



# Santa Barbara County Emergency Alert and Warning Systems

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# Topics

- Overview of Alerting
- Santa Barbara County Alerting Tools
- Bridge Fire Alerts
- Challenges & Paths Forward



# Alert and Warning Objectives

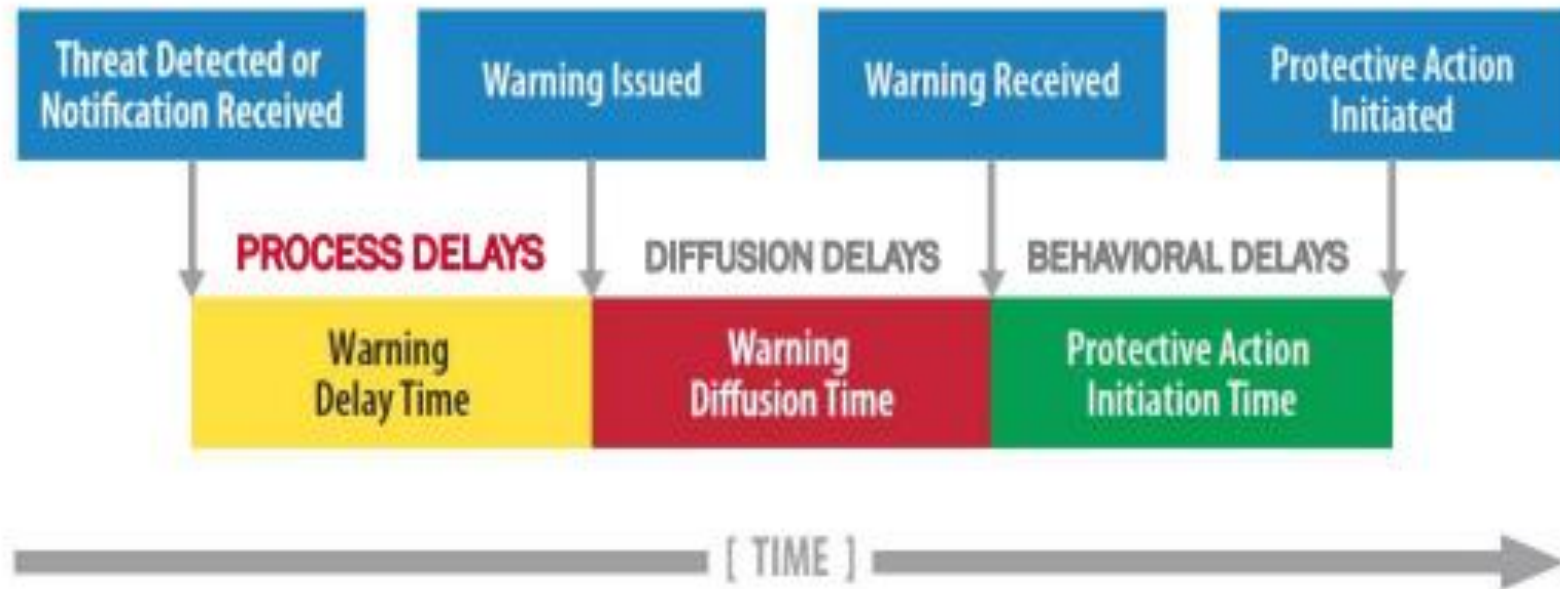
**The right information, to the right people, at the right time.**

- To protect lives and property
- Time is of the essence
- Communicate protective actions
  - e.g., evacuation, sheltering in place, boil water
- Use multiple communication pathways



# Warning and Protective Action Timeline

FIGURE 1 – WARNING AND PROTECTIVE ACTION INITIATION TIMELINE



# Guidelines and Regulations

- *Santa Barbara County Public Alert & Warning Standard Operating Guidelines (SOG)*
- *County of Santa Barbara Public Alert & Warning Policy (DRAFT)*
- California Statewide Alerting & Warning Guidelines (Cal OES, March 2019)
  - Minimum expectations for designated alerting authorities
- Various state and federal regulations
  - Code of Federal Regulations, Title 47, Section 10.420 (WEA)



# Who Alerts & When?

- Authority

- Public Safety Agency determines Protective Action is prudent

- Who:

- New Imminent Threat:

- Sheriff's Dispatch sends notifications
- Until the OEM Duty Officer is activated

- Pre-Notification Event: OEM Duty Officer

- Imminent Natural Event: NWS/NOAA, USGS (flash flood, tornado, tsunami, earthquake, etc.)

