Sacramento County Office of Emergency Services

After Action Report
Improvement Plan

Regional Mass Notification Test

2/1/2018
FINAL

EXECUTIVE SUMMARY

The counties of Sacramento, Placer and Yolo participated in a region-wide test of the Regional Mass Notification System (EVERBRIDGE). This system is the local public notification system for all three counties and is financially supported by all three counties. On Thursday, October 19, 2017 in conjunction with the Great ShakeOut, the counties conducted tests of the alert system, contacting residents who were subscribed. The counties of Yolo and Sacramento used their 9-1-1 database files as part of the test. Placer County tested a specific area that included Newcastle to Serine Lakes (east to west) and county boarder on the north and south, inclusive of Auburn.

The test was completed between 10:19 AM and 1:00 PM Pacific time.

New Opt-Ins during October 2017: 21,355
Percentage of growth during October 2017: 24.4%
Percentage of increase comparing October 2016 to October 2017: 57.4%
Percentage of growth for calendar year 2017: 119%

SACRAMENTO COUNTY CALLS	
Citrus Heights	10,520
Elk Grove	21,937
Folsom	2,904
Galt	3,267
Isleton	461
Rancho Cordova	9,685
Sacramento	75,527
Unincorporated	86,731
TOTAL	211,032

PLACER COUNTY CALLS	
Placer County	15,545
TOTAL	15,545

YOLO COUNTY CALLS	
Yolo County	127,936
TOTAL	127,936

Contents

EXERCISE OVERVIEW

Exercise Name	**Regional Mass Notification Alert Test**
Exercise Dates	October 19, 2017, 8:30 AM – 2:00 PM
Scope	This is a full-scale, real-world test of the Emergency Alert Notification System within the counties of Sacramento, Yolo and Placer.
Mission Area(s)	Response and Recovery
Core Capabilities	Public Information and Warning
Objectives	- To ensure successful operation of a large-scale launch of the Everbridge system (Sacramento-Alert; Yolo-Alert; and Placer-Alert) to the tri-county area. - To test the ability of agencies to create an alert specific to their jurisdiction's boundaries - To promote earthquake preparedness and risk knowledge during the Great ShakeOut through a test of the alert system that would give warnings during potential earthquake events. - To work with local media and promote the test so the public has ample warning regarding the alert notification. - To ensure redundancy of capabilities by utilizing social media messaging and managing operations within a JIC.
Threat or Hazard	Earthquake
Scenario	A real-world test of the Emergency Alert System within the tri-county region inclusive of Sacramento, Placer and Yolo
Sponsor	Sacramento County Office of Emergency Services
Grant	General Fund
Participating Organizations	City of Citrus Heights City of Davis City of Elk Grove City of Folsom
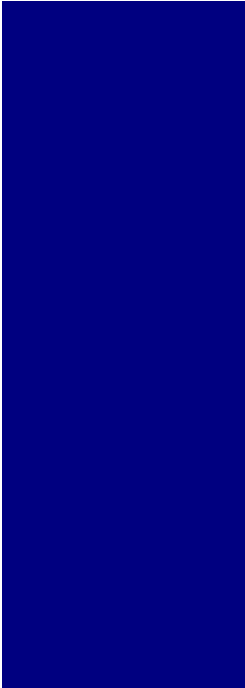
City of Galt

City of Isleton

City of Rancho Cordova

City of Sacramento

City of West Sacramento

City of Winters

City of Woodland

Placer County Office of Emergency Services

Sacramento County Office of Emergency Services

Sacramento County Sheriff Department

Yocha Dehe Wintun Nation

Yolo County Housing

Yolo County Office of Emergency Services

Point of Contact	Mary Jo Flynn, MS, CEM Emergency Operations Coordinator Sacramento County Office of Emergency Services flynnm@sacoes.org (916) 874-4671 office; (916) 508-5131 cell

DATA ANALYSIS

2017 Citizen Opt-In by Month

■ Citizen Opt-In ■ Growth ■ Total

Month	Citizen Opt-In	Total	Growth
December	100704	101674	970
November	99050	100704	1654
October	77695	99050	21355
September	76551	77695	1144
August	76176	76551	375
July	74901	76176	1275
June	73646	74901	1255
May	73359	73646	287
April	73007	73359	352
March	72601	73007	406
Februray	63403	72601	9198
January	46289	63403	17114

Regional Analysis of Call Attempts

	Sacramento	**Yolo[1]**	**Placer**
Overall duration to complete all attempts	10:19:14 – 13:16:59 2 hours 57 minutes 45 seconds	10:19:00 – 14:04:57 3 hours 45 minutes 57 seconds	
Duration to complete all call attempts	10:19:14 – 12:19:02 1 hour 59 minutes 48 seconds	10:19:59 – 14:05:00 3 hours 45 minutes 1 second	
Duration to complete all e-mail attempts	10:19:15 – 10:23:23 4 minutes 8 seconds	10:23:54 – 10:32:18 8 minutes 24 seconds	Data not provided
Duration to complete all text attempts	10:19:23 – 10:28:20 8 minutes 57 seconds	10:26:48 – 10:31:18 4 minutes 30 seconds	
TTY Device all attempts	10:20:06 – 10:31:32 11 minutes 26 seconds	10:24:25 – 10:34:18 9 minutes 53 seconds	
Mobil App Push Alert		10:25:11 – 10:30:54 5 minutes 43 seconds	

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[1] Test was manually stopped prior to its scheduled end time due to reports of duplication in calls.

Sacramento County

On 10/19/17 the Sacramento Operational Area launched the Regional Everbridge System for Mass Notification to Opt-In and 9-1-1 residential databases in unincorporated Sacramento County and City of Isleton. Cities within Sacramento Operation Area launched their own alerts within their city.

Message
The message consisted of separate Text and E-mail messages. A voice message was recorded by the Sacramento County Office of Emergency Services.

Text Message Sent
Sacramento Alert – This is the Sacramento County Sheriff's Department conducting a test of its emergency notification system. This is only a test. No action is required. Thank you.

E-mail Message Sent
Title: TEST---Sacramento County Mass Notification Alert---TEST

This is the County of Sacramento conducting a test of the Mass Notification system.
Several cities throughout Sacramento, Yolo and Placer Counties are conducting this test today, —October 19, 2017, as part of the Great California ShakeOut. The purpose of this e-mail is to test the Sacramento county's ability to deliver emergency notifications to the County of Sacramento residents during a disaster. During an actual emergency, important information and instructions will be sent to you through this system.

We encourage you to register your cell phones, text devices and email addresses at www.sacramento-alert.org. Please share this e-mail with your friends and family members living within the city of Isleton. Please also download the Everbridge App from the Google Play Store at:
https://play.google.com/store/apps/details?id=com.everbridge.mobile.iv.recipient&hl=en
and Apple iOS iTunes Store at: https://itunes.apple.com/us/app/everbridge/id565859420?mt=8

For questions or inquiries about the Sacramento Alert System, please visit www.sacramento-alert.org or contact the Sacramento County at 916-875-4311. For more information, residents may call County 2-1-1 Sacramento County's information hotline.
Thank you.
County of Sacramento

Send Parameters
The message was sent to all devices in the system using the Sacramento County Unincorporated and City of Isleton boundary shape file limited to Opt-In registrations and 9-1-1 data bases. No confirmation was required. Each City utilized Opt-In registrations and 9-1-1 data bases limited by their city shape file boundary.

Sender
Sacramento County Office of Emergency Services

Strengths

This was the second test of its kind requiring cooperation from three counties and cities within each county. Overall, the test was successful in delivering multiple calls from several jurisdictions at once.

- Launch was pre-programmed and sent on time
- System was successful in recognizing duplicative information and preventing needless contacts
- Outreach was successful to residents through utilization of TTY devices.
- The send process began immediately.
- Registration surpassed October 2016 registration for Opt-In, and likely increased due to heavy media attention from the Santa Rosa Fires and lack of use of Wireless Emergency Alerts (WEA).
- Using the shapefiles made the test launch easy.
- Coordination with PIOs and media. The system worked as designed.

