure the best dissemination of alerts and warnings.

3. Incorporate social equity measures and ensure the ability to reach individuals with Access and Functional Needs (AFN) and those who are non-English-speaking by identifying potential barriers and implementing mitigation strategies as required.

4. Coordinate and assist with delivering alerts and warnings across jurisdictional boundaries to ensure messaging continuity.

1.4 SITUATION OVERVIEW

Alerts and warnings are critical functions of emergency management. The ability to communicate with the public is essential to the preservation of life and property.

Currently, the field of Alert and Warning is rapidly and significantly evolving. Traditional methods of communication, such as landline telephones, broadcast television, and radios, are in decline as U.S. residents shift to wireless broadband, social media, and online platforms for communications and news.

Alert and Warning technology has been transformed in the last ten years in both capability and complexity:

- The widespread adoption of mobile devices and supporting data networks has radically increased individual connectivity.
- The increased use of Geographic Information Systems (GIS) enables the rapid identification and analysis of specific geographic locations. Specialized GIS hazard assessment models provide rapid forecasts of potential effects.
- The development of competing commercial software systems has produced a new service line that can rapidly deliver multimodal messages to various personal devices and systems (text, cell phone, cable/internet, etc.).
- Wireless alert and warning systems now promise to enable alert activators to define target geographic areas more accurately.

Public expectations for local government alert and warning services have often escalated significantly beyond current industry practices:

- Time: community members may expect alert and warning messages to be delivered within minutes of a no-notice event (e.g., fire) and hours before a slowly developing event (e.g., flooding).
- Custom delivery: many community members expect that even if they are not enrolled in a local system, the government will locate them and deliver warning messages to the device/system at hand in a form/language that is understandable to the recipient.
- Detailed situational awareness: Given the specificity and timeliness of the alert and warning message, recipients assume that first responders fully understand the nature, scope, and severity of the incident, and this information will be immediately conveyed to the recipient.
- Specific instructions: The capacity for systems to deliver detailed information and graphic content leads recipients to expect instructions customized to their specific circumstance on what action to take, which evacuation routes are recommended, and where additional resources are available.

- Additional information: Community members expect to be able to corroborate the warning message with other sources and obtain additional details (e.g., a phone number to call or an immediately available website).

However, there are significant social and technical challenges to the effective use of alert and warning systems including:

- Economic disparity can limit communication. For example, seniors, migrant workers, immigrants, renters, and persons below the poverty line are likely to have given up landlines but not adopted more expensive cell phones capable of receiving wireless alerts. Those experiencing homelessness may be unreachable through any telecommunications system and may be actively avoiding contact with local authorities, making in-person contact difficult.

- Another key issue is the uneven availability of communications systems such as landline/cable internet and wireless broadband. While 91% of OA residents may have access to the internet, 9% do not – and these are often residents living in economically disadvantaged or geographically remote areas. Many warning systems may not be able to reach them. Recent disasters continue to show that people who experience marginalization because of inadequate infrastructure and limited access to basic services are also disproportionately impacted.

- Individuals with Access and Functional Needs (AFN) historically experience a disproportionate number of fatalities during a disaster, partly because alerts might not have reached them soon enough or in an appropriate form to allow for timely response or evacuation.

- Geography and terrain can be significant barriers. In many rural parts of the Op Area, wireless broadband/cell service is spotty or completely unavailable. Landline telephone and cable systems are prone to failure due to loss of power or line damage and availability may be limited. Mountain ranges and deep valleys also impact radio signals.

1.5 WARNING SYSTEM TECHNOLOGIES

The Op Area maintains and utilizes multiple alert and warning technology systems. Each provides different capabilities and limitations. See also Table 1 below.

Wireless Emergency Alert (WEA)

The WEA system can send a brief text message and a unique tone to all operating WEA-enabled mobile devices in a specified area. However, WEA operates with the following limitations:

- Not all wireless carriers will transmit the WEA signal, as participation in WEA is voluntary. Many low-cost carriers have opted out of participation, and customers may not be aware

of this. As WEA transmits only through smart devices, this disproportionately affects AFN populations, such as the elderly, who are less likely to use smartphones, and low-income individuals, who are more likely to use discounted carriers and devices.

- Not all wireless carriers distribute WEA messages the same way. Field testing and observation reveal that some carriers will not transmit messages unless their towers are within the designated alerting area.
- Wireless towers are vulnerable to disasters and power shutoffs and may not work properly.
- Device users may have disabled their alert capabilities, turned off audible notifications, or ignored incoming messages.
- Depending on the wireless carrier and/or the individual smart device, WEA may not be capable of sending messages in full length or Spanish.

The following table shows the urgency, severity, and certainty (those in **RED** will trigger a WEA Alert).

Table 1

Urgency	Severity	Certainty
Immediate Responsive action should be taken immediately	**Extreme** Extraordinary threat to life or property	**Observed** Determined to have occurred or to be ongoing
Expected Responsive action should be taken soon (within the next hour)	**Severe** Significant threat to life or property	**Likely** Likely (more than 50% chance)
Future Responsive action should be taken shortly	**Moderate** Possible threat to life or property	**Possible** Possible but unlikely (less than 50% chance)
Past Responsive action is no longer required	**Minor** Minimal to no known threat to life or property	**Unlikely** Not expected to occur
Unknown Urgency unknown	**Unknown** Severity unknown	**Unknown** Certainty unknown

Alert - Yolo

Alert Yolo is a geographically targetable alerting system powered by Everbridge that uses contact databases to send automated messages to phone, text, email, and TDD systems. Each jurisdiction within the Yolo County Operational Area can use the system for alerts and warnings. The County uses citizen opt-in, purchased, or donated contact databases augmented by user subscriptions. Limitations include:

- This data set may be used to forward community messages to residents *IF* they opt-in for those messages.
- Databases must be updated periodically. The best practice assumption is that 1% of the database will become 'stale' each month as the population moves.
- Although cell phones are capable, the bulk of contacts will be using landlines. Landlines are now very prone to disruptions during power outages due to electrically powered phones and voice-over-internet protocol (VoIP).
- The spread of telemarketers has caused many residents not to answer unless they recognize the number - meaning an inordinate number of the public will not pick up their phone, and emergency messages will go to voicemail.

National Oceanic and Atmospheric Administration (NOAA) Weather Radio (NWR)

Frequently used by the National Weather Service (NWS) and broadcast over most of the Op Area, an NWR alert can send an alarm and very limited information to radios turned to the NOAA radio frequency at 162.475; system limitations include:

- Requires having a working NW device set to the correct channel.
- Single point of failure with only one radio transmitter servicing most of the Op Area and currently without redundant capability.
- Many areas throughout the Op Area are situated in radio "shadows" and cannot receive alerts.
- Radio backup battery systems have a short duration in the event of a power failure.
- Op Area does not have independent alerting authority, and the NWS may deny activation requests.

Emergency Alert System (EAS)

EAS is a national public warning system that requires broadcasters, cable televisions, and wireless cable systems to provide the communications capability that state and local authorities may use to deliver important emergency information. System limitations include:

- Television and most radio devices are unable to alert persons who are not watching/listening to local media stations.
- Participating is voluntary; stations may opt not to re-transmit alert messages.
- Power disruption may interfere with transmission and reception.
- Significant portions of the population no longer use traditional radio or cable television in favor of social media and entertainment streaming services and may not receive the alert.

- Currently, EAS activation procedures integrate regional media markets, covering most of the Sacramento Valley area. EAS alerts can be expected to extend well beyond the intended targeted area.