- Incident of National Significance: Office of the President



# Priority of Notifications

## 1. Immediate Protective Action

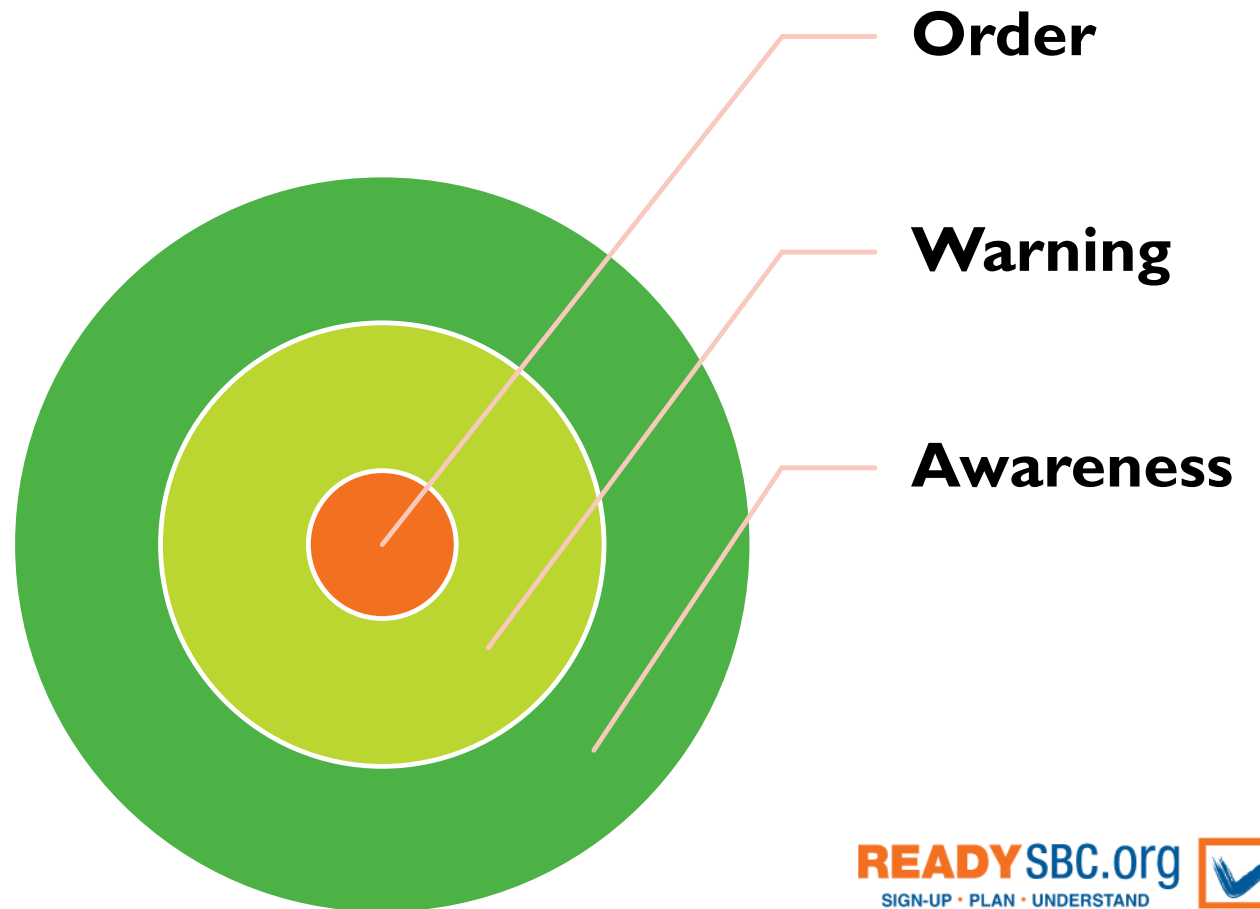
- Evacuation ORDER
- Shelter in Place

## 2. Readiness for Protective Action

- Evacuation WARNING

## 3. Awareness

- Traffic impacts, smelling smoke, etc.
- Don't call 9-1-1 for info



# Elements of an Alert

1. Source	Identify who—agency/authority—the alert or warning is coming from. This should be a source that is familiar to and trusted by the community.
2. Hazard	Describe the threat and its impacts
3. Location	Articulate the impact boundaries in common language, i.e. use street names, landmarks, neighborhood name, etc...
4. Protective Action	Say what protective action to take, the time to do it, how to accomplish it and how doing it reduces the impact.
5. Time	Expected duration, if known, or “until further notice”

**Source:** State of California Alert & Warning Guidelines;  
Code of Federal Regulations, Title 47, Section 10.420 (WEA)





# Alerting & Information Tools

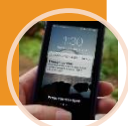
- Field first responder
- Door knocks
- Evacuation sirens
- Public loud speaker announcements

Field Notification



- No registration required (no contact database)
- Based on geographic location of cell towers
- FEMA program

Wireless Emergency Alerts (WEA)



- Phone call, text, email, and TTY/TDD
- REGISTRATION REQUIRED
- **MOST comprehensive**

ReadySBC Alerts



- Via TV and Radio
- Federal FCC program
- TV and Radio Stations are NOT required to share messaging
- NOAA/NWS Radio RECOMENDED

Emergency Alert System



- Zip code based; Text to register
- Not all notifications are sent via Nixle
- Message length is extremely limited

Nixle



- Follow & monitor official social media platforms
- @countyofsb
- @SBCCountyOEM
- [www.ReadySBC.org](http://www.ReadySBC.org)
- [www.CountyofSB.org](http://www.CountyofSB.org)

Social Media and ReadySBC.org



- 24-7 Staffed hotline
- Provide preparedness resources prior to and information during an emergency

211



- TV, Radio, Online, and Print

Traditional Media



- Partner Radio stations
- County AM Radio Stations (TBA)

Radio Ready



- Only operational during a large event
- Provides vital information to the community during an actual emergency