Area for Improvement 1:

Residents in the Sacramento County Unincorporated area as well as cities of Folsom and Sacramento remarked that they did not receive phone calls to their Cell Phones, but they did receive text messages. This could be due to several possibilities:

1. A mobile number must be entered in both "Text Primary Cell" to receive an SMS text message as well as "Primary Cell Phone" to receive a call to that number. It is possible that one of the fields was left blank.
2. Distribution of cellular phone calls was bottlenecked at the carrier or cell tower level.
3. The system properly recognized duplicate number entries and stopped phone calls; this may have been due to messages not being marked as High Priority.
4. Multiple jurisdictions across 12 states were conducting the same test for the Great ShakeOut and this may have impacted the ability of calls to get through on a grand scale. This does make for a very interesting US western region test of the system.

During this test lessons learned from the Santa Rosa fires were emerging. Since that time additional lessons learned from southern California fires were identified:
5. Night-time notifications may be complicated due to cell phones that have been turned off or are silenced for sleep.
6. Damage to cell towers impacted the ability to distribute messages effectively.
7. Loss of power infrastructure may have caused charging phones to lose power or fail to charge.

Reliance on only one distribution method is not feasible; multiple methods including but not limited to: WEA, EAS, Alert Notifications, Social Media, Radio, Television broadcasts, and door-to-door announcements must be used. It is important that messages go out as close to day-time as possible.

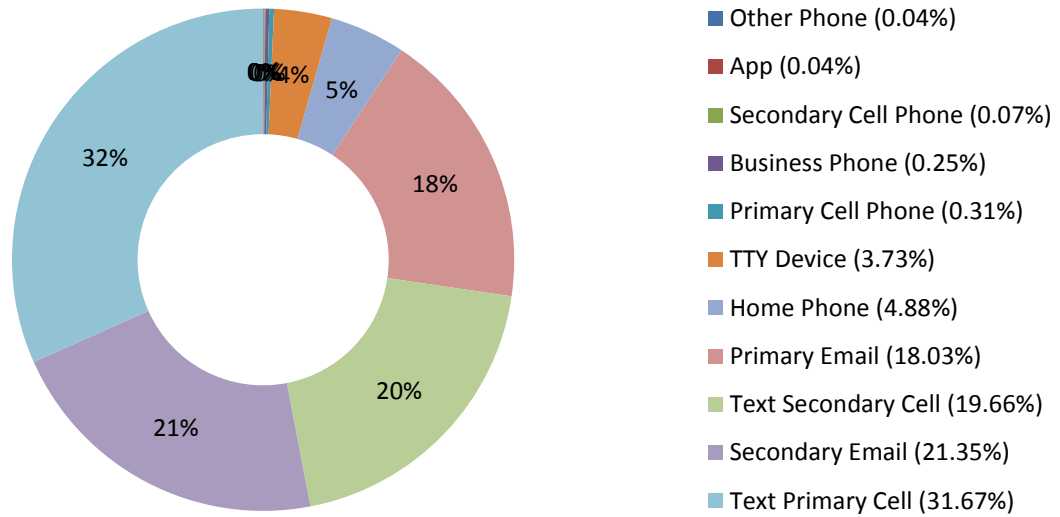The test was able to push the limits of the technology and phone systems behind the technology. It was discovered that a one-hour setting is not sufficient to deliver calls. Additionally, that text messages being the smallest data packet, should be delivered first and that re-prioritizing the contact methods based on speed of delivery should be considered.

Sacramento County needs to increase registered users. The value of the phone company data is limited as land-line data purchases show declines in landline ownership. In Elk Grove out of the 21,000 contacts it was supposed to go to, only 10,371 were contacted (out of 177,000 total residents) so this information made it to 5.8% of the population.

Registered users did not receive cellular calls in a large portion of the county. Investigation into why that may have happened and what was the true infrastructure of technology limitation is ongoing. Erroneously geotagged e9-1-1 data was identified (Rocklin addresses showed up in Sacramento County, and some Sacramento addresses showed up in Yolo county). Confirmation Placer is needed to ensure utilization of the same GIS system to map the e9-1-1 data to street addresses.

Sacramento County Message Delivery Status
Grand Total 247,341

- Not Delivered - Unregistered Device (0.0%)
- Not Delivered - Downstream Temporary Error (0.01%)
- Not Delivered - Line Busy (0.06%)
- Not Delivered - Invalid Number (0.06%)
- Not Delivered - Contact Unavailable (0.08%)
- Not Delivered - Out of Service (0.12%)
- Not Delivered - Voicemail Hung Up (0.30%)
- Not Delivered - No Answer (0.76%)
- Not Delivered - Recipient Hung Up (0.92%)
- Delivered (1.32%)
- Delivered - To Voicemail (1.91%)
- Sent (94.46%)

Sacramento County Message Delivery Types
Grand Total 247,341

Legend:
- Other Phone (0.04%)
- App (0.04%)
- Secondary Cell Phone (0.07%)
- Business Phone (0.25%)
- Primary Cell Phone (0.31%)
- TTY Device (3.73%)
- Home Phone (4.88%)
- Primary Email (18.03%)
- Text Secondary Cell (19.66%)
- Secondary Email (21.35%)
- Text Primary Cell (31.67%)

Pie chart values: 32%, 18%, 20%, 21%, 5%, 4%

Citrus Heights

Test duration: 1 hour
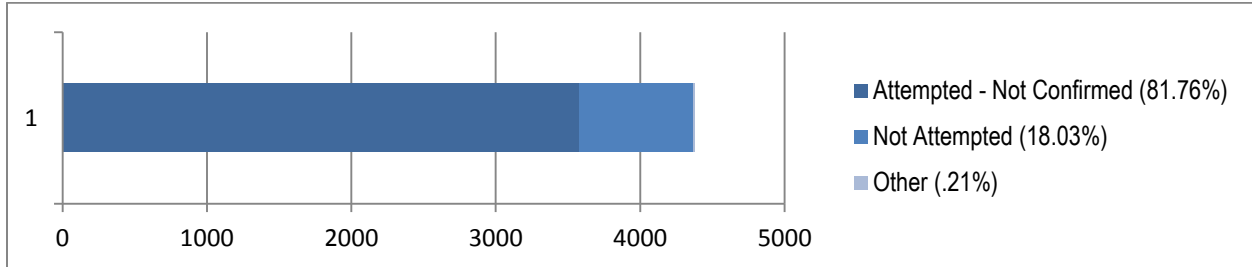
Call Results(per Delivery Path)	Total	% of Total
Attempted - Not Confirmed		
Sent	3577	81.76
Not Attempted		
Not Delivered – Duplicate Path	778	17.78
Not Delivered – Contact Path Not Defined	11	.25
Other		
Not Attempted – Unsubscribed	9	.21

Elk Grove

Test duration: 1 hour
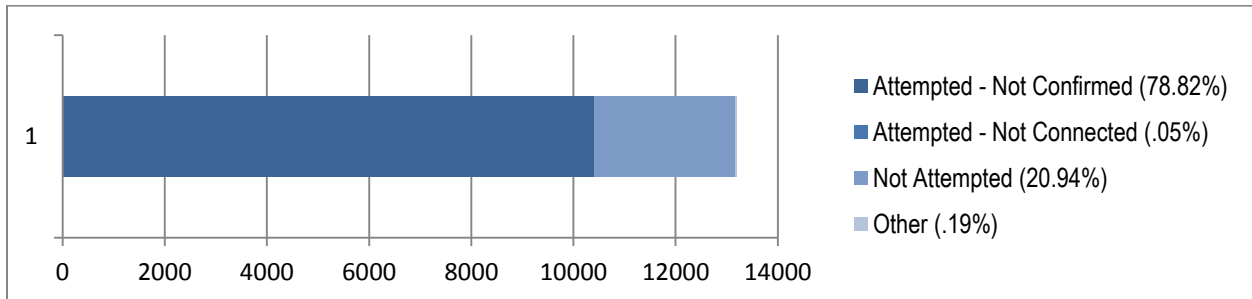
Call Results(per Delivery Path)	Total	% of Total
Attempted - Not Confirmed		
Delivered	6	.05
Not Delivered – Voicemail Hung Up	6	.05
Not Delivered – Recipient Hung Up	11	.08
Not Delivered – No Answer	12	.09
Delivered – To Voicemail	25	.19
Sent	10341	78.36
Attempted - Not Connected		
Not Delivered – Out of Service	2	.02
Not Delivered – Invalid Number	5	.04
Not Attempted		

Not Attempted – Contact Path Not Defined	32	.24
Not Delivered – Duplicate Path	2731	20.70
Other		
Not Attempted – Invalid Path	1	.01
Not Attempted – Unsubscribed	24	.18