Hi-Lo Sirens

Hi-Lo auditable sirens are mounted on select law enforcement and other emergency vehicles. Their unique tone (like a European ambulance) is designed to warn residents to evacuate. System limitations include:

- Little information can be conveyed other than there is some emergency. Residents may experience reluctance to act on a Hi-Lo siren and will seek additional information, possibly clogging the 9-1-1 system.
- The effective audible range may be limited to rugged terrain, heavy vegetation, densely built areas, or how much sound can be heard inside a building.
- Law enforcement and other emergency responders will be at a premium during a disaster. Each vehicle can only cover limited ground and accomplishing event moderate-level alerting will be challenging.

Nixle

Nixle is a commercial notification system that sends text messages and emails to those you register to receive messages. Because of its format and large base of subscribers, the system is a robust platform for quickly sending longer messages to large numbers of the public. While primarily a public information tool used by public safety, Nixle can reinforce and extend emergency warnings. Limitations include:

- Nixle is a passive system. It is not associated with a ringtone or alarm other than a user's standard text/email setting.
- Nixle text messaging relies on wireless broadband systems that may be degraded or inoperative during a disaster.

UC Davis

University of California, Davis faculty, staff, students, and other subscribers with timely information and instructions during emergencies or other urgent situations that may directly affect their well-being. The system can send simultaneous messages to the university community by e-mail, text, telephone, and cell phone.

Rave Mobile Safety® powers this UC Davis Mass Notification System. The following positions on the UC Davis campus can authorize use of the system:

- UC Davis Police personnel
- UC Davis Fire Chief
- UC Davis Emergency Manager

Table 2 below summarizes the various mass communications mediums that each alert system can utilize:

Communications Medium	Alert System						
	WEA	EAS	Alert-Yolo	NWR	UCD	Hi-Lo Sirens	Nixle
Cell Phone - Voice			☐		☐		
Cell Phone - Text	☐		☐		☐		☐
Broadcast Television		☐	☐				
Cable Television [1]		☐	☐				
Radio		☐	☐				
Landline/VoIP			☐				
Email			☐		☐		☐
NOAA Weather Radio				☐			
Mobile audible siren						☐	

[1] Local channels only

Table 3 below summarizes the various situations, distribution methods, and message circumstances:

Situation	Distribution Method(s)	Recommended IPAWS Code	Message Circumstances
Life Safety High Priority, High Risk Incident	IPAWS - EAS IPAWS - WEA Mass Notification System Social Media Media Release	 Civil Danger Warning (CDW)	• Active shooter • Dam breach • Large, escalating hazardous materials • Pipeline • Water supply contamination
Requiring Evacuation	IPAWS - EAS IPAWS - WEA Mass Notification System Social Media Media Release	 Evacuation Immediate (EVI)	• Flooding • Dam breach • Hazardous materials • Wildfire
Requiring People to **Stay Where They Are**	IPAWS - EAS IPAWS - WEA Mass Notification System Social Media Media Release	 Shelter-In-Place (SPW)	• Hazardous materials • Environmental health hazard (e.g. Air quality)

Priority Information	IPAWS - WEA Mass Notification System Social Media Media Release	 Civil Emergency Message (CEM)	• 911 service disruption • Emergency closure of major roadways • No travel advised • Location of confirmed NWS-issued warnings
Priority Public Safety Information to **Follow Up on Previous Alert**	IPAWS - WEA Mass Notification System Media Release	Public Safety Message	• Awareness/Impact – Following NWS- issued alert (e.g. areas to avoid, detours) • Awareness/Impact – Following CEM (e.g. downed power lines, road closure, shelter locations)
Prepare for Expected Event/ Post-Event General Information	Mass Notification System Social Media Media Release	Electronic Telephone Notification (ETN)	• Community preparedness message • Town hall meeting • Generalized public safety message
System Test	IPAWS – EAS IPAWS - WEA	Required Weekly Test (RWT)	• Conduct end-to-end test without public alert

SECTION 2.0: CONCEPTS OF OPERATIONS

Alert and Warning program activities extend across three phases of emergency management - preparedness, response, and recovery. In each phase, two critical roles drive efforts: 1) Alert and Warning Authority and 2) Alert Originator.

2.1 ALERT AND WARNING AUTHORITY

An Alert Authority is a public official granted the authority to alert the public of emergencies through Federal, State, and local laws. Alert and Warning Authority is vested in any Incident Commander, Emergency Operations Center (EOC) Director, or Public Safety Agency senior officer for alerting within their jurisdiction. Alerting that will impact jurisdictions outside their own must be coordinated with the respective Alerting Authority as described below.

For alerts and warnings that cross jurisdictional boundaries within the Op Area, Alerting Authority is limited to:

- The Sheriff. Authority may be delegated to the senior officer on duty;
- The County EOC Director; or
- The County Administrator as Director of Emergency Services. Authority may be delegated to the Deputy County Administrator.

No county or city agency has an alerting authority for alerts and warnings that extend beyond their Operational Area of Yolo County.

2.2 ALERT AND WARNING DISPATCHERS

Alerting Dispatchers have been designated and trained to draft and distribute alert and warning messages through the approved notification systems.

When there is an imminent threat to life, the dispatch agencies, Yolo Emergency Communication Agency (YECA) and Davis Police Department Dispatch, or in direct communication with an Incident Command Post, will send the alerts. If dispatch cannot send the alert, they will notify the OES Duty Officer.

2.3 PHASE I: PREPAREDNESS

Successful alerting requires continuous effort to identify and train key staff on procedures and technical systems. The alerting systems themselves and databases must be regularly maintained and updated. Alert and warning efforts will only succeed if residents have been engaged and educated about how the systems work, how to receive information, and what actions should be taken.

During the preparedness phase, those agencies and organizations that have a role in the Alert & Warning program will:

- Identify, train, and test Alert Authorities;

- Identify, train, and test Alert Dispatchers.
- Conduct periodic maintenance for alerting systems, including updating/validating contact databases and address information.
- Conduct periodic tests of alerting systems to ensure functionality as well as operator proficiency;
- Conduct continual public outreach to educate, encourage enrollment in alerting systems, and encourage personal readiness when receiving alerts

2.4 PHASE II: RESPONSE

When an incident warrants the activation of alert and warning systems, the Alert Dispatchers will prepare and disseminate alerts and warnings as needed. See also the sections below on *Activation Criteria* and *Message Content.*

As the County uses various alerting systems to access different communications mediums, Alert Dispatchers will coordinate their messaging as closely as possible to ensure a continuity of information. As the incident matures, messaging should be coordinated closely with the County EOC Public Information Officer or Joint Information Center.

Multiple and redundant alerting systems will be utilized because of the known limitations of all systems and the likelihood that incidents will disrupt communications. WEA, Alert-Yolo, EAS, and/or NOAA Weather Radio (NWR) will be the primary alerting systems for most incidents. Nixle, social media, and traditional media may reinforce warnings and provide more detailed information.

Considerations should be given to ensure alerts and warnings are delivered to residents who may need access to these communications technologies. Depending on the nature and scope of the event, additional warning efforts may need to be undertaken, including the use of hi-lo sirens, social media, or door-to-door in-person warnings.

2.5 PHASE III: RECOVERY

Upon suspension of active alerting, the Alert Originator will:

- Send “all clear” messages, if needed.
- Immediately preserve message data sent and conduct ‘hot wash’ reviews with stakeholder agencies to evaluate the alerting effort's effectiveness.
- An Alert and Warning Subcommittee may conduct a formal After-Action Review to determine effectiveness and identify areas for improvement in future alerting and may publish an after-action report.

