

After Action Report Infrastructure Safety Assessment Field Exercise CUP-23-24T

Cupertino ARES
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Overview

Description:	Hayward Earthquake / Field Communications Exercise
Event Type:	Cupertino ARES Exercise
Event Name	ISA Field Exercise
Activation No:	CUP-23-24T
Managing Entity:	Cupertino ARES
Event Date:	18 November 2023
Report Date:	25 December 2023
Report Revision:	1.0, DRAFT
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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 Management (OEM) 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 OEM 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.
- CAP (CARES): Community Access Points - These are ad-hoc CARES field locations throughout the city where emergency communications stations can be set up to take and relay emergency messages from the community.
- CAP (FEMA): Corrective Action Plan; FEMA; HSEEP³ - actions identified during activations or exercises that are tracked to completion, ensuring that exercises yield tangible preparedness improvements.
- CARES: Cupertino Amateur Radio Emergency Service - a volunteer organization of FCC-licensed amateur radio operators who will respond to requests from the city during times of

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>

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.
C469:
- DOC: Department Operations Center - manages the overall field CCC deployment; aggregates data to be passed to the EOC. Advises EOC Staff on CCC capabilities, readiness, and activities.
- DPW: Department of Public Works
- ESC Emergency Services Coordinator - City staff member with responsibility for Cupertino's Emergency Planning and Operations.
- FLA First Look Area - A specific selection of streets in Cupertino on which an FLA Assessment will be made.
- ISA: Infrastructure Safety Assessment – a review and report-out on specific critical facilities in Cupertino that are important to the city and CARES served Agencies.
- 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 passing of messages between stations on the frequency.
- OEM: Office of Emergency Management
- PSC Public Safety Communications - used in context with Comm 469 vehicle.
- SCCFD Santa Clara County Fire Department
- SJFD City of San Jose Fire Department

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 our operational 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 and procedures for the biennial Infrastructure Safety Assessment (ISA). This report is submitted to Cupertino OEM as a record of our findings, planned follow-up actions, and recommendations to the city.

Summary

CARES performs the Infrastructure Safety Assessment (ISA) on specific critical facilities that are deemed to be important to the city or our Served Agencies. Critical facilities (or assets) are components of systems or infrastructure that support the delivery of product or services to the residents of Cupertino. These critical assets that could affect Cupertino are:

1. San Jose Water Company, 21 assets

2. Cupertino Sanitary District, 12 assets
3. Santa Clara Water District, 5 assets
4. City of Cupertino, 9 staffed buildings, 7 major roadways
5. CALTRANS, 12 freeway overpasses
6. Fire Stations: 3 SCCFD stations and 1 SJFD station.
7. Sheriff's Office, 1 Substation

These Served Agencies have requested an *eyes-on* assessment of their assets either because the agency will not have the manpower to inspect all of their assets immediately after an infrastructure-shaking event, or that their status is critical to support the city's response efforts.

This exercise was designed to test the updates to tools and procedures for deploying CARES to perform the ISA process. Updates included a revised data collection method, cold-start of the exercise (no pre-staged assets), and delegated critical event management tasks to other CARES members.

CARES members were activated and deployed from their respective homes. Over the course of the exercise, the following planned objectives were tested:

1. Test a cold-start Comm 469 during an earthquake scenario.
2. Exercise the Mike-Mike reporting process.
3. Test the ISA process dispatch process.
4. Test the ISA spreadsheet data collection process.
5. Test the Demob process

Key Findings

Following the exercise, CARES performed an after-action review of our existing operating procedures and new aspects under test. The lessons learned from this review will drive specific Corrective Action Plan activities within key areas of the CARES response. Four specific findings from this exercise are:

1. **Event Startup.** CARES has never incorporated a Cold-Start before considering it WILL be the likely scenario that we will encounter for any self-evident event that we may face. Adding this element required the CARES leadership team to define the startup method that, when refined, will become part of the CARES Playbook (in progress).
2. **Broader task familiarity.** Whereas specific tasks were always performed by staff, there is a chance that they will not always be there when needed. This exercise trained up specific members to take on these new roles. The benefit of doing this was identifying specific process gaps that need to be addressed.
3. **Consolidated assessment approach.** The ISA assignment structure is organized into 11 assignment sets that cover the 37 legacy ISA assets plus the 7 major FLA roadways, and staffed city and fire department facilities. The structure again worked well with **7 teams** deployed to cover 9 of the 11 assignment-sets in about 2.0 hours.
4. **Data management tools.** The complexity of the custom web-app data management solution proved to be support-intensive. It was agreed to revert to a paper- and spreadsheet-based solution that has a higher likelihood of being supportable over time. This method worked well with areas to address such as information transfer.