Folsom

Test duration: 3 hours

Legend:
- Attempted - Not Confirmed (82.85%)
- Attempted - Not Connected (.15%)
- Not Attempted (16.66%)
- Other (.34%)
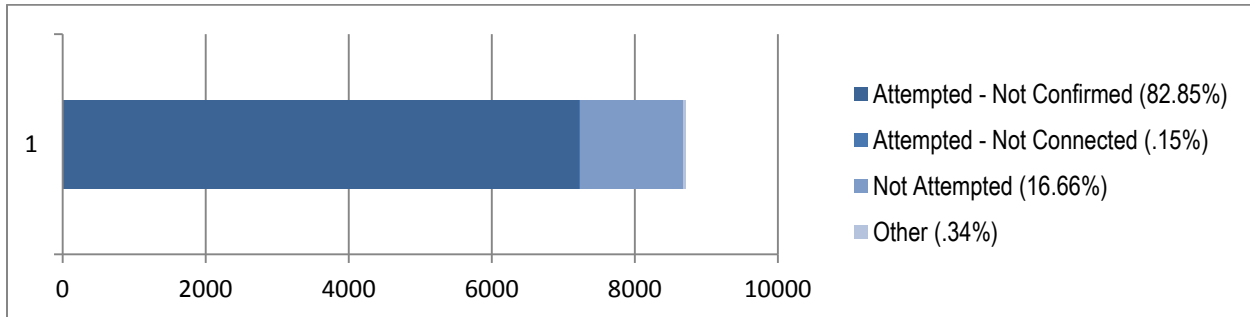
Call Results(per Delivery Path)	Total	% of Total
Attempted - Not Confirmed		
Not Delivered – No Answer	31	.36
Sent	6684	76.68
Delivered	169	1.94
Delivered – To Voicemail	237	2.72
Not Delivered – Voicemail Hung Up	26	.30
Not Delivered – Recipient Hung Up	75	.86
Attempted - Not Connected		
Not Delivered – Line Busy	9	.1
Not Delivered – Invalid Number	3	.03
Not Delivered – Out of Service	1	.01
Not Attempted		
Not Delivered – Contact Path Not Defined	37	.42
Not Delivered – Duplicate Path	1415	16.23
Other		
Not Attempted – Unsubscribed	17	.2
Not Delivered – Contact Unavailable	8	.09
Not Attempted – Invalid Path	5	.06

Galt

Test duration: 1 hour
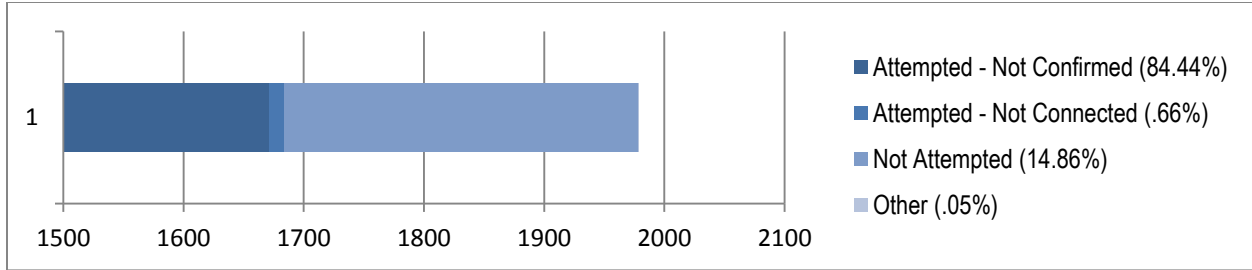
Call Results(per Delivery Path)	Total	% of Total
Attempted - Not Confirmed		
Delivered – To voicemail	175	8.84
Not Delivered – No Answer	82	4.14
Not Delivered – Recipient Hung Up	84	4.24
Not Delivered – Voicemail Hung Up	26	1.31
Sent	1178	59.53
Delivered	126	6.37
Attempted - Not Connected		
Not Delivered – Out of Service	3	.15
Not Delivered – Line Busy	4	.2
Not Delivered – Invalid Number	6	.3
Not Attempted		
Not Delivered – Duplicate Path	288	14.55
Not Delivered – Contact Path Not Defined	6	.3
Other		
Not Delivered – Contact Unavailable	1	.05

Isleton

Test duration: 1 hour
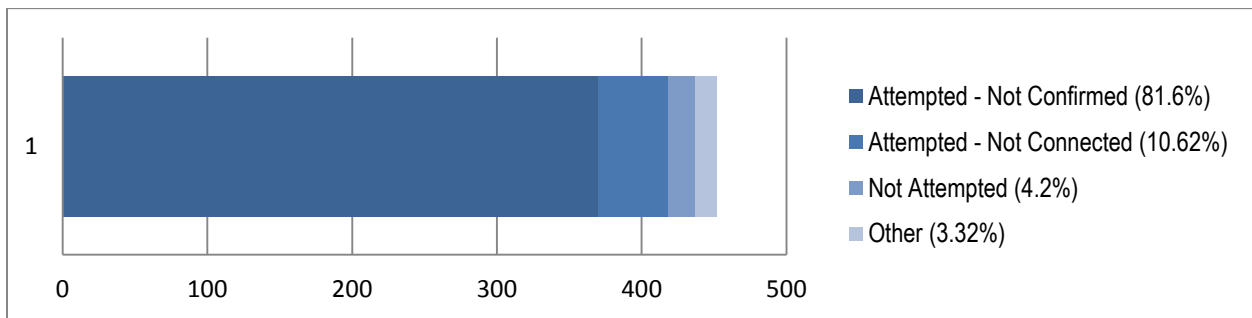
Call Results(per Delivery Path)	Total	% of Total
Attempted - Not Confirmed		
Delivered – To Voicemail	102	22.57
Sent	58	12.83
Not Delivered – Recipient Hung Up	57	12.61
Not Delivered – Voicemail Hung Up	18	3.98
Not Delivered – No Answer	64	14.16
Delivered	71	15.71
Attempted - Not Connected		
Not Delivered – Line Busy	3	.66
Not Delivered – Invalid Number	6	1.33

Not Delivered – Out of Service	39	8.63
Not Attempted		
Not Delivered – Duplicate Path	19	4.20
Other		
Not Delivered – Downstream Temporary Error	15	3.32

Rancho Cordova

Test duration: 2 hours
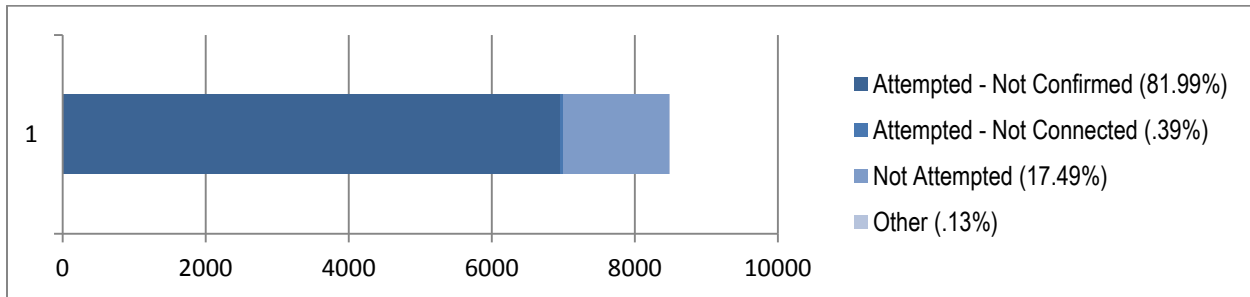
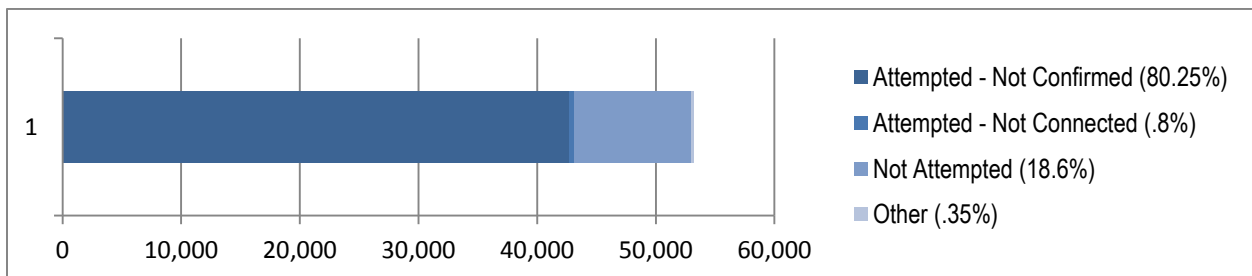| Call Results(per Delivery Path)	Total	% of Total
Attempted - Not Confirmed		
Delivered – To Voicemail	454	5.34
Not Delivered – Voicemail Hung Up	111	1.31
Not Delivered – Recipient Hung Up	301	3.54
Sent	5537	65.19
Not Delivered – No Answer	244	2.87
Delivered	317	3.73
Attempted - Not Connected		
Not Delivered – Line Busy	17	.2
Not Delivered – Out of Service	4	.05
Not Delivered – Invalid Number	12	.14
Not Attempted		
Not Delivered – Contact Path Not Defined	215	2.53
Not Delivered – Duplicate Path	1271	14.96
Other		
Not Attempted – Unsubscribed	2	.02
Not Delivered – Downstream Temporary Error	1	.01
Not Delivered – Contact Unavailable	8	.09