County Call Center



# EX: Prescribed Messages

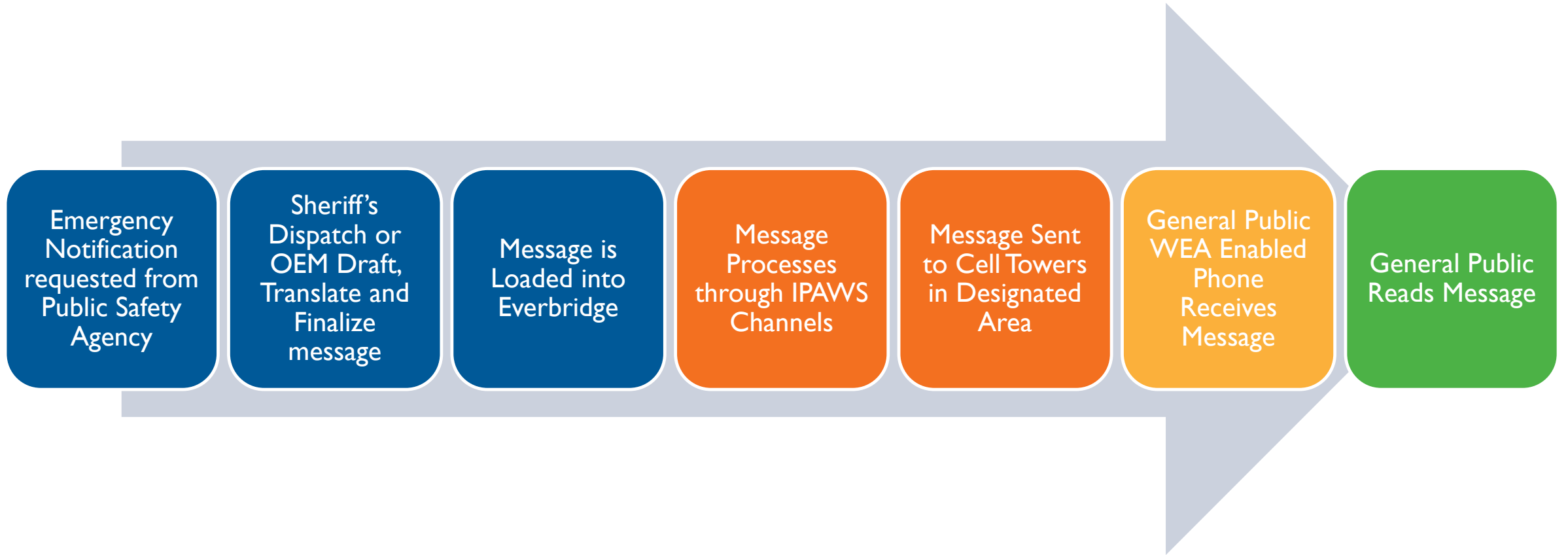
Hazard or Threat	ReadySBC Alerts and Nixle Email/Facebook/ReadySBC.org: No character limit but best practice is to keep these brief.	Text Message/Twitter/ WEA 360 characters: As appropriate, limit bilingual text messages to 360 characters.	Nixle Text Message 138 characters	English WEA 90 characters	Spanish WEA 90 characters
Evacuation Order	<p>An <b>EVACUATION ORDER</b> has been issued due to a <b>[INSERT HAZARD/THREAT HERE]</b> for the following area(s): north of <b>[INSERT STREET HERE]</b>, south of <b>[INSERT STREET HERE]</b>, east of <b>[INSERT STREET HERE]</b>, and west of <b>[INSERT STREET HERE]</b>. Please evacuate the area immediately. As time allows, gather essential items only. Evacuation center information will be provided shortly. For more information, please call <b>XXX-XXX-XXXX</b> or visit ReadySBC.org.</p> <p>Una <b>ORDEN DE EVACUACION</b> se ha emitido una debido a un <b>[INSERT HAZARD/THREAT HERE]</b> para las siguientes areas: al norte de <b>[INSERT STREET HERE]</b>, al sur de <b>[INSERT STREET HERE]</b>, al este de <b>[INSERT STREET HERE]</b>, y al oeste de <b>[INSERT STREET HERE]</b>. Por favor evacua el area inmediatamente. A medida que el tiempo lo permite, reuna articulos esenciales solamente. La informacion sobre el centro de evacuacion se proporcionara en breve. Para obtener mas informacion, llame al <b>XXX-XXX-XXXX</b> o visite ReadySBC.org/es.</p>	<p>Evacuation Order issued for <b>[INSERT AREA DESCRIPTION]</b> due to a <b>[INSERT HAZARD]</b> until further notice. Leave immediately. More info: <b>[INSERT WEB ADDRESS]</b>.</p> <p>Orden de Evacuacion para <b>[INSERT AREA DESCRIPTION]</b> debido a <b>[INSERT HAZARD]</b> hasta nuevo aviso. Vayase inmediatamente. Mas informacion: <b>[INSERT WEB ADDRESS]</b>.</p>	<p>Evacuation Order issued for <b>[INSERT AREA DESCRIPTION]</b> due to a <b>[INSERT HAZARD]</b>. Leave immediately. More info: ReadySBC.org</p>	<p>Evacuation Order: <b>[INSERT AREA DESCRIPTION]</b> due to <b>[INSERT HAZARD HERE]</b>. Leave now.</p>	<p>Orden de evacuacion: <b>[INSERT AREA DESCRIPTION]</b> debido a <b>[INSERT HAZARD]</b>. Vayase inmediatamente.</p>