2.6 ALERT AND WARNING ACTIVATION CRITERIA

Alerts may be issued whenever there is an imminent threat to life and property. The nature of the specific threat influences the types of systems used, the size of the area affected, and other

factors. This may be a judgment call by the Alerting Authority (Responsible Jurisdiction). If time permits, the Alert Authority should consult with the appropriate agencies and information resources to weigh factors that should be considered before launching an alert. Key criteria to be considered include:

- The potential impacts of the threat;
- Time of day;
- Required actions by the public;
- Time available for the public to react;
- Environmental considerations that may magnify the effects of the incident (e.g., fuel loads or wind speed for fire, road network for evacuation, etc.)

Notwithstanding the above criteria, the Alerting Authority will use its best judgment and err on caution. Issuing a false alarm with sufficient information to lead a reasonable person to conclude that a threat exists is acceptable.

2.7 ALERT AND WARNING MESSAGE CONTENT

Successful alert and warning messages have specific common components. However, circumstances may only allow for some elements to be included. The Alert Dispatchers may need more incident information or - in the case of WEA, NWR, and TDD - the systems limit the length of messages.

Specific message components include:

- Identify the Alert Authority (e.g. Yolo County Sheriff, Dispatch, Cities, County OES, etc.)
- Description of threat (e.g. wildfire, flood, tsunami, hazardous material)
- Guidance for protective action (evacuation warning or order/shelter-in-place)
- Location of hazard/shelter-in-place or evacuation areas
- Time available to act (IMMEDIATE/NOW or timeframe if available)
- Future information source

When possible, Alert Originators will use pre-scripted templates and modify them as necessary.

Table 4: Five key elements of a message and the information they should include:

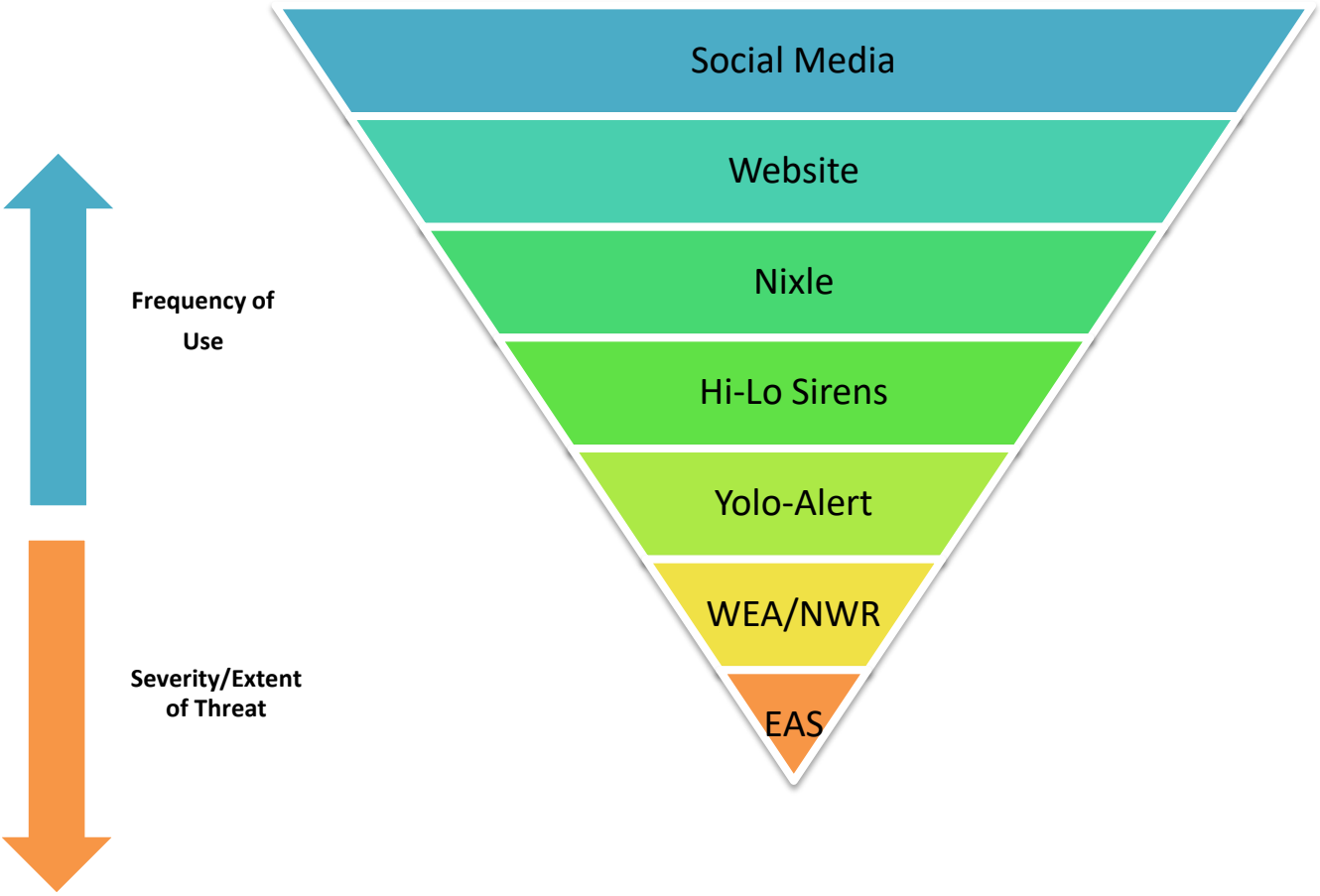
Message Element	Element Description
Source	Who is the message from? Your citizens want to know if the message is from an authoritative source. Shorten your organization's name when needed for messages with limited space (e.g. IPAWS 90-character legacy or SMS). If your mass notification system can automatically provide the source information through a customized caller ID and custom audio (for phone messages) and SMS and email messages, you should only need to add the Source for IPAWS and other certain types of messages.
Hazard	What is the danger? While you can create a generic message, a specific template for the most common hazards in your area (e.g. floods, wildfires, boil-water alert, etc.) will be helpful. Include relevant location and time parameters in either the hazard or guidance description when needed.
Guidance	What should the recipient do? Be brief and use standardized words for guidance, as the code you choose does not show up in the message display in WEA automatically. Use words and phrases such as "evacuate," "take shelter," "shelter in place," and “check for updates” (if you are pointing them to a web page, etc.; if time permits, you can add more situation-specific information).
Location	Where is the hazard? When using this, you'll fill in a description of the place, using language the recipient will understand. NOTE: If using a polygon, do not exceed 10 polygons or 100 points, as it will cause your message to be rejected at the IPAWS OPEN Server. Square polygons are acceptable; the simpler, the better.
Termination Time	When is the hazard expected to be over or no longer relevant? This only applies when the information is available and you want to publish it in the message. You might also plan on using "unknown" to fill in a template. Note: WEA requires a termination time and cannot go past 24 hours, as it will keep broadcasting your message to phones that continue to enter your polygon until the message termination time has arrived. Once a phone receives that message, it sees all other instances as duplicates unless you have posted an UPDATE.