Sacramento City

Test duration: 1 hour
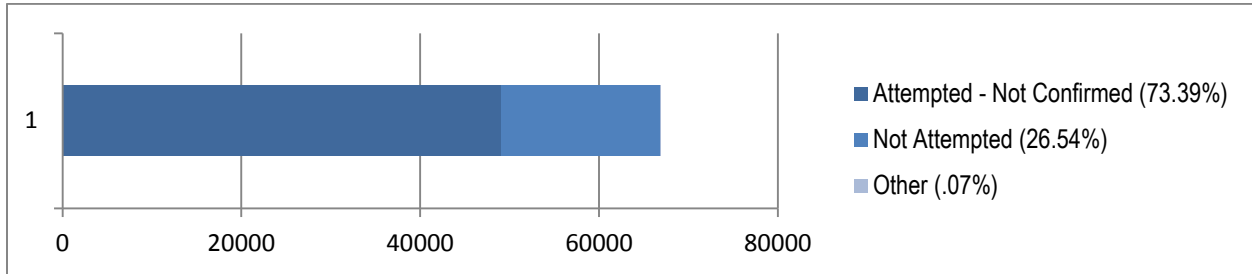
Call Results(per Delivery Path)	Total	% of Total
Attempted - Not Confirmed		
Sent	49062	73.36
Delivered – To Voicemail	16	.02
Delivered	2	.00
Not Delivered – No Answer	3	.00
Not Delivered – Recipient Hung Up	1	.00
Not Delivered – Voicemail Hung Up	1	.00
Not Attempted		
Not Delivered – Contact Path Not Defined	231	.35
Not Delivered – Duplicate Path	17518	26.19
Other		
Not Delivered – Downstream Temporary Error	1	.00
Not Attempted – Unsubscribed	36	.05
Not Delivered – Unregistered Device	1	.00
Not Attempted – Invalid Path	7	.01

Sacramento County Unincorporated

Test Duration: 1 hour

Call Results(per Delivery Path)	Total	% of Total
Attempted - Not Confirmed		
Sent	34156	64.19
Not Delivered – Voicemail Hung Up	471	.89
Delivered	2177	4.09
Not Delivered – No Answer	1360	2.56
Not Delivered – Recipient Hung Up	153	2.95

Delivered – To Voicemail	2997	5.63
Attempted - Not Connected		
Not Delivered – Out of Service	236	.44
Not Delivered – Line Busy	78	.15
Not Delivered – Invalid Number	113	.21
Not Attempted		
Not Attempted – Contac Path Not Defined	292	.55
Not Delivered – Duplicate Path	9603	18.05
Other		
Not Attempted – Invalid Path	5	.01
Not Delivered – Unregistered Device	1	.000
Not Attempted – Unsubscribed	26	.05
Not Delivered – Contact Unavailable	151	.28
Not Delivered – Downstream Temporary Error	3	.01

Yolo County

On 10/05/17 the Yolo Operational Area pre-scheduled the Regional Everbridge System for Mass Notification to all contacts within the Yolo County boundary on the system with the exception as part of the Great Shakeout exercise.

Message
The message consisted of separate Text and E-mail messages which were branded on behalf of all of the jurisdictions in the Yolo Operational Area. A voice message was recorded by the Yolo Emergency Communications Agency (YECA).

Text Message Sent
Yolo Alert – This is the Yolo County conducting a test of its emergency notification system. This is only a test. No action is required. Thank you.

E-mail Message Sent
Title: TEST---Yolo County Mass Notification Alert---TEST

This call test Yolo County's ability to deliver emergency notifications to Yolo county residents during a disaster. During an actual emergency, important information and instructions would be sent to you through this system.

Today you will receive calls, texts and e-mails on every device you have entered into the mass notification system. If you do not receive a message on one of your phones or e-mail accounts and would like to, please enter that information into www.yolo-alert.org and download the Everbridge app to receive notifications through your smartphone.

If your friends or family did not recive a notification and should, please encourage them to register. If you have questions about the mass notification system please visit www.yolo-alert.org or contact the Yolo Office of Emergency Services at (530) 406-4930.

This concludes our test of the Mass Notification System. Thank you.

Send Parameters

The message was sent to all devices in the system using the Yolo County boundary shape file as the selection method with a delivery method interval of 1 minute between devices. No confirmation was required.

Sender

Yolo Emergency Communications Agency

Strengths

In addition to the Strengths listed in the Sacramento section of this AAR, Yolo County had the following additional strengths:

- The test provided a good cross-training opportunity between the Yolo OES and YECA for Mass Notification distribution.
- Yolo jurisdictions continued, this second year, to perform uniformed messaging by coordinating the test message ahead of time.
- The 2017 was sent to more numbers than the 2016 test due to an increase in the send duration.
- Delivery throttling rules enacted after the 2016 test for the CalStrs building in West Sacramento lessened the number of calls going to that call center.
- 2017 was the first year that the Mobile App push notifications were tested.

- Number of messages not attempted due to the fact that they were recognized as duplicative information in the system = 36,461 (39.09%)
- Number of messages not sent due to the fact that no message pathway was provided by owner = 99
- Number of messages sent to TTY Devices = 350

Area for Improvement 2:

Test was given ample time for the number of contacts according to the software manufacturers claims on infrastructure expansion during high send volume moments (5 hours total). It is unclear whether all of the messages to the original send of 127,936 contacts would have successfully sent within the five-hour timeframe had the send NOT been manually stopped.

It was also unclear whether or not the lag in send time could be attributed to high usage by Everbridge owners nation-wide due to the fact that the send was scheduled for the same day as the Great Shakeout exercise.

Recommendation:

Attempt future test at a time that doesn't coincide with a Nation-wide exercise to test send amounts and duration settings in an attempt to identify if the 2017 send was delayed due to a high usage of Everbridge owners of the infrastructure.

Area for Improvement 3:

Due to the low call volume from the public to the Yolo OES during the 2016 send, 2-1-1 was NOT used to answer resident questions during the 2017 send. In addition, the Yolo OES main line number was used as opposed to the standard (999) 999-9999 number in an attempt to eliminate hang ups on lines with caller ID. This resulted in a large number of calls into the Yolo OES for days after the test.

Upon examination it was found that residents were simply calling the number that was listed in the caller ID without listening to the voicemail that was left by the system.

Recommendation:

Reassess during the 2018 test whether to use the Office Main line for callbacks, whether to use 2-1-1's call back number or stay with the system default of (999) 999-9999.

Area for Improvement 4:

The Yolo test was stopped almost an hour early due to several members of the public calling in and saying that they had received duplicative notifications during the day. Since the system is supposed to scrub duplicative notifications and NOT send to the second occurrence of any contact pathway, the notification was stopped for further analysis.

During analysis it was discovered that duplicative numbers were all from the City of West Sacramento. It was identified that the County of Sacramento's reverse 9-1-1 data purchase included numbers within the City of West Sacramento (which is in Yolo County). Since Sacramento County and Yolo County's sends were pre-programmed by two different senders, the sends resulted in duplicative notifications within that area.

Recommendation:

Yolo and Sacramento counties will work together to eliminate the West Sacramento numbers from the Sacramento upload. This will leave just the Yolo numbers for West Sacramento in and will still adhere to delivery throttling rules that have been programmed in that jurisdiction by Yolo County.

Area for Improvement 5:

Yolo County did not launch WEA and EAS in test mode during the 2017 launch.

