

After Action Report

Earthquake Day 2 Comm Outage Exercise

Cupertino ARES
13 December 2021

Version: v2 **FINAL**

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Overview

Description: Hayward Earthquake Day 2 Field Communications Exercise
Event Type: Cupertino ARES Exercise
Event Name: Field Comm Exercise
Activation No: CUP-21-39T
Managing Entity: Cupertino ARES
Event Date: 20-Nov-2021
Report Date: 13-Dec-2021
Report Revision: 2, **FINAL**
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Requirements for Reporting¹

Completing an After-Action Report is part of the required California SEMS reporting process. The Emergency Services Act, Section 8607 (f) mandates that the Office of Emergency Services (OES) in cooperation with involved state and local agencies complete an After-Action Report within 120 days after each declared disaster. Section 2450 (a) of the SEMS Regulations states that, "Any city, city and county, or county declaring a local emergency for which the governor proclaims a state of emergency, and any state agency responding to that emergency shall complete and transmit an after-action report to OES within ninety (90) days of the close of the incident period as specified in the California Code of Regulations, Title 19, s2900(q)." Additionally, "Section 2450 (b) The after-action report shall, at a minimum, be a review of response actions taken, application of SEMS, suggested modifications to SEMS, necessary modifications to plans and procedures, identified training needs, and recovery activities to date."

Terms

- AAR²: After Action Report, a document intended to capture observations of an exercise and make recommendations for post-exercise improvements. The final AAR and Improvement Plan (IP) are printed and distributed jointly as a single AAR/IP following an exercise.
- AAR/IP: Improvement Plan; identifies specific corrective actions, assigns them to responsible parties, and establishes targets for their completion.
- AEC Assistant Emergency Coordinator
- ARK Repository of supplies used by Citizen Corps during emergency incidents and during training.
- CAP: Corrective Action Plan; FEMA; HSEEP³: actions identified during activations or exercises that are tracked to completion, ensuring that exercises yield tangible preparedness improvements.

¹ <http://www.caloes.ca.gov/cal-oes-divisions/planning-preparedness/after-action-corrective-action-reporting;http://temp.caloes.ca.gov/PlanningPreparednessSite/Documents/01%202450.pdf>

² <https://training.fema.gov/programs/emischool/el361toolkit/glossary.htm>

³ <https://www.fema.gov/emergency-managers/national-preparedness/exercises/hseep>

- CARES: Cupertino Amateur Radio Emergency Service is a volunteer organization of FCC-licensed amateur radio operators who will respond to requests from the city during times of emergencies. Their focus is on understanding risks facing the city and putting plans, communications processes, and tools in place to respond to these risks.
- CCC: Cupertino Citizen Corps; the City’s umbrella organization for CARES, CERT, and MRC.
- Comm 469, City of Cupertino Public Safety Communications Vehicle #469. Refer to PSCV definition C469: below.
- DOC: Department Operations Center; manages the overall field CCC deployment; aggregates data to be passed to the EOC. Advices EOC Staff on CCC capabilities, readiness, and activities.
- DPW: Department of Public Works
- EC Emergency Communications Coordinator
 - EM Emergency Manager. City staff member with responsibility for Cupertino’s Emergency Planning and Operations.
- IDR Plan Infectious Disease Response Plan
- ISA: Infrastructure Safety Assessment, A review and report-out on specific critical facilities in Cupertino that are important to the city and other Service Providers.
- H&W: Health & Welfare; used within the context of a Health & Welfare Check. Usually check of field teams to sure they are OK.
- NCO/NCS: Net Control Operator / Net Control Station; the control function that ensures the efficient management of and exchange of messages between stations on the frequency.
- OEM: Office of Emergency Management
- PSC Public Safety Communications, used in context with Comm 469 vehicle.
 - PSCV Public Safety Communications Vehicle, #469. Refer to Comm 469 definition above.
 - RRO Radio Room Operator: receives messages from and transmits messages to the field.
- SCCFD Santa Clara County Fire Department
- SJFD City of San Jose Fire Department
- TNC Terminal Node Controller, a modem that enables ASCII messages to be sent by radio.

Background and Timeline

Introduction

The purpose of an After-Action Report (AAR) is to analyze the management and response to an incident, event, or exercise by identifying the strengths to be maintained and promoted, as well as the areas for improvement.

The focus of this AAR is on the Cupertino Amateur Radio Emergency Service (CARES) exercise to test the Cupertino ARES tools, processes, and procedures for a Day 2 deployment following an earthquake event. This report is submitted to Cupertino OES as a record of our findings, plans follow-up actions, and recommendations to the city.

Summary

On 15 May 2021, CARES held an exercise that included the Infrastructure Safety Assessment (ISA) in response to a simulated significant earthquake resulting in the loss of commercial power and communications. At the end of that day, CARES was (simulated) asked to deploy the following day (this exercise) to continue on-going support of the community. The focus for this exercise was on passing 3rd party voice message traffic using standard CARES processes.