# Translation Tools

1. Dispatch and OEM Bilingual staff
  - Highest quality, fastest turnaround, not always available
2. MAG (Message Alert Generator)
  - Automated tool, very basic language
3. Spanish Alert Translation Team
  - Takes longer, not all trained on emergency verbiage



# How WEA's Work

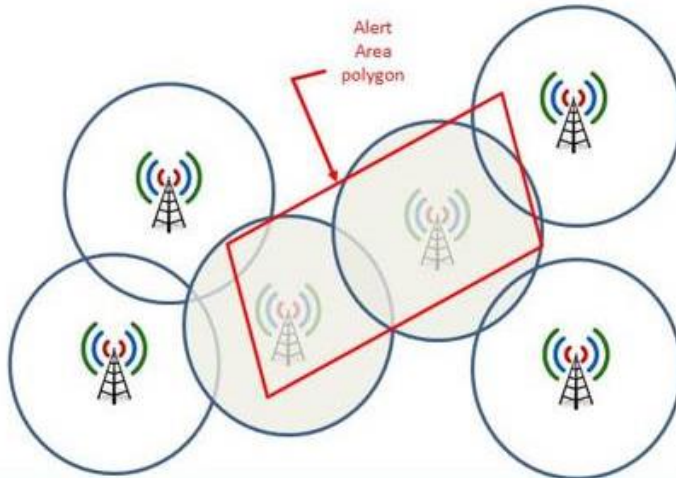


# WEA Coverage

## WEA Carrier Implementation: Variation 1

- Alert is broadcast only from towers **located inside alert area** polygon defined in the IPAWS message.

WEA is broadcast from towers in shaded area only

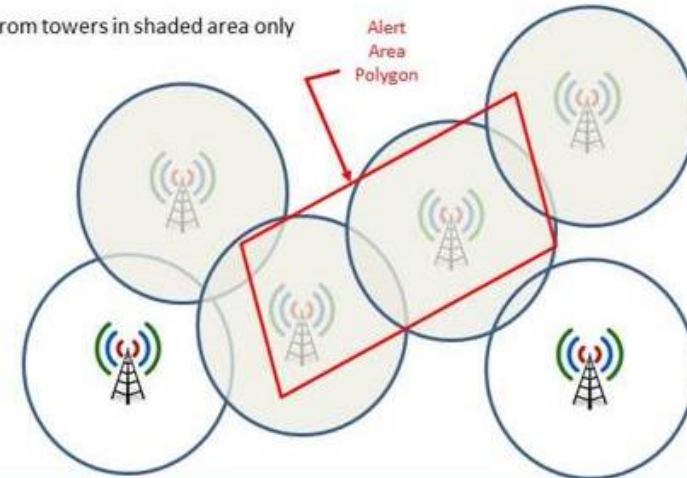


Note: Phones located between towers inside and outside the Alert Area may be connected to a tower not broadcasting the WEA.