Recommendation:

Incorporate this process into future launches to maintain practice with launching WEA and EAS.

Yolo County Message Delivery Status Grand Total 93,266

Legend:
- Delivered
- Delivered - To Voicemail
- Not Attempted - Invalid Path
- Not Attempted - Unsubscribed
- Not Delivered - Contact Path Not Defined
- Not Delivered - Contact Unavailable
- Not Delivered - Downstream Communication Error
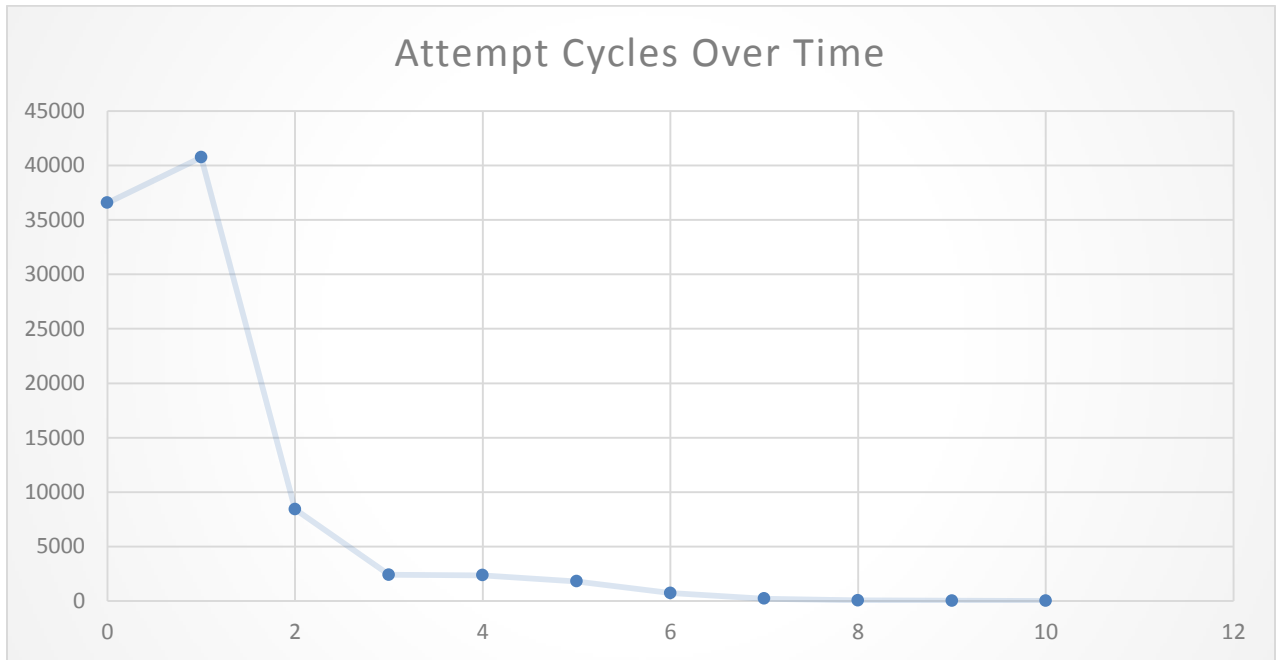- Not Delivered - Downstream Temporary Error
- Not Delivered - Duplicate Path
- Not Delivered - Invalid Number
- Not Delivered - Line Busy
- Not Delivered - No Answer
- Not Delivered - No Associated Device
- Not Delivered - Out of Service
- Not Delivered - Recipient Hung Up
- Not Delivered - Unregistered Device
- Not Delivered - Voicemail Hung Up
- Sent

YOLO COUNTY MESSAGE DELIVERY TYPES GRAND TOTAL 93,167

- Text Secondary Cell 3%
- App 0%
- TTY Device 1%
- Text Primary Cell 10%
- Secondary Email 3%
- Secondary Cell Phone 1%
- Primary Email 11%
- Primary Cell Phone 4%
- Other Phone 1%
- Business Phone 28%
- Home Phone 38%

Attempt Cycles Over Time

OUTREACH ANALYSIS

Sacramento County

Date	Platform	Reach	Engagement	Engagement Rate	URL Clicks
10/12/2017	Press Release	28,560	5925	20.75%	1424
11/32017	Facebook	3666	199	5.43%	173
10/20/2017	Facebook	23555	3198	13.58%	1912
10/19/2017	Facebook	2470	143	5.79%	106
10/19/2017	Facebook Live	7255	145	2.00%	3178
10/192017	Facebook	964	35	3.63%	26
10/172017	Facebook	48630	4002	8.23%	3458
10/102017	Facebook	8482	467	5.51%	384
11/1/2017	Twitter	512	15	2.93%	12
1019/2017	Twitter	1938	27	1.39%	13
1019/2017	Twitter	4082	362	8.87%	55
10/19/2017	Twitter - Periscope	993	153	15.41%	2
10/19/2017	Twitter	565	19	3.36%	6
1017/2017	Twitter	993	10	1.01%	0
10/17/2017	Twitter	4328	192	4.44%	72
10/19/2017	Soundcloud		5		
11/4/2017	Nextdoor	217234	102	0.05%	1869
10/20/2017	Nextdoor - Poll	71018	944	1.33%	986
10/17/2017	Nextdoor	71018	65	0.09%	

Poll: Yesterday's Sacramento Alert Test

Emergency Operations Coordinator Mary Jo Flynn from Sacramento County Office of Emergency Services · 20 Oct

Yesterday, Sacramento County OES along with city partners and the counties of Yolo and Placer conducted a region wide of the Sacramento-Alert.org Emergency Notification System. If you were subscribed to receive an alert, you may have received an email, text message, or heard this phone call or voice mail https://soundcloud.com/sacoes/sacramento.... Please let us know if you've received the alerts in the poll below. If you are not registered, please take action to register now.

Yesterday's Sacramento Alert Test

I received two of the three (email, text, call)	31%
I'm not registered, I did not receive an alert	28%
I received one of the three (email, text, call)	25%
I am registered, but I did not receive any of the alerts	10%
I received all methods of delivery (email, text, call)	6%

This poll has been closed.   944 votes
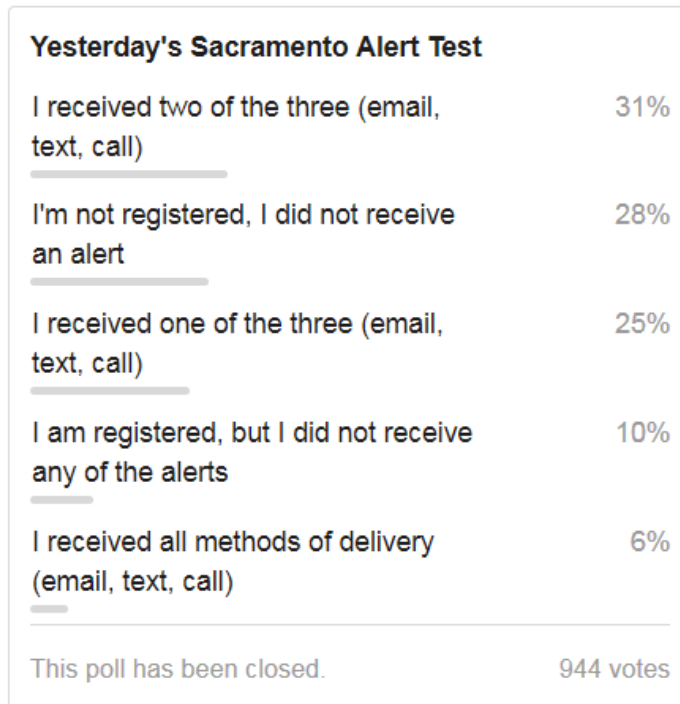
20 Oct · Subscribers of Sacramento County Office of Emergency Services in 28 areas in General

ANALYSIS OF CORE CAPABILITIES

Aligning exercise objectives and core capabilities provides a consistent taxonomy for evaluation that transcends individual exercises to support preparedness reporting and trend analysis. Table 1 includes the exercise objectives, aligned core capabilities, and performance ratings for each core capability as observed during the exercise and determined by the evaluation team.