2.8 Alert and Warning System – Prioritization of Use

While the use of warning systems is often thought of in terms of escalating incident severity (see Figure 1 below), the Yolo Op Area will prioritize the use of warning systems in the following order to maximize the timeliness and scope of warning efforts:

- Wireless Emergency Alerts (WEA): These are for use in short-notice incidents with a threat to life, health, or property. WEA messages should be augmented with Alert-Yolo and Nixle messages to provide additional coverage and detailed information.
- Alert-Yolo: Because of the additional time required to prepare an Alert-Yolo, it will ordinarily be issued following a WEA to provide additional coverage and detailed information. For incidents that provide a long lead time (e.g., floods, or power shutoffs), Alert-Yolo should be the primary means of alerting.
- NOAA Weather Radio (NWR): Alerts should be sent simultaneously as a WEA, Alert-Yolo and/or EAS message. The NWR should target challenging service areas, areas impacted by loss of power, and the deaf and hard-of-hearing community. Note: NWR messages may be vetoed for dissemination by the NWS.
- Emergency Alert System (EAS): EAS messages go out to most of the Sacramento Valley and cannot be limited to the Op Area. EAS should be limited to incidents that pose a threat to life, health, or property over a significant area.
- Hi-Lo Sirens: Many Op Area law enforcement and fire agencies have installed Hi- Lo sirens on their vehicles. These sirens produce a unique tone like that of ambulances in Europe. The unique tone is used only in case of evacuation. These sirens can be used to augment other warning systems or by themselves in areas where traditional communication systems are unreliable due to their remote nature, or subject to failure of electrical or communications systems.
- Nixle: primarily a public information tool for public safety agencies and local governments, Nixle can reinforce and extend emergency warnings.
- Website: Yolo County OES will post information on the “Current Emergencies and Incidents” tab of the emergency. Information will be updated as the event progresses. Resources will be listed to guide the community on what to do, and may call 211 for additional information.
- Social media (ex. Facebook, Twitter, and Nextdoor): These social media networks should be used aggressively and near-simultaneously, if possible, with WEA/Alert-Yolo/NWR. These networks are “passive” in that they don’t activate devices or use an alarm tone - they should be used only after the primary warning systems are activated. Additionally, messaging should be consistent as possible across the platforms.

Figure 1: Common Hierarchy of Use for Alert & Warning Systems – Based on Severity/Extent of the Threat



2.9 Alerting Operations and Coverage Issues

When preparing to send out alert messages, it is important to understand each alerting system's potential coverage area. The guidance below illustrates how to incorporate each system into a layered approach, starting with the system with the broadest reach and ending with those capable of being scaled down to a small, geographically targeted area.

In the tactic's column, the colors mean the following:

- Green = Fastest – opt-out audience, including visitors
- Yellow = More direct opt-in audience
- Red = Takes coordination
- Gray = Warning limitations.

Table 5

Tactic	Benefits	Barriers
WEA	- Targets a larger audience via cell phones. - Every mobile user with a WEA-capable device will receive an alert broadcast over WEA, unless they opt out. - Special needs communities tend to rely heavily on wireless devices. - Reaches tourists and visitors who are unlikely to have enrolled in a local service. - Avoids network congestion issues. - Grabs public attention, motivating receivers to seek additional information.	- Individuals can opt out, except for Presidential messages. - Cell coverage is irregular nationwide, especially in rural areas. - Definition of imminent threat is different nationwide. - Limited message length (90 – 360 characters). - Limit polygon to 100 point or FIPS/Code EAS.
EAS	- Reaches users listening to radio or watching TV. - Distinct noise grabs users' attention. - Verifies information from a trusted source.	- Users are trending away from cable TV and radio in favor of video streaming services. -Local; does not reach users on satellite TV. - Multiple alerts can lead to message fatigue. - Unable to target alerts with greater accuracy due to media markets.
Mass Notification System Everbridge **Including opt-In cellular (voice)**	- Ability to target at-risk users through landlines in specific geographic areas through the use of specific groups. - Provides voice alerts for urgent incidents. - Easy to provide clear instructions on how to respond. - Ability to target at-risk users through cell phones in specific areas.	- Fragile infrastructure during natural disasters, which can also be costly; e.g., flooding. - Users are trending away from landline telephones in favor of mobile devices. - Once the user hangs up the phone, there is no way to access the alert or information. - Individuals tend to be suspicious of automated phone calls. - Accessibility issues if language barriers are not addressed. - Unlisted numbers, cell phones and numbers on "no-call" lists are not included on call databases unless manually added.
Tactic	Benefits	Barriers

Email opt-in	- Reach users on their computers and smart phones. - Ability for alert originators to send longer messages. - Easy to provide multimedia links, URLs or additional resources, when appropriate. - Users are able to filter the type of information they want to receive, allowing for more personalized alerts. - If the email is from an official source, it verifies information and builds trust.	- Requires users to sign up and opt in. - Requires personnel resources to educate users on availability and get them to opt in. - User(s) may not receive the email in timely manner. - Potential to lose a user's attention if the message has too much information.
Text/SMS opt-in	- Short-form messages are easy to send quickly. - If a text cannot get through, it keeps trying. - Users can refer back to messages later. - Users are able to filter the type of information they want to receive, allowing for more personalized alerts (e.g., home address, work address, county). - Accessible for the hearing impaired and can use multiple language formats.	- Requires users to sign up and opt in. - Short messages are limited in effectiveness if they cannot grab a user's attention. - Space and character limitations may lead to confusion on actions to take. - A lack of sufficient information may result in a longer milling period (the time between receiving an alert and taking action). - Requires personnel resources to educate users on availability and get them to opt in. - Reaches users where they are, not where the warning is intended for.
Social media	- Usage is increasing nationwide, increasing potential reach. - Supports full alerts and warnings cycle, including preparedness and recovery. - Easy to push out information in real time. - Easy to provide multimedia links, URLs or additional resources when appropriate. - Can supplement traditional alerting tactics to provide more information, reducing milling periods. - Monitoring allows for more specific messaging, which can increase protective actions. - Easy to share information during non-emergencies to support public education on other alerting tools.	- User will only receive the alert if they are looking for information. - Misinformation is difficult to distinguish and combat. - Lack of credibility. - Depending on the platform, space for content can be limited or constricted by platform requirements. - Public expectation of a two-way dialogue may be unrealistic in times of imminent threat, resulting in issues. - Legal concerns. - Privacy concerns.
Tactic	**Benefits**	**Barriers**

National Oceanic and Atmospheric Administration (NOAA) Weather Radio All Hazards (NWR)	- NWR broadcasts official Weather Service warnings, watches, forecasts and other hazard information 24 hours a day, 7 days a week.	- NWR requires a special radio receiver or scanner capable of picking up the signal. - As of the publishing date of this best practice guide, no authorized Minnesota COGs can send an alert through the FEMA IPAWS OPEN system to the NWS system.
Traditional media (Press release, radio or tele- Vision broadcast, etc.)	- Easy to tailor content. - More detailed information. - More time to prep response. - Builds trust. - Emergency Management controls the information released and shared.	- Time consuming process, which sometimes results in information being out of date. - Information reaches the public slowly. - Public reach is limited. - Content tends to be no-nonsense, which feels less personal and engaging. - Media desire for breaking news can lead to errors or over- reach.
Website integration	- Can act as a home base for incident information. - Alert originators can update content. - Publicly accessible. - Allows for long-form, short-form and multimedia content. - Information comes from a verified source.	- Public is not automatically notified of updates. Users must seek out information. - Requires version control so users read the most up-to- date information. - Can be hard to find alert information on more complex websites, not easily accessible. - Requires coordination with IT personnel or a website provider.
Outdoor Warning Sirens	- Easily gets the attention of affected individuals in the area - Easy to educate communities on the meaning of a siren.	- Sirens may mean different things from community to community. - Limited ability to provide instructions for protective action. - Not effective with the deaf and hard-of-hearing.
Satellite radio and television	- Can reach the entire nation at once.	- Cannot be scaled down to a small area. - Only national alerts will be heard.
Route notification (e.g., knocking on doors)	- Information is directly from a trusted source. - Higher sense of urgency. - Reaches isolated communities.	- Time consuming and personnel intensive. - Reaches limited number of individuals. - Danger to the alert originator.