Responding Resources

CARES deployed under activation number CUP-23-24T. Event resources came from the following organizations:

1. **Cupertino ARES/RACES.** CARES staffed both field positions and Comm 469. Fifteen (15) CARES members participated during the 3-hour exercise.
2. **Household buddies.** One individual was recruited from member households as a team field buddy.
3. **City Staff.** One city staff member was involved to perform Citizen Corps DOC role as liaison with the Cupertino EOC.

Timeline

The following timeline is a compilation from ICS214s and other documentation submitted as part of this event.

Time	Description, Notes, Comments
Saturday 18 Nov	08:00 Simulated Earthquake occurs. Opened Resource Net, began taking check-ins.
	08:10 Mike-Mike report summary indicated an average 6.5.
	08:10 CARES Shifted to Initial Response ops, notified CCC, initiated ISA.
	08:11 Transmitted MM summary to County RACES
	08:12 Assigned Comm 469 operator to retrieve the Comm Van.
	08:12 Assigned ISA Staging Unit Leads to Senior Center
	08:12 Deployed ISA staging teams to Senior Center for assignment.
	08:18 Shift Supervisor proceeds to City Hall
	08:21 Staging Unit Lead arrives at Senior Center, starts set up
	08:35 First Forum-based ISA assignment received by field NCO (Cristo Rey group)
	08:35 Gave DOC MM Summary; 12 reports
	08:53 First ISA assignments made from Staging.
	09:06 Comm 469 arrived at City Hall, started minimal setup.
	09:15 Last Forum-based ISA assignment received by field NCO
	09:20 Comm 469 minimal setup complete
	09:22 First Staging-initiated ISA survey started.
	09:30 Shutdown ISA staging.
	09:37 Comm 469 NCO handoff
	10:05 Began set up of Demob function.
	10:43 Last ISA report received.
	11:05 All team returned to city hall
	11:09 Closed Resource Net.
	11:25 Shutting down Demob.
12:25 Comm 469 departed City Hall for Service Center.	

Observations and Recommendations

Observation #1

Performing a Cold-Start as part of the initial exercise startup activities worked.

This was the first Cold-Start earthquake exercise that CARES ran and it removed a nagging artificiality used in previous exercise plans. Cold-Start essentially means: no pre-staged activity before the exercise or event, including Comm 469 is not pre-staged at the EOC and all responders rely on their current state of personal readiness. As a result, we observed real travel times for resources, real states of individual readiness, and specific opportunities for improvement.

What could not be simulated is real vehicle traffic that might be encountered for any operator getting from home to their assignment. During an actual earthquake event, we recognize that for the initial response, Comm 469 will not be immediately available meaning the remote start activity will be the controlling element for CARES until other resources are in place. The remote-start activity was developed as part of the 2022 Net Control Handbook and tested during this exercise. It also forms the basis for the CARES Playbook that describes the overall response that CARES will execute. All the recommendations from the 2021 ISA exercise for this topic were implemented.

Recommendations:

Cupertino ARES

1. Tabletop the Cold-Start process with interested CARES members.
2. Refine the definition and information handoff from the Field/NCO to the C469/NCO.
3. Develop a protocol for taking and dispositioning emergency messages immediately after the net opens up.
 - i. Include guidance for checking for cell coverage.
 - ii. How to test if the cell service is operational.
 - iii. Look at e911 for texting 9-1-1 calls.
4. Other suggested tactical changes to be considered:
 - i. Poll for transportation options: car, bike, walk, etc.
 - ii. Review, update Section 3 NCO Refresher, NCO handbook
 - iii. Recommend form options for ad-hoc team tracking

Observation #2

The ISA Process was run with good results. A last-minute change focused on deploying a single ISA Staging location for making ISA field assignments. This resulted in a good first experience for new ISA Staging Unit Leads and several suggestions for process improvement

The ISA Process includes several process steps including staging, assignment, asset evaluation, record-keeping, and assessment status handoff (EOC and served agencies).

ISA Staging is required to distribute confidential asset location information to field responders. The decision for a single ISA Staging location was made late during the exercise planning and attempted to model what could be a realistic staffing constraint that we may encounter. For instance, for a large earthquake event, it is likely that CARES members will suffer similar damage as their neighbors meaning their availability for a field assignment may not be immediate because of their situation at home (home and family). Implementing a single ISA Staging location recognized this risk and would further reduce the staffing level for another ISA Staging Unit Leader.