Objective	Core Capability	Performance
To ensure successful operation of a large-scale launch of the Everbridge system (Sacramento-Alert; Yolo-Alert; and Placer-Alert) to the tri-county area.	Public Information and Warning	**P**
To test the ability of agencies to create an alert specific to their jurisdiction's boundaries	Public Information and Warning	**S**
To promote Flood Preparedness during Flood Preparedness Week through a test of the alert system that would give warnings during potential flood events.	Public Information and Warning	**P**
To work with local media and promote the test so the public has ample warning regarding the alert notification.	Public Information and Warning	**S**
To ensure redundancy of capabilities by utilizing social media messaging and managing operations within a JIC	Public Information and Warning	**P**

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 targets and critical tasks associated with the core 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 targets and critical tasks associated with the core 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

Objectives:

1. To ensure successful operation of a large-scale launch of the Everbridge system (Sacramento-Alert; Yolo-Alert; and Placer-Alert) to the tri-county area.
2. To test the ability of agencies to create an alert specific to their jurisdiction's boundaries
3. To promote earthquake preparedness via Earthquake Preparedness during the Great California Shakeout exercise through a test of the alert system that would give warnings during potential earthquakeearthquake events.
4. To work with local media and promote the test so the public has ample warning regarding the alert notification.
5. To ensure redundancy of capabilities regarding social media messaging and operations within a JIC.

Objective One Analysis

Question 1
Do you believe the objective: To ensure successful operation of a large-scale launch of the Everbridge system (Sacramento-Alert; Yolo-Alert; and Placer-Alert) to the tri-county area was performed satisfactorily? Please explain your selection.
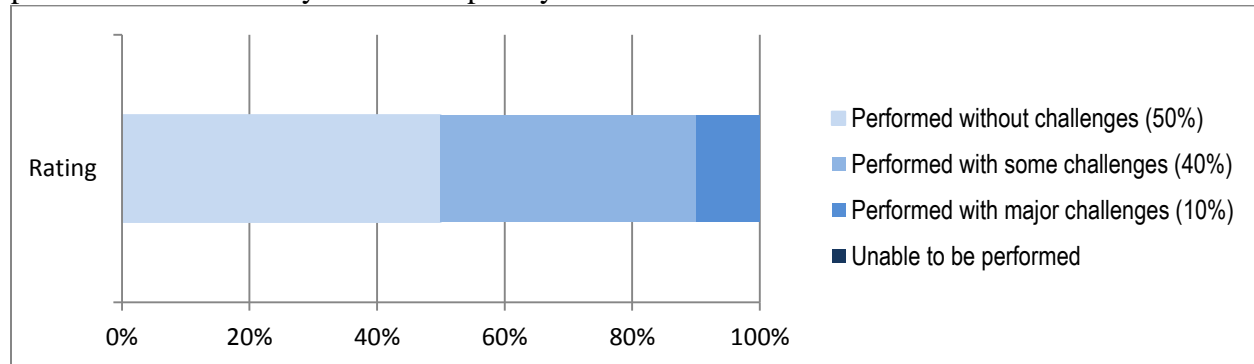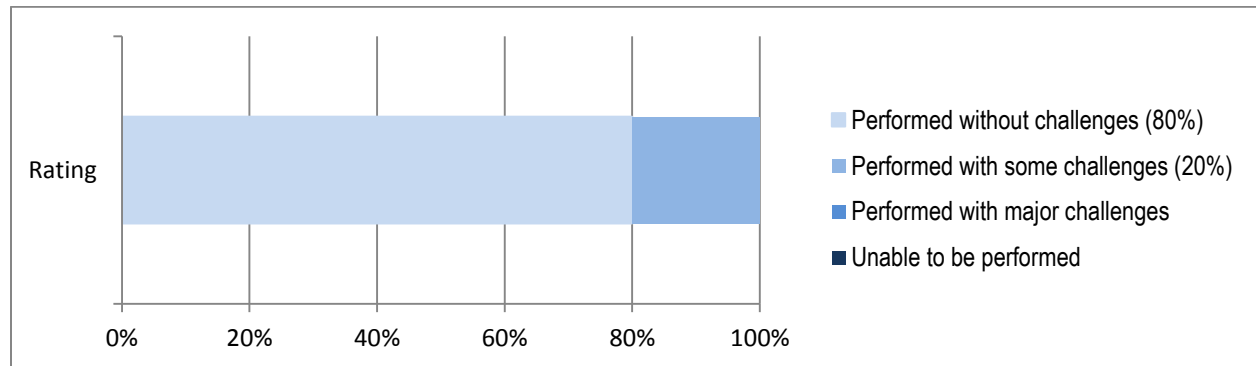

Comments
- Only a few complaints from citizens regarding error messaging from the sacramento-alert.org website advising their addresses within our city were not valid, which did not allow their enrollment via the website.
- Lessons learned regarding simultaneous countrywide messaging. Also gave insight as to duration needed to get message out as well as method priorities.
- Seemed like the system took longer than it should (maybe due to the influx of other Everbridge owners all launching at the exact same time)? Test could not fully send due to this fact.
- I think we need to separate the performance of the system from the performance of the staff entering the test information.

- Although some notifications were received successfully - No Citizens in Folsom received a phone call. Those that received a text or email received it 45 minutes after the launch which. If this were a major emergency evacuation, 45 minutes is an extremely long period of time in addition to no phone call.

Objective Two Analysis

Question 2
Do you believe the objective: To test the ability of agencies to create an alert specific to their jurisdiction's boundaries was performed satisfactorily? Please explain your selection.
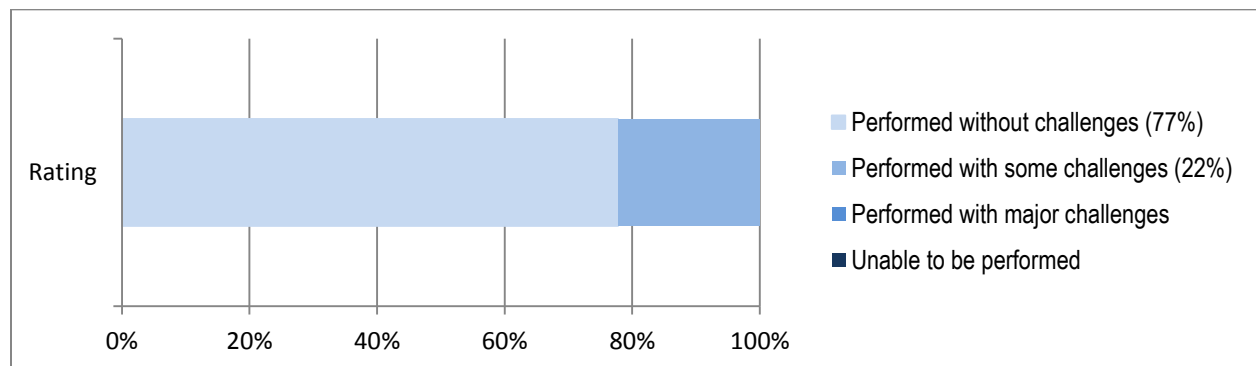

Comments
- I really appreciated the shapes that were added for each city!
- As far as I know, all the agencies successfully used the system appropriately to get their message to the public.
- Done by the Yolo Emergency Communications Agency for all Yolo members of YECA.
- I think each of the jurisdictions were able to schedule their test successfully in advance.

Objective Three Analysis

Question 3
Do you believe the objective: To promote earthquake preparedness during the Great California Shakeout through a test of the alert system that would give warnings during potential flood events was performed satisfactorily? Please explain your selection.
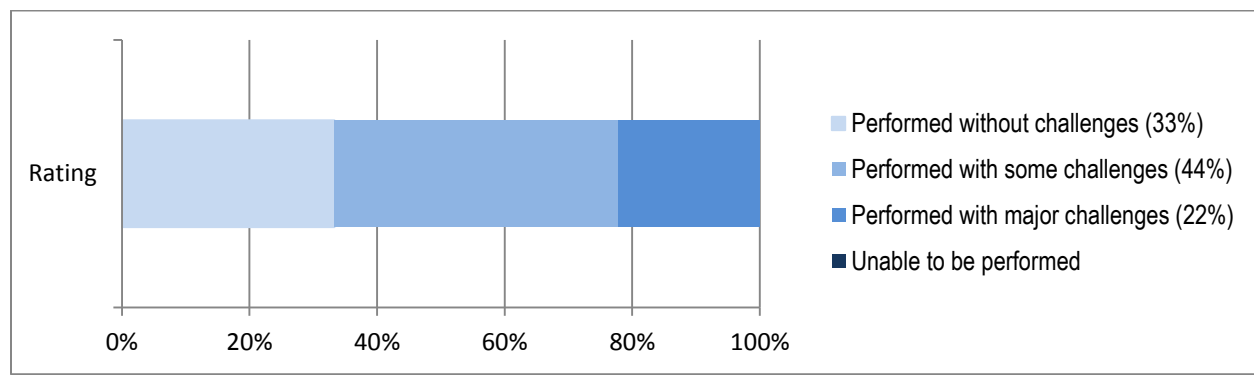
Comments

- Since the test didn't go to everyone....unable to tell.
- I think the message of earthquake preparedness was diminished. Scheduling the test in conjunction with the ShakeOut also presented challenges in that multiple jurisdictions in at least 12 other states were conducting similar tests.