For all alerts, the following tactics are prescribed:

- Go Big. Except in circumstances requiring a very narrow and defined alerting area, alert areas should cover the entire potential area that may be affected and neighboring communities. Disasters may expand rapidly; however, even when they do not, neighboring

communities may suffer secondary or tertiary effects of a disaster, including supporting evacuation traffic, shelters, or limited transit into the affected area. In Yolo County, the accepted rule of thumb is to make the alert area larger than the area directly impacted or threatened.

- In Spanish. Simultaneously, provide a fully interpreted Spanish version of the message and any other predominant language in the jurisdiction or impacted area.
- Verify transmission and receipt of alerts. Successful use of many alert and warning platforms may not result in successful public alerting. Suppose the computer systems or transmission systems fail. In that case, the Alert Originator may falsely believe they have succeeded in issuing an alert when, in fact, the alert has failed to reach the public.
    - Where possible, the Alert Originator should contact known individuals in the alert area to confirm the alert has successfully launched. This could be the Incident Commander or other responders.
    - Review the system launch records to ensure the FEMA message exchange has successfully received and relayed the message.
    - Do not assume automatic successful dissemination of alerts.
- Speed is essential in no-notice or fast-moving incidents. While not optimal, An incomplete or not fully verified alert is better than a completely accurate alert sent after it is no longer relevant.
- Include Access and Functional Need (AFN) capabilities. Use every available method of alerting to ensure that persons with disabilities or other AFNs receive alerts with sufficient time to respond. Ensure that the needs of persons living below the poverty line and/or who may be homeless are considered in the type of alert utilized. As technologies become available, proactively incorporate them to aid in alerting and warning. Specific systems to be used include:
    - Use of NWR radios with bed shaker/strobe light attachments for individuals who are deaf or hard of hearing.
    - Use of case workers and/or automated polling systems to query persons with disabilities/medically fragile to determine needs for assistance as part of the In-Home Support Services (IHSS) Disaster Response Plan.
    - Evaluate the need and potential to utilize Hi-Lo vehicle sirens and internal stakeholder organizations to warn homeless individuals.
- Where possible, use the voice message option in Alert-Yolo. People respond better to voice messages than text messages during an emergency. However, do not use Text-to-Speech systems.
- Be aware that all systems may fail or not fully perform. Do not rely on any single system. Alert Originators should not hesitate to use all available systems if the situation warrants. For example, in areas with significant numbers of visitors, such as the coast, the use of the WEA system may be warranted even if the target area is relatively small.

- Irrelevant warnings can fatigue the public rapidly and lead to recipients discounting further warning messages. Every effort should be made to limit warning delivery to only those at immediate risk.
- People rarely act on a single warning message alone. To be effective, warnings should be delivered in various formats via various media, both to increase the reliability of warning delivery and to provide a sense of corroboration that will encourage recipients to take protective actions.

SECTION 3.0: ROLES AND RESPONSIBILITIES

Specific roles and responsibilities for alert & warning are assigned to stakeholder organizations as follows:

3.1 COUNTY AGENCIES

Yolo County Sheriff

- Primary Alert Authority for evacuations.
- Back-up Alert Dispatcher for Alert-Yolo, WEA, and EAS.
- System activator for Sheriff's Office Nixle messages.

Office of Emergency Services

- Manage County Alert & Warning Program and maintain warning systems, including Alert-Yolo, WEA, EAS, and NWR.
- Back-up Alert Dispatcher for Alert-Yolo, WEA, EAS, and NWR messages.
- Primary responsibility to train and test Alert Authorities and Originators in Alert-Yolo, WEA, EAS, and NWR.
- Coordinate Alert and Warning preparedness and response efforts throughout the Op Area.
- Responsible for sending Alerts & warning opt-in messages to unincorporated Yolo County.
- Conduct After Action analysis of emergency alerts, as needed.
- Proponent for research and development of alert and warning systems.
- Primary liaison to state and federal agencies for alert and warning coordination.

Yolo County Op Area Emergency Operations Center (EOC)

- Upon activation, act as the primary Alert Authority for the Op Area.
- With the PIO, or in conjunction with the JIC, assist in coordinating Alerts across the Op Area.

Yolo County Health and Human Services Agency

- Maintain In-Home Supportive Services (IHSS) Program Client List and coordinate secured access to data by alert and warning originators as needed.
- Medical Health alerting and support as needed.

- Upon activating the IHSS Disaster Response Plan, provide supplementary Alert and Warning to at-risk clients.

Yolo County Administrator's Office – Public Information Officer

- Publish alerts on County of Yolo social media platforms (Facebook, Twitter and Nextdoor).
- Maintain the pulse of the community through rumor monitoring and advise the Incident Commander on warning effectiveness, feedback, and misinformation
- Coordinate with GIS regarding the representation of warning products on public-facing maps.
- Through the regional Joint Information System (JIS), share alert messaging with partners for release on their jurisdiction's platforms.

3.2 OTHER AGENCIES

Cities

- Maintain primacy of authority and responsibility for alert and warning functions.
- Appoint and train Alert Authorities and Originators for their respective jurisdictions.
- If required, request Alert and Warning aid through the OES and/or Op Area EOC.
- Alerts that require cross-jurisdictional coordination will be originated by County agencies.
- Where applicable, coordinate Alert and Warning with the OES and/or Op Area EOC for continuity of message.

Fire Departments/Districts

- If serving as Incident Commander, determine if an alert or warning message is required to protect public safety.
- Provide situational awareness to Dispatch to possibly send out an alert.
- Back-up Alert Dispatcher for WEA, EAS, and Alert-Yolo.

Police Departments

- Primary Alert Authority for evacuations.
- If serving as Incident Commander, determine if an alert or warning message is required to protect public safety.
- Provide situational awareness to Dispatch to possibly send an alert.

- Back-up Alert Dispatcher for WEA, EAS, and Alert-Yolo.
-

Dispatch Centers

- Serve as a conduit of information between Incident Commanders and Alert Originators.
- Primary Alert Dispatcher for WEA, EAS, and Alert-Yolo.

National Weather Service (NWS)

- Primary Alert Originators for EAS and NWR systems for weather-related emergency messaging.
- Alert facilitators for NWR systems for non-weather emergency messages (NWEM).

SECTION 4.0: INFORMATION COLLECTIONS AND DISSEMINATION

Collecting and sharing timely and accurate situational awareness information is the fundamental first step in providing alerts and warnings. Various agencies have a role in developing this information and either directly initiate alerts or ensure the information is shared with Alert Originators.

Table 6: Incident Hazard Information Coordination

Type of Incident	Message Requestor	Message Sender	Backup Message Sender
Fire or Law Enforcement (Wildfire, Mudslide, Gas Leak)	Law and Fire for the OA	PSAP	OES Duty Officer, LE, FD
Law Enforcement (Active Shooter, Civil Unrest, Terrorism)	Law and Fire for the OA	PSAP	OES Duty Officer, LE, FD
Public Health or OES (Pandemic, Adverse Weather)	MHOAC, Health Officer, OES Duty Officer, Law, and Fire for the OA	PSAP or OES Duty Officer	MHOAC PSAP

SECTION 5.0: COMMUNICATION SYSTEM HAZARD ANALYSIS

Communication systems hazards are those technical, environmental, sociological, systemic, and situational factors that may individually or collectively prevent timely warnings. Understanding these hazards is imperative to conducting effective alerts and warnings.