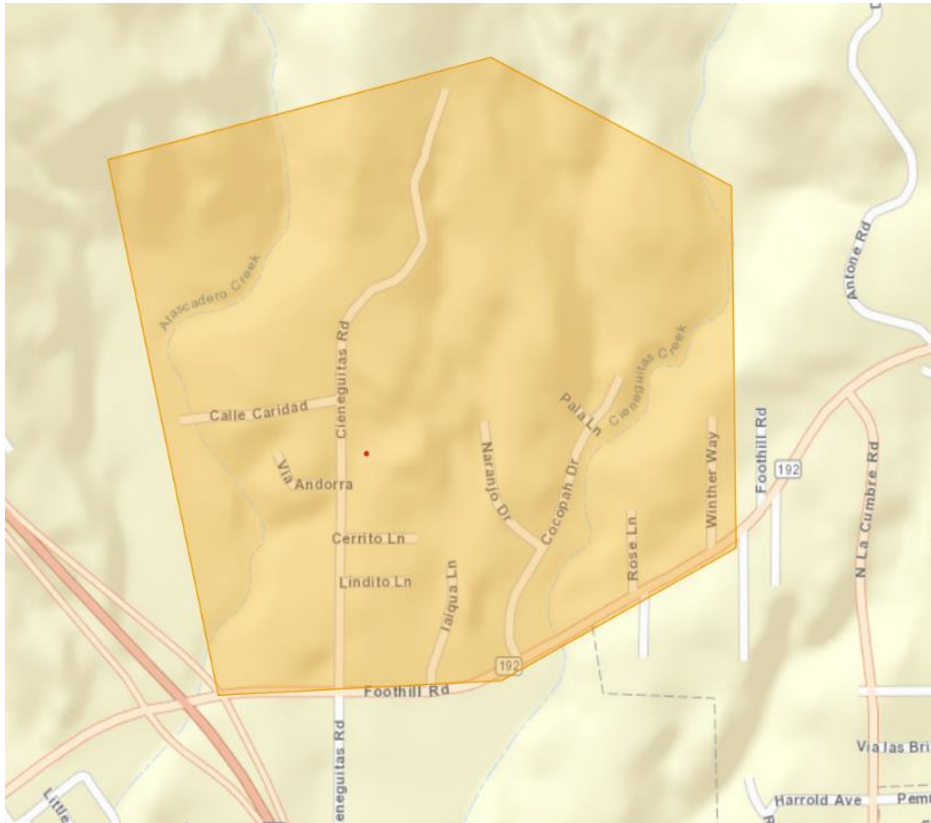
## WEA Carrier Implementation: Variation 2

- Alert is broadcast from towers with estimated coverage that includes a part of the alert area polygon defined in the IPAWS message.

WEA is broadcast from towers in shaded area only



# Bridge Fire Notification



Notifications	Method*	Number	Success
	Door Knocks	257	55%
	WEA	Unknown	Unknown
	ReadySBC	905 (3 new)	76.7%

Complaints	Area	WEA	ReadySBC
	Intended Notification Zone	None	None – 3 new contacts added during event
Outside Notification Zone (1-4 miles)	17 (did not receive)	None	

\*Method listed in order of action.



# WEA Challenges

## ■ Technology

- Cell Towers
- Older Phone, NOT WEA Enabled
- WEA turned OFF
- Geography

## ■ Data

- Missing Addresses
- Typos
- Old Info
- Not registered for multiple methods





# Pathway & Tool Challenges

- **No ONE tool will reach target audience**
- Equipment/technology failure or impacted by the hazard
- Telecommunication company policies
- Character count limitations
  - WEA: 90 and 360 character limit
  - Nixle text message: 138 characters





# Staffing/Training Challenges

- Requires extensive and continuous training and exercise
- Limited staffing
- High-pressure environment
- Juggling other emergency response actions simultaneously
  - e.g., incoming 911 calls, EOC activation
- Understanding information needed for messaging



# Accessibility/Whole Community Challenges

- Language barriers
  - Manual translation of local languages
  - Complexity and number of languages needed
  - Issues and critical errors when using auto-translation tools (e.g., Google translate)
- Literacy challenges
- People with sensory disabilities (low vision/blind, deaf/hard-of-hearing)
- Geographic isolation and rural communities
- Commuters, travelers and transient populations
- Homeless populations



# Path Forward

- Public and Private cross-sector coordination
  - Local Response Partners
  - California Public Utilities Commission
  - CalOES & FEMA
  - Telecommunications Industry
  - Federal Communications Commission
- Exploring New Methods
  - NOAA/NWS Weather Radios
  - RadioReady AM Stations
  - Evacuation planning & tools
- Continuous Review & Improve Process
  - Collaborative hot washes
  - Data Analysis
  - Training
  - Policies and Procedures



# What the Public can do today

- Public looks for no less than **3 sources** to confirm actions
- [www.ReadySBC.org](http://www.ReadySBC.org)
  - Register & Update Contact Info for Alerts
  - Register for home, work or on behalf of vulnerable family members
- Community & Neighborhood Awareness





# Q & A