Objective Four Analysis

Question 4
Do you believe the objective: To work with local media and promote the test so the public has ample warning regarding the alert notifications was performed satisfactorily? Please explain your selection.


Legend:
- Performed without challenges (33%)
- Performed with some challenges (44%)
- Performed with major challenges (22%)
- Unable to be performed

Comments

- As far as I know, the PIO's successfully worked with the media to get the message to the public. Media attention to the test also was successful in terms of getting new registrations.
- Test was advertised pretty heavily
- I think there was limited effort to get the story out in Sacramento County. It wasn't until media contacted the county directly about comments regarding the use of these systems for the wildfires affecting Santa Rosa that word started spreading about the test. There was some media interest the day of the test, again generated as a story more about the Wildfires and potential for floods, than anything that was released. We need to set specific goals about interviews for TV and Radio.
- I would like to see more involvement with the media or from the media. Minus the press release that was sent out by OES which I found online - I did not see this on mainstream media.

Objective Five Analysis

Question 5

Do you believe the objective: To ensure redundancy of communications capabilities by utilizing social media and managing operations within a JIC was performed satisfactorily? Please explain your selection.
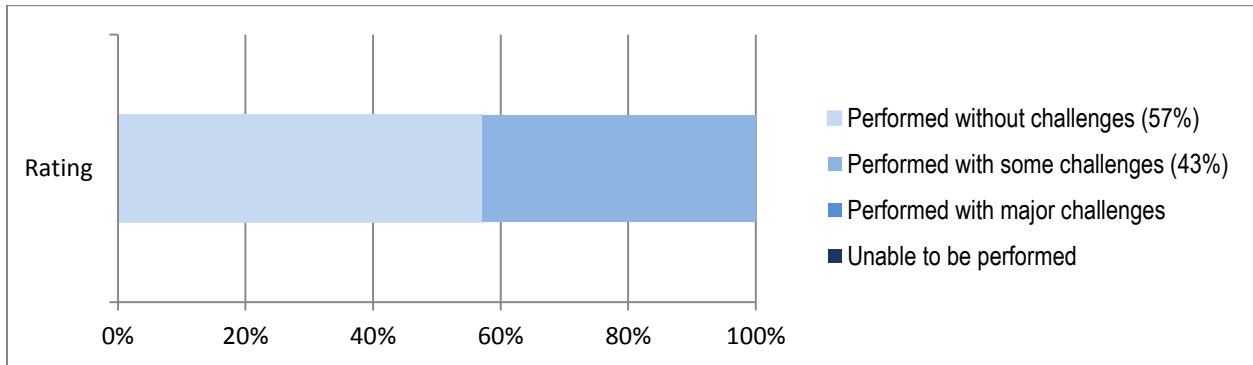
Comments
- Yolo did not participate in the JIC
- I don't believe the JIC was utilized as much as it could have been. There could have been more structure to media contacts and trying to get the media interested in presenting the story. Next year the JIC should write a crisis communication plan for this event so that there is a structured workplan in place for those working in the JIC. A morning briefing conference call with PIOs at least 2 hours before the launch of the test to review talking points, any concerns, media contacts, etc. should be scheduled.

PARTICIPANT SURVEY

Participants were asked a series of questions regarding the execution of the exercise. A small sample of participants (N=10) participated in the survey.

Question 6
Overall, how satisfied were you with the test of the emergency alert system? Please describe the reasoning for your response in the comments.
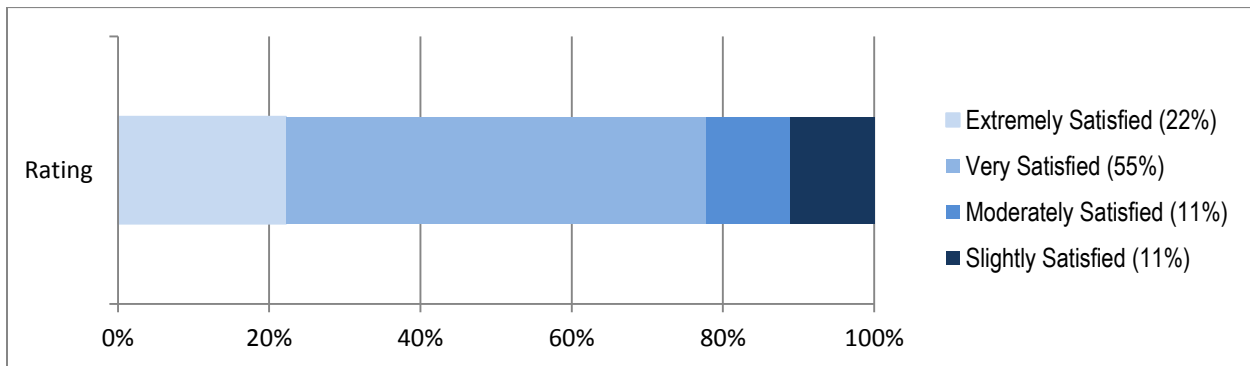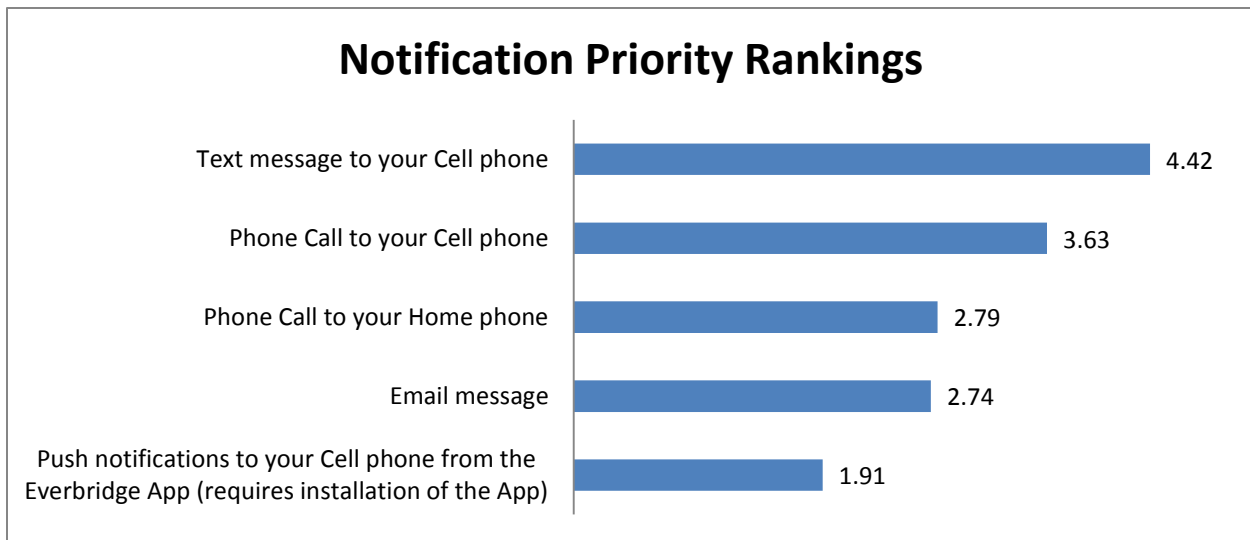

Question 6 comments

- Satisfied because I think it identified some concerns/problems that should be evaluated, and changes made, if necessary.

- We did get several opt-ins, so that part of the exercise was good. The communication from OES to the agencies was slim and then communication went directly to the Chief and other older contacts for the Department.

- I think it was good to do - but so complicated to coordinate the communications and who was doing what and get one press release that made sense. I think we'd be better off doing it separately in the future to avoid any fears of blowing up the system, and to simplify how many 'yes's we need before we can distribute the info.

- I feel the test went well. Our notification audience didn't really reflect a "large" scale notification, but was obviously successful with several agencies sending out a broadcast at the same time.