In general, the following factors will slow or prevent effective alerts and warning:

- Insufficient or unclear processes
- Compromised telecommunication systems
- Communication systems limitations
- Insufficient situational awareness
- Insufficient alert originator and alert authority training
- Access and Functional Needs challenges
- Insufficient translation resources
- Audience non-reception (phone spam blockers, turning off the phone, etc.)

Notably in each wildfire incident in 2017, 2019, and 2020, many wireless broadband systems and landline cable systems were compromised or did not function in threatened areas. These systems failed due to loss of power from electrical systems or were subject to Public Safety Power Shutoffs (PSPS) or were physically damaged by fire. In all cases, the ability of local governments to use these systems to send emergency warnings via WEA, Alert-Yolo, and EAS were similarly compromised. The resilience of wireless broadband systems is an increasingly fundamental factor in determining the success of warning efforts.

The Yolo County Hazard Mitigation Plan provides an overview of the key natural hazards that threaten the Op Area. These hazards pose significant challenges for the built environment, including communications systems and power. Major events such as earthquakes, wildfires, or flooding may disrupt, overload, or destroy the communications infrastructure upon which many alert and warning systems depend.

The above factors and numerous sub-factors create a difficult – if not impossible - environment within which any single system is able to effectively communicate with the entire public. Thus, it is the position of the Op Area to utilize every available and appropriate method for alerting when the incident requires.

SECTION 6.0: SOCIAL MEDIA

Social media is a critical piece of the Operational Area's alert and warning strategy due to its extensive use by every jurisdiction within the OP area. Several jurisdictions maintain multiple accounts on various platforms and endeavor to ensure messages are consistent across all accounts. Posting guidelines for each jurisdiction is the responsibility of each jurisdiction. A summary of social media platforms utilized by each jurisdiction is provided below.

Jurisdiction/Agency	Google +	Facebook	Twitter	Instagram	YouTube	Nixle	Nextdoor	Periscope
City of Davis		☐	☐	☐			☐	
City of West Sacramento		☐	☐		☐	☐	☐	☐
City of Winters		☐	☐	☐	☐	☐	☐	
City of Woodland		☐	☐				☐	
Yolo County		☐				☐		
Yolo County Housing		☐	☐		☐			
Yocha Dehe Wintun Nation		☐	☐	☐	☐			
University of California, Davis	☐	☐	☐	☐	☐			
Sacramento-Yolo Mosquito Vector Control District		☐	☐					
Yolo-Solano Air Quality Management District		☐	☐					
Yolo County Flood Control & Water Conservation District					☐			

While social media can be a very effective way to supply alert and warning information, special consideration must be given to the posted messages. Factors such as character constraints, type of message to be posted, and typical posting methods on each platform should be considered when identifying notification strategies and designing messages for an incident. For more detailed information, postings to social media should link back to a jurisdictional website.

SECTION 7.0: WEBSITES & OTHER ONLINE RESOURCES

A critical way to distribute information is via local websites. Whether using a traditional alert and warning system or social media, additional information will need to be provided. Prior to releasing an emergency notification, information will need to be added to a local website (or multiple sites) so that links can be provided in the alert and warning messages (preferably via tiny URL).

It is important to compile, edit, and make the web-based information "live" as quickly as possible, and to keep the information current. At the beginning of an event, information on a website may be launched in simple paragraph format while additional resources (infographics, maps, etc.) are under development. Edits to the page initially launched throughout the duration of the event is recommended to maintain a consistent URL.

2-1-1 Yolo

2-1-1 Yolo is a resource to provide information to the public via an online database and a call center. The database can be accessed via: www.211yolo.org.

The call center can be accessed by dialing:

- 2-1-1
- (530) 392-4182
- (855) 866-1783- Toll Free

Operational Area partners will work through local Public Information Officers to draft talking points that will be provided to 2-1-1 call center operators. Information provided to the call center often contains more in-depth information regarding any message sent previously through other systems referenced in this Annex.

SECTION 8.0: ADDITIONAL ALERT & WARNING METHODS

Multiple other systems are maintained throughout the Yolo Operational Area. These systems may be maintained by departments within City/County government, special districts, or private partner agencies.

California Health Alert Network (CAHAN)

The California Health Alert Network is a Mass Notification System provided by the California Department of Public Health and powered by Everbridge®. Within Yolo County, the Emergency Preparedness Division is responsible for maintaining and administering this system. The primary purpose of CAHAN is to distribute health-related alerts/notifications to Healthcare Groups.

Women Infants & Children (WIC) Autodialer

The WIC Autodialer is a system that can issue phone calls to Yolo County WIC participants. The system is normally used to relay appointment information but can distribute any notification that WIC deems in the best interest of its participants.

8.1 PHYSICAL NOTIFICATION SYSTEMS

A physical notification system would be used to visually post a message, physically deliver a message, and/or audibly sound a message.

Posting Locations

During times when Mass Notifications are issued, local fire departments will be the primary posting location(s) within a jurisdiction to provide information to residents who have no additional way of accessing other resources mentioned in this Annex.

Door-to-Door

In fast-moving emergencies/disasters (such as fires), local public safety professionals may issue notifications by going door-to-door. Public safety officials will be identified to members of the public by uniforms issued by their agency.