The exercise objectives were:

1. Execute the response per the CCC IDR Plan protocols.
2. Track resources and information per the CARES Net Control procedures.
3. Open all Cupertino ARKs per the Cupertino ARK Activation Procedures.
4. Pass formal 3rd party messages by voice, packet between the EOC and Field.
5. Execute the Demob Process for all responders per the current Demob Process.

Key Findings

Following the exercise, CARES held an after-action review of both our existing operating procedures as well as the new operational aspects under test. The lessons learned from this review will drive specific actions within key areas of the CARES response. The three specific findings that came out of this exercise were:

1. **Day 2 Activation.** This activation was quite different from our usual initial deployments with pre-planning focusing on how several of our existing procedures would work. The result was a likely scenario that has never been tested before. This scenario leveraged an assumption that a Day 1 deployment occurred, an official request for a Day 2 deployment was received, clear objectives from the EOC were defined, and available resources for Day 2 were identified. While not one of the initial exercise objectives, the Day 2 deployment was instructive and will influence how we manage resources and tasks in the future.
2. **Field Response and Operations.** The CARES Field Response worked at multiple levels. Available CARES members were given their Day 2 assignments the 'night before' (actual email 2 days prior). This allowed responders to better anticipate what they would need to do for their Day 2 assignment giving them additional time to prepare.
3. **C469 Setup.** Based on changes from the May 2021 exercise, the Comm 469 Minimum Setup was defined and performed on arrival at the EOC/City Hall. From arrival to being radio-ready, C469 setup tasks took about 15 minutes. This approach still needs to be reviewed and confirmed that all required activities were performed.

Responding Resources

CARES deployed under activation number CUP-20-39T. Event resources came from the following organizations:

1. **Cupertino ARES/RACES.** CARES staffed both Comm 469 and field positions. Seventeen (17) CARES members participated during the 3-hour exercise with opening 4 of the 6 ARKs. One team in Covid-19 quarantine simulated opening a 5th ARK and operated from home.

Timeline

The following timeline is a compilation from ICS 214s and other documentation submitted as part of this event.

Time	Description, Notes, Comments
Saturday 15 May	0720 Departed Service Center with Comm 469. 0731: Comm 469 arrived at City Hall, started C469 Minimal Setup. 0800: Opened Resource Net, began taking check-ins. 0830: First inbound message traffic received. 1030: Field responders were directed to secure, return to EOC Began Demob function. 1135: Closed Resource Net. 1134: Shutting down Demob. 1225: Comm 469 departed City Hall for Service Center.

Performance against Objectives

Objective #1

Execute the response per the CCC IDR Plan protocols.

Results: Satisfactory

With the advent of COVID-19 vaccinations and boosters, CARES recommended that some IDR restrictions be relaxed. All current protocols were observed and followed.

Recommendations:

1. Continue to hold periodic reviews of the IDR Plan and make adjustments that are in line with city policies and general interaction practices.

Objective #2

Track resources and information per the CARES Net Control procedures.

Results: Needs Work

Net operations were adjusted to accommodate the Day 2 pre-defined assignments. All responders were known and, given an 8:30am start operations time, were at their assignment within the allotted time.

A single NCO was used for this exercise. This operator handled both resource tracking and message passing with all field units. An alternate NCO was also assigned as a scribe to help with logging and as a relief operator allowing the NCO and scribe positions to be rotated. Since this model has not been fully defined, roles were not clear as to who should keep what log resulting in some initial duplicate logging. Additionally, by committing the NCO to also take the messages, the concept of the Radio Room Operator was not used and introduced some deviation from our published processes on how messages should be passed.

NCO used the Heil boom mic/headphones for operations in C469. Field Reports were received that the NCO's audio volume was low. A check of the problem during the exercise pointed to the mic's position

relative to the mouth was not providing sufficient gain. Additionally, a mechanical problem (breakage) was reported with the Heil headphone that requires more investigation.

Recommendations:

2. Review the NCO operational model and re-affirm the approach we will take. Confirm staffing and operational processes.
3. Develop the net control briefing to re-enforce how we operate in Cupertino. This should be a reminder just prior to take the net and cover items such as message numbering.
4. Add clarification on which forms the NCO should use during a net.
5. Complete the Net Control Handbook. Set up training to build familiarization with how CARES nets will run.
6. Add the coaching role to the NCO and Shift Supervisor position to fix operational problems as they occur thereby ensuring responders do not repeat incorrect procedures.
7. Reach out to CARES members who may be interested in performing the net control role.
8. Agree on the tactical name for C469 (Net Control? Cupertino EOC? COMM 469?).
9. Change C469 Kenwood TM-V71 radio menu 111 to HIGH; perform a field transmit test with the Heil mic/headphone to verify audio levels. If resolved, update the *Comm 469 Radio Reference*, Section 6.

Objective #3

Open all Cupertino ARKs per the Cupertino ARK Activation Procedures.