- Our Specialists responded with timely and correct information to callers. We felt we could contact County OES at any time for assistance.

- Yolo is still doing analysis on messages that didn't send (and why)....but data supports that the message successfully sent

PUBLIC SURVEY

Following the test, the public was asked to participate in a survey prioritizing how they would like to receive communications. The survey was distributed to the Sacramento County Office of Emergency Services Facebook Page and to County-wide subscribers of Nextdoor.com. A total of 1,869 responses were collected from both sites.
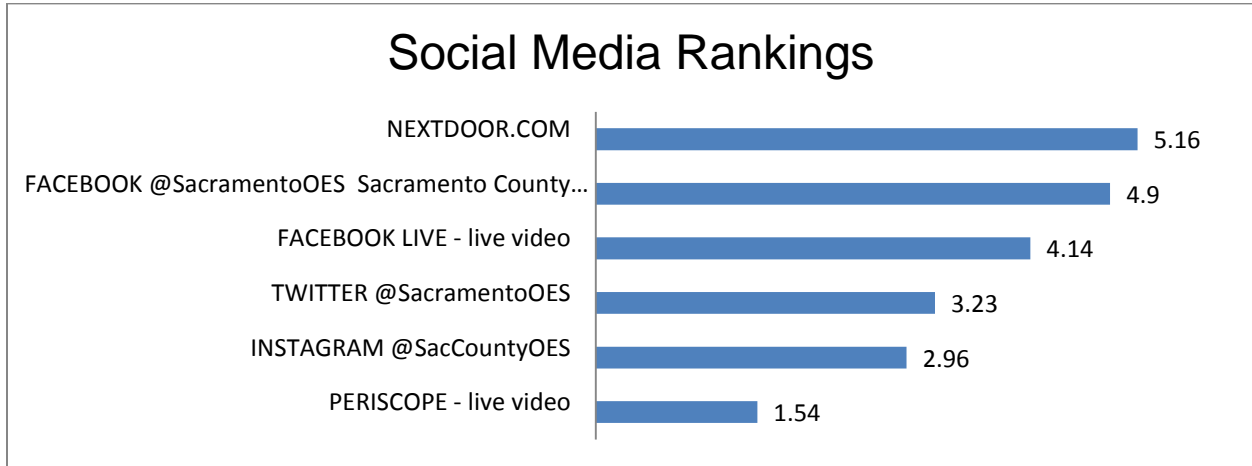
Collector	Responses	Percentage
Facebook	67	3.5%
Nextdoor	1,802	96.4%

Respondents were asked to rank each question assigning a priority from 1-5 with 1 being the highest priority and 5 being the lowest priority.

Notification Priority Rankings

Text message to your Cell phone	4.42
Phone Call to your Cell phone	3.63
Phone Call to your Home phone	2.79
Email message	2.74
Push notifications to your Cell phone from the Everbridge App (requires installation of the App)	1.91

Sacramento-Alert can send messages that you may receive in different ways. In an emergency, how would you prioritize those different methods? Please rank the order of your choices.							
	1	2	3	4	5	Total	Score
Text message to your Cell phone	1123	320	190	62	27	1722	4.42
Email message	58	347	545	555	172	1677	2.74
Phone Call to your Cell phone	275	744	434	187	31	1671	3.63
Phone Call to your Home phone	308	216	282	291	433	1530	2.79
Push notifications to your Cell phone from the Everbridge App (requires installation of the App)	53	100	187	364	665	1369	1.91
						Answered	**1835**
						Skipped	**34**

Respondents were asked to rank each question assigning a priority from 1-6 with 1 being the highest priority and 6 being the lowest priority.

Social Media Rankings

Channel	Score
NEXTDOOR.COM	5.16
FACEBOOK @SacramentoOES Sacramento County…	4.9
FACEBOOK LIVE - live video	4.14
TWITTER @SacramentoOES	3.23
INSTAGRAM @SacCountyOES	2.96
PERISCOPE - live video	1.54

In addition to the alert system, many individuals rely on social media for information about emergencies. How would you prioritize the various social media channels that we use?								
	1	2	3	4	5	6	Total	Score
NEXTDOOR.COM	891	328	228	82	57	17	1603	5.16
FACEBOOK @SacramentoOES Sacramento County Office of Emergency Services	467	446	223	72	39	29	1276	4.9
FACEBOOK LIVE - live video	189	311	269	190	110	41	1110	4.14
INSTAGRAM @SacCountyOES	36	90	172	272	273	112	955	2.96
TWITTER @SacramentoOES	88	136	144	232	241	110	951	3.23
PERISCOPE - live video	5	14	28	65	175	586	873	1.54
							Answered	**1718**
							Skipped	**151**

APPENDIX A: IMPROVEMENT PLAN

This IP has been developed specifically for Sacramento & Yolo Counties as a result of the Regional Mass Notification Test. All corrective actions for Sacramento are entered into their WebEOC for tracking over time.

Core Capability	Issue/Area for Improvement	Corrective Action	Capability Element[2]	Primary Responsible Organization	Organization POC	Start Date	Completion Date
1: Public Information and Warning	**1.1** Low Opt-In Rates	**1.1.1** Establish a sign-up campaign at regular intervals; establish materials and protocols to promote registrations during anticipated severe weather	Planning	Sacramento County JIC	K. Nava	Jan 2018	
	1.2 Everbridge Templates	**1.2.1** Identify funding to pursue Everbridge Templates. Pre-program various template scenarios to expedite message delivery.	Equipment	Sacramento County	M. Hawkins	Jan 2018	
	1.3 Social Media Preference	**1.3.1** Survey results show specific preference order for social media. Develop a protocol for message delivery via social media in addition to Everbridge.	Training	Sacramento County JIC	M. Flynn	Jan 2018	

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[2] Capability Elements are: Planning, Organization, Equipment, Training, or Exercise.

	1.4 Timing of Press Release	**1.4.1** Maintain consistency with previous JIC work in coordinating key messages; but each agency is responsible for their own release rather than a multi-agency release	Planning	Sacramento County JIC	K. Nava	Jan 2018	
	1.5 Simplified web address	**1.5.1** Available: SacRegionAlert.net, .info, .us., .com, .org Available: SacAlert.net, .info, Available: AlertSacramento.net, .info .co, .us, .org Available: AlertSac.net, .org, .info Consider purchasing additional domains to make communicating the web address easier for the public.	Equipment	Sacramento County OES	S. Cantelme	Jan 2018	
	1.6 Verifying success of delivery methodologies	Confirm methodology for verifying success of all delivery methods prior to test. Identify ways of re-testing calls that were not placed.	Planning	Sacramento County OES	M. Hawkins	Nov 2017	
2: Public Information and Warning	2.1 Length of Test	**2.1.1** Duration of test was 1 hour in most cities and Sacramento County. Other cities and counties tested 2, 3 and 5 hours.	Planning	Sacramento County OES	M. Hawkins	2018 Test	2018 Test

		2.1.2 Duration of test was set to 5 hours for all of Yolo County but was halted during send. Retest in 2018 with 5 hour limit.	Planning	Yolo OES	D. Carey	2018 Test	2018 Test
	2.2 Date and Time selection	**2.2.1** Test should not be scheduled in conjunction with the Great Shakeout so as to get a truer test of calls within the tri-county region.	Planning	Sacramento County & Yolo OES	M. Hawkins & D. Carey	2018 Test	2018 Test
3: Public Information and Warning	**3.1** Call-Back numbers	**3.1.1** Don't use an office number for call-backs There were varying reports of the number of calls from residents. Continue partnership with 2-1-1 and 3-1-1 to provide answering services on behalf of Sacramento County.	Planning	Sacramento County OES	M. Hawkins	Jan 2018	
		3.1.2 Decide what to use as the call-back number for the Yolo test in 2018 (office lines not advised).	Planning	Yolo OES	D. Carey	2018 Test	2018 Test
4: Public Information and Warning	**4.1** Reverse 9-1-1 Data Uploads	**4.1.1** Scrub all West Sacramento numbers out of the Sacramento County reverse 9-1-1 data upload.	Planning	Sacramento County & Yolo OES	M. Hawkins & D. Carey	April 2018	Prior to 2018 Test
5: Public Information and Warning	**5.1** WEA & EAS Testing	**5.1** Test iPAWS during the 2018 test.	Planning	Yolo OES	D. Carey	2018 Test	2018 Test