Sirens & Loudspeakers

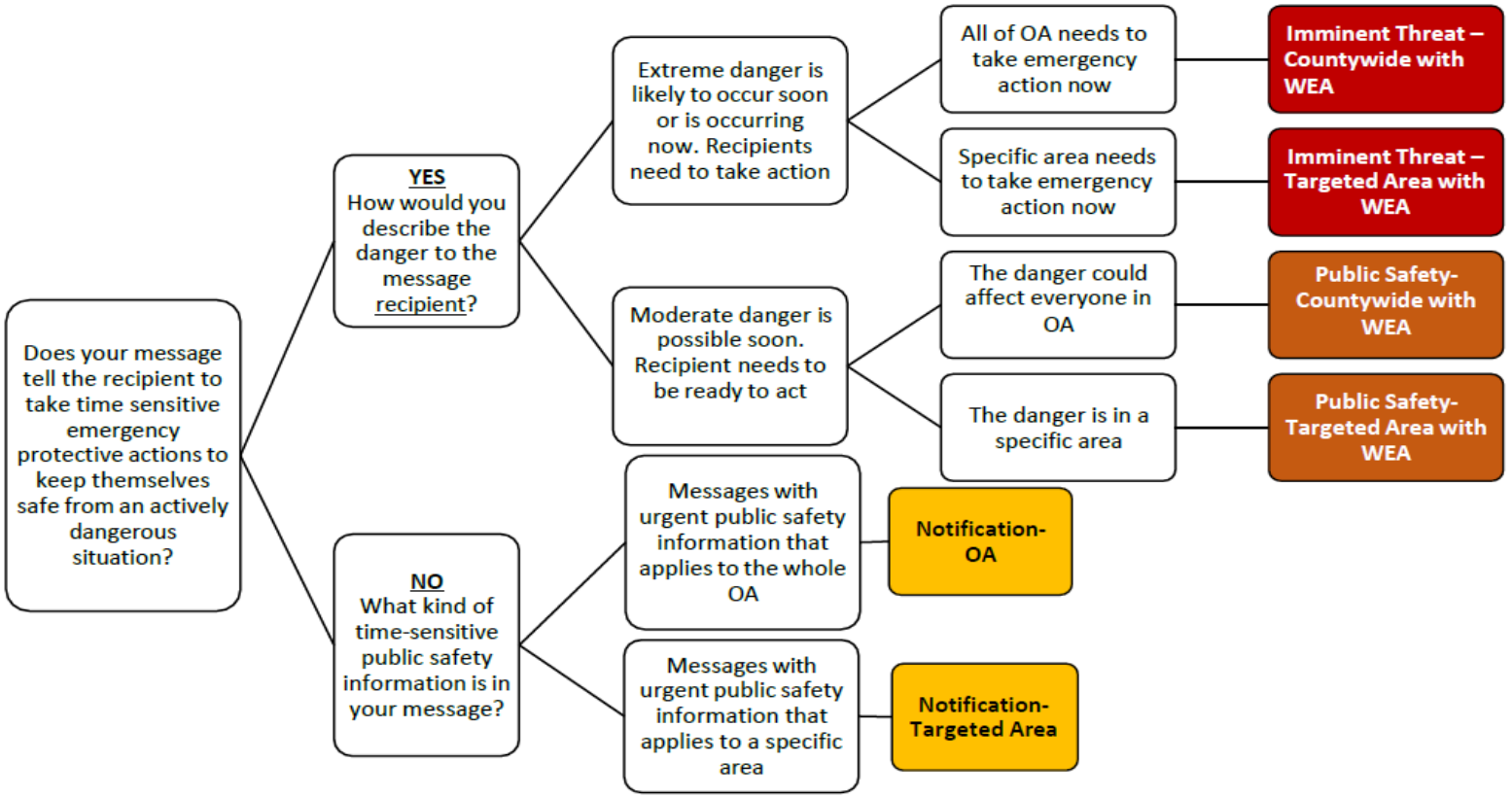
Public safety officials may communicate with the public through audible sirens and loudspeakers. In some cases, vehicles with loudspeakers may be used to relay information to neighborhoods. Another common form of notification can be a siren with an audible tone. At this time, alert and warning sirens do not exist in Yolo County. If sirens are added throughout the county, their individual tones and meanings will be added to this Annex.

Transit System – Yolo bus

If time allows, information can be printed and posted on Yolo bus buses. Signage to be displayed inside buses can be printed on heavy cardstock, while messages for the outside of the bus must be weatherproofed prior to delivery.

APPENDIX A: ALERT SYSTEM (EAS OR WEA) CHECKLIST

In general, the following conditions should be considered in determining whether the issuance of an EAS or a WEA is warranted:



APPENDIX B: EMERGENCY PUBLIC INFORMATION AND WARNING INCIDENT TEMPLATE SELECTOR

Category	Description	Target Contact Methods
Imminent Threat- Whole OA	Emergency instructions on protective actions for recipients citywide to follow due to an extreme danger actively occurring or likely to occur immediately. The Incident Commander (IC) should approve the Message in coordination with fire and law. *Example:* Post-Earthquake	**WEA** • Imminent Threat Category, Simplified full OA WEA Shape **Yolo-Alert** • Phone Call, Text, Email, TTY/TDD, App, social media, Website
Imminent Threat- Targeted Area	Emergency instructions on protective actions for recipients in a targeted area to follow due to an extreme danger actively occurring or likely to occur immediately. The fire and law should approve the Message, *Example:* Wildfire Evacuation	**WEA** • Imminent Threat Category, Specific Targeted Area **Yolo-Alert** • Phone Call, Text, Email, TTY/TDD, App, social media, Website
Public Safety- Whole OA	Emergency instructions on protective actions for the recipients citywide to take due to a moderate danger likely or possible shortly. When possible,	**WEA** • Public Safety Category- Simplified whole OA WEA shape

	the message should be approved by the IC, Fire or Law Chief, or OES Duty Officer. *Example:* Curfew	**Yolo-Alert** • Text, Email, TTY/TDD, App, social media, Website • *Optional:* Phone Call: Based on time of day/urgent
Public Safety-Targeted Area	Emergency instructions on protective actions for recipients in a targeted area to follow due to a moderate danger, likely or possible shortly. When possible, the message should be approved by the IC or Fire/Law Chief and/or OES Duty Officer *Example:* Gas Leak Shelter in Place	**WEA** • Public Safety Category, Targeted Area **Yolo-Alert** • Text, Email, TTY/TDD, App, social media, Website • *Optional:* Phone Call: Based on time of day/urgency
Notification-Whole OA	Urgent messages that advise on timely public safety information OA. When possible, the message should be approved by the IC, Law/Fire Chief, or OES Duty Chief. *Example:* Mask ordinance, dangerous weather	**Yolo-Alert** • Text, Email, TTY/TDD, App, social media, Website
Notification-Targeted Area	Urgent messages that advise on timely safety information for a specific area. When possible, the message should be approved by the IC, Law/Fire Chief, or OES Duty Officer. *Example:* Avoid the area due to broken water main	**Yolo-Alert** • Text, Email, TTY/TDD, App, social media, Website •

APPENDIX C: COMMUNITY OPT-IN SELF-IDENTIFICATION OF ASSESS AND FUNCTIONAL NEEDS

In our communities, there will be some individuals who would have challenges receiving or responding to emergency directives or accessing services following an emergency. According to the U.S. Department of Health and Human Services, “At-risk individuals have needs in one or more of the following functional areas: communication, medical care, maintaining independence, supervision, and transportation. At-risk groups may include children, senior citizens, and pregnant women as well as people who have disabilities, live in institutionalized settings, are from diverse cultures, have limited English proficiency or are non-English speaking, are transportation disadvantaged, have chronic medical disorders, or have a pharmacological dependency.”

Considerations for access or functional needs populations can influence how we communicate with those residents during an emergency, what steps residents and responders should take when an incident or event happens, and what factors comprise an emergency in the first place. In addition to mapping out what response access and functional needs populations will need to take during an emergency, including any special considerations for evacuation, temporary shelter, or sheltering-in-place, you must carefully consider how to identify and communicate with those individuals when an emergency occurs.

Opt-in Registration Outreach

Community self-registration is critical to reaching as many residents as possible with critical information. Consider access needs related to registration: factors such as visual impairment, hearing impairment, or lack of internet access or proficiency can hamper standard online opt-in portals. To ensure that residents have access to self-register, there are multiple channels, such as:

- By phone or by mail.
- Registration forms in utility bills or other outgoing mailings
- Register at public meetings and community events
- Register at community facilities, including hospitals, assisted living facilities, town offices, and libraries.

Gather Data on Access and Functional Needs during Opt-in Registration

In addition to ensuring that all community members can register for critical communication, self-identifying is offered both online and manual signup forms. These questions are not required to

be answered to register, and all answers are confidential. The self-identifying questions during registration will include:

- Specific access or functional needs
- Medical equipment, service animal, or medication considerations
- Housing situation and concerns, including the ability to evacuate or the feasibility of shelter-in-place
- Available help, including professional service providers or co-located family
- Specific needs in the event of an emergency

Drafting the Right Messages and Templates

While registering citizens and capturing information about our diverse populations is important, the real value lies in the ability to use this information to send targeted messages to those individuals during an emergency. When creating message templates for potential emergency scenarios, consider what specific messages would be sent to access and functional needs populations. If functional or access needs mean that these individuals should follow separate procedures from other populations – for example, sheltering in place versus attempting to evacuate – they should receive a distinct message indicating those directives. This level of targeted messaging helps eliminate confusion during emergencies when message recipient comprehension is often lowered by stress. In addition to sending out automated messages to multiple audiences during an emergency, your critical communication system can also collect additional information from recipients about their emergency needs. Consider the additional services that at-risk groups might need during an emergency. An example needs of at-risk groups:

- Dialysis Oxygen Senior Citizens Residents needing dialysis will need access to equipment and may require assistance with transportation to medical facilities.
- Residents who need oxygen support have various needs for power to run their filters and other equipment.
- Senior citizens may have multiple functional needs, including limited mobility and access to medications and medical equipment. They could need transportation and other services.