Assignments are defined for both single responders (solo) as well as multiple responders (buddy). Solo assignments were a result of COVID accommodations that seemed to work well for some ISA group assignments. Buddy assignments are called out for assignments where 2 individuals are needed to ensure a safe assessment can be made. During this exercise, all assignments were made as solo. Assignment process clarification is needed for future ISA events.

Assignment status sharing is an area that needs work, particularly for served agencies with offices located outside of the city. Passing information about ISA assets to Served Agencies is a goal for CARES. However, with the assumption that all commercial power and communications would be out, there needs to be a clear communication path. For this exercise, we passed ISA reports of failed assets by email and text message (assumed that a voice call would not work). While this worked for this exercise, it cannot be the only option for a real earthquake deployment.

Recommendations:

CARES

1. Consider delegating ISA assets to members. Assign 2-4 assets for specific individuals. Need to develop the process for assigning and tracking assigned asset paperwork.
2. Develop the ISA Staging location options for different response level situations. Consider locations and resource availability.
3. Clarify the process for making field assignments. This includes both assignments types (solo and buddy) as well as assignment timing (assign and go).
4. **For information handoffs to CuSD, look at developing a resource pool of CARES or CERT members to deploy to CuSD offices in Cupertino to receive ISA reports by radio and relay these reports to CuSD Staff.
5. **For information handoffs to SJWC, work with SJWC on an approach for information access to ISA reports assuming that commercial power and communications is out.
6. Tabletop the end-to-end ISA process with interested CARES members.

Observation #3

Mike-Mike information handoff occurred to the city's Citizen Corps Coordinator. If this person was not available, other handoff options would need to be used.

Fortunately, the CCC was available for the Mike-Mike information handoff and copied our intent to shift to Initial Response Operations. However, if the CCC was not available, other methods would be needed to communicate with other Cupertino OEM staff. These options need to be defined, practiced, and incorporated into OEM and CARES operating procedures. One option is to leverage the city's Public Safety VHF simplex frequency.

Similar Mike-Mike information was successfully handed off to County RACES per their established protocol for city MM roll ups.

Recommendations:

CARES

7. Look at a different method for determining the trigger to activate: Max MM vs average score.
8. Work with OEM staff on radio access options -- Part 90 city trunk radio or WPYD282, Part 97 AMS radio.
9. Consider other information sharing methods.

Observation #4

Document integrity is a critical aspect of any field response. The Demob process used for the second time with good results.

For the second time, CARES tested the Demobilization Check Out process and custom Demob form that guided responders through a series of checks. General feedback from the Demob Unit Lead was that the level of document quality was not perfect, but better than it has been in the past. For the most part, Forms and logs were legible and complete.

Recommendations:

CARES

10. Encourage CARES members to watch the SCCo RACES Forms video, and save the sample of the form in the go-kit. Look at stressing forms completion with every exercise.

Observation #5

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

Recommendations:

CARES

11. Look at incorporating CERT members in future exercises as the buddy.
12. **Develop a clear list of our priorities for our response: MM, ISA, ARKs, EOC, CAP, etc. Consider updates to the Emergency Plan doc? Develop the list of docs and forms they should have available. Use to build a more engaged subset of members to take a leadership role.

Tactical Action Item List

13. Review C469 training plan for completeness
14. Create work order to add Recessed D-Ding tie-down anchors

15. Update CARES website > Forms page to reference only one version of the form. Update training to reflect this change.
16. Correct the missing TRANS assets on ISA tracking form
17. Correct the sort on ISA tracking form...
18. Refresh ISA Document Binder that was used to hand out assignments.

Conclusion

While it is easy to focus on the things that need to get done to – in this case, improve ISA process performance – we cannot lose sight of that fact that a Hayward Fault rupture is long overdue. With 25 items identified above as things on which we could work, not everything can get done.

This ISA exercise was a process merge of legacy (pre-2021) ISA assets, new assets, and aspects of the First Look Area assessment. If the Hayward Fault ruptured tomorrow, what we deployed for this exercise would essentially work during a real event. Prioritizing the things that can make a difference ensures we spend our time effectively on improving our response process. This is the next step.

Special thanks to the Exercise Team for your hours of reviewing, discussing, and agreeing on aspects of this exercise.