*Results: Satisfactory**

Four of the 6 ARKs were opened.

The ARK access code was requested on the net and passed to all responders. The ARK code holders were named based on an informal handoff from Citizen Corps to select AEC Staff who asked for the code. This method puts field ARK operations at risk in the event all of the current CARES Code Holders are not available.

Recommendations:

10. Develop a method for managing the ARK access code.
 - o Store in the Shift Supervisor Playbook.
 - o Train all Shift Supervisors and C469 staff on how to access and use the code.
11. Update the ARK Activation Manual to reflect Citizen Corps policy allowing for only one member to open the ARK.

Objective #4

Pass formal third-party messages by voice, packet between the EOC and Field.

Results: Needs Work

CARES field responders initiated and passed third party messages from their location to the EOC using the COES ICS 213SF (Short Form). Additionally, the EOC originated ALL STATION messages to all field stations.

There was observed a wide difference among our member's familiarity with more formal message passing. Some aspects of message passing need work, including:

- ALL STATIONS message passing. This was a new item for CARES. Because it was lightly touched on the Exercise Prep, not every station was prepared to copy the traffic. The result was the need for a repeat to ensure all stations received the message.
- Use of Message Numbers. The CARES process is for the Net Control to assign a numeric message number to the originator for all city traffic. This is different from how County RACES operates where each jurisdiction assigns their own message number. As a result, some field stations assigned their own numbers resulting in an inconsistent overall message numbering scheme.

Recommendations:

12. Reiterate the CARES process that NCO assigning message numbers for all intra-city messages. City to County EOC is per the County message numbering policy.
13. It is clear that third party messages exist between the city and the County EOC. Determine to what extent intra-city third party messages will occur. Set member expectations and our training objectives accordingly.
14. Clarify the definition of and when to use third-party messages (training issue).
15. Include a message passing training module to be presented regularly to CARES members.
16. Develop an approach for giving CARES members more opportunity to practice message passing with a focus on technique, composition, prowords, forms, plain text, and message pace to name a few.

Objective #5

Execute the Demob Process for all responders per the current Demob Process.

Results: SATISFACTORY

This was the second exercise where CARES performed the Demob function. All CARES members who signed up showed up. All field responders participated in Demob (two by remote form submission). Almost everyone filled out the necessary forms and did so correctly with only minor follow up to complete submitted forms.

Recommendations:

17. Add the need to demob C469 at the end of an event to pick up material replenishment or equipment issues.

Other Observations and Recommendations

Observation #1

Shift Supervisor role is not defined.

This comment is not exclusive to this exercise but is re-iterated here. As stated in past exercises, the Shift Supervisor role is not well defined. Additionally, information needed to support a successful deployment is not readily located. This topic needs to be a focus for 2022.

Recommendations:

18. Develop and complete the Shift Supervisor Handbook to include:
 - i. overview of relevant forms to be maintained.
 - ii. checklists

- iii. operational data
 - iv. ARK and PC passwords
19. Define, agree on, and practice the method for field resource tracking – T-Cards, forms, etc.

Observation #2

Several miscellaneous items were identified during exercise planning or during the exercise itself, that need attention.

Recommendations:

Packet

- 20. Implement a USB Serial Server that will put the TNC on the network. Install the necessary Windows applications that allow you to tunnel a serial connection over a network. This will allow packet operations to move outside thereby freeing up Position 2 for some other purpose.
- 21. Work with the City to acquire a laptop as the remote packet station. This would allow us to run Packet anywhere within the vicinity of C469.

Infectious Disease Response Plan

- 22. Reinstall the 2 additional operating position chairs taken out per the IDR Plan.

Comm 469

- 23. Repair BCP Network connections N13 and N14.
- 24. Agree on the C469 GMRS Antenna configuration to ensure city-wide GMRS coverage.
- 25. Replace the Position 2 headset (broken).
- 26. Add the role of Van Operator to the PSCV Operations Manual for deployments.
- 27. Clarify PSCV Operations Manual Minimum Setup to complete the C469 check list.
- 28. Document procedure in the PSCV Operations Manual for starting the generator if the compartment battery is dead
- 29. Investigate a shore power option at city hall.
- 30. Investigate a better mounting arrangement for the Gen-Turi exhaust pipe.
- 31. Change the C469 server BIOS to auto-start on powerup.

Conclusion

The value of these exercises continues to be opportunities for CARES members to practice field deployments. While the focus for this one was on message passing, the exercise touched on several aspects of a field deployment including resource net procedures, ARK access and setup, message passing, packet operations, and Demobilization. With so many possible aspects of a field response from which to choose, it is sometimes hard to prioritize on which aspects of our response to focus. Thus, message passing, both by voice and packet, continue to occupy center stage.

Similar to past events, the list of Improvement Plan items again will be a mix of *quick hits* as well as some that require careful thought and consideration. Prioritizing the things that can make a difference ensures we spend our time effectively on improving our overall response process. This is the next step.