Polling messages can help identify specific needs and allow the county and jurisdictions to let response teams know which services and professionals are needed to move and assist residents. Polling messages can also identify functional needs if that information is not captured during registration. A good example of a polling message that can be sent during an evacuation scenario is as follows:

- “We are preparing to evacuate your area. Our records indicate you are wheelchair or bedbound. Please Press 1, if you can evacuate on your own. Please Press 2 if you will need assistance evacuating.”

In this example, during registration and opt-in, this resident indicated they were either wheelchair or bedbound. Because you, through your critical communication system, are aware of this specific qualification, you can send these individuals a different message than the general population. This type of targeted messaging also shows the value of creating templates for potential events in advance. By pre-crafting messages, you can automate the delivery of messages by contact group, allowing you to deliver multiple, specific messages during an emergency quickly.

APPENDIX D: DISSEMINATION CHANNELS

Dissemination Channels	Speed[1]	Coverage[2]	Concentration[3]	Message Comprehensiveness[4]
Door-to-Door alerting	Slow	Limited	Concentrated	High
Loud speakers and public address (PA) systems	Fast	Limited	Concentrated	Medium
Wireless Emergency Alerts (WEA)	Very Fast	Widespread	Dispersed	Very Low
Wireless communications (SMS)	Very Fast	Widespread	Dispersed	Very Low
Radio	Moderately Fast	Widespread	Dispersed	High to Low
Television broadcast	Moderately Fast	Widespread	Dispersed	Very High to Medium
Television message scrolls	Moderately Fast	Widespread	Dispersed	Low
Newspaper	Very Slow	Widespread	Dispersed	Very High
Dedicated tone alert radios	Very Fast	Limited	Concentrated	High
Tone alert and NOAA Weather Radio	Fast	Widespread	Dispersed	High
Text Telephone (TDD/TTY)	Fast	Widespread	Dispersed	Low
Reverse telephone distribution systems	Fast	Limited	Dispersed	High
Audio sirens and alarms	Fast	Limited	Concentrated	Very Low
Broadcast sirens	Fast	Limited	Concentrated	Medium
Message boards	Fast	Limited	Concentrated	Low
Aircraft	Slow	Limited	Concentrated	Low
Visual alerting	Fast	Limited	Concentrated	Low

[1] The rapidness of the system to reach its targeted audience ranges from Very Fast (less than 10 minutes) to Slow (greater than 60 minutes).
[2] Coverage is the size of the area that can be reached by the channel (Widespread – a large of Limited – a small area).
[3] Concentration is the degree to which the people that the channel reaches are co-located or dispersed (Concentrated – the message is delivered to targeted locations only or Dispersed – the message has the potential to reach everyone).
[4] Comprehensiveness, or the ability to convey the content needed for effective response classes.

Internet protocol (IP) based technology	Fast	Widespread	Dispersed	Very High to Medium
Social media	Fast	Widespread	Dispersed	Low

APPENDIX E: PRE-SCRIPTED MESSAGES

Below are sample messages alerting agencies can use as a guide to draft a specific message relevant to a local emergency. These samples are not exhaustive. Final messages should always be tailored to the specific needs of the unique event precipitating their need.

Evacuation

Samples Long Messages

This is [Agency] with an evacuation order for [location]. Take the following protective actions and leave immediately; 1. Gather all family members and all pets. 2. Take only essential items, such as medications. 3. Turn off all appliances and lights in your home and lock your doors. The evacuation route is: [Evacuation Route]. An Evacuation Center is open at [Name and Location of Evacuation Center]. For more information, please tune to local radio and television stations, visit [url], or call [###-###-####].

[Agency] is issuing a mandatory evacuation order for [location]. The National Weather Service has issued a flood warning for [location]. All residents in the impacted area should evacuate immediately. An Evacuation Center is open at [location]. For more information, go to [insert resource]. Please listen to [radio station] for updated details. Short Message Flood threat-Evacuation Order for [location]-Leave now-Details on [Agency] website.

Short Message

Flood threat-Evacuation Order for [location]-Leave now-Details on [Agency] website

Shelter-in-Place

Long Messages

This is [Agency] reporting a shelter in-place for residents in [location] due to a hazardous materials release. Take self-protective actions immediately: 1. Go inside immediately and stay inside your house or building 2. Bring pets indoors only if you can do so quickly. 3. Close all windows and doors 4. Turn off air conditioners and heating system blowers 5. Close fireplace dampers 6. Gather radio, flashlight, food, water and medicines 7. Call 911 only if you have a true emergency. You will be advised when this dangerous condition has passed and it is safe to go outside and resume normal activities. For more information, please tune to local radio and television stations, visit [url], or call [###-###-####].

The [Agency] requests everyone within a ½ mile radius of [location] to get inside and remain inside due to a hazardous materials release. Stay indoors, close your windows, turn off your air conditioner, and bring your pets indoors. More information to follow. [link]

Short Message

Hazardous Release. All within ½ mi of [location]. Get Inside. Stay Inside. Stay Tuned.

Weather Awareness

Long Messages

This is [Agency] reporting mandatory evacuation order for [location] due to potential flooding. Take the following protective actions and leave immediately: 1. Gather all family members or other individuals and all pets 2. Gather only essential items, such as medications. 3. Turn off all appliances and lights in your home and Lock your home. The evacuation route is: [Evacuation Route]. An Evacuation Center is open at [Name and Location of Evacuation Center]. For more information, please tune to local radio and television stations, visit [url], or call [###-###-####].

The National Weather Service is predicting flooding in [location] within the next 24 hours. Police are advising residents who live in this area to be prepared for an evacuation at any time. Updates to follow.

Short Message

Flood Warning for [location] Avoid area. Turn Around-Don't Drown. Stay tuned for updates.

Active Shooter

Long Message

This is [Law Enforcement Agency] reporting an active shooter near [location]. Avoid the area. If you are near [location], get inside, stay inside, and take the following protective measures: 1. Go inside immediately and stay inside your residence 2. Bring pets indoors only if you can do so quickly 3. Close and lock all windows and doors 4. Call 911 immediately if you have a true emergency or hear or see any suspicious activity in or near your location. You will be advised when your safety is no longer at risk. For more information, please tune to local radio and television stations, visit [url], or call [###-###-####].

Update: As of 11 a.m., Police advised the public to avoid the area of [insert location]. Officers are responding to an active shooter. Those located in the area should seek shelter and mute phones. If engaged with the shooter, RUN, HIDE, FIGHT. Please go to [link] for additional information and standby for further instruction.

Short Message

Active shooter near [location]. Avoid Area or Run, Hide, Fight. Stay tuned in for update.

APPENDIX F: VERSION HISTORY

(Note: File each revision transmittal letter behind this record page.)

Version Number	Implemented By	Revision Date	Approved By	Approval Date	Description of Change
0.1	Yolo OES	11/25/2015			Initial Draft
2.0	Yolo OES	6/1/2023			Draft