

# After Action Report 2015 Infrastructure Safety Assessment Drill



Cupertino  
ARES/RACES

## 1. Overview

**Description:** Infrastructure Safety Assessment Drill  
**Event Date:** 16-May-2015  
**Report Date:** 17-May-2015  
**CARES Event:** CUP-15-20T  
**RACES Event:** CUP-15-20T  
**Control:** Cupertino ARES/RACES  
**Report Revision:** 1.1, **FINAL**  
**Submitted by:** Jim Oberhofer KN6PE

### Requirements for Reporting<sup>1</sup>

Completing an After Action Report is part of the required 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)."

CARES will follow this requirement for reporting the results and recommendations for this Training Event.

## i. Introduction and Background

### Terms

**CARES:** Cupertino Amateur Radio Emergency Service, ARES/RACES organization supporting the City of Cupertino.

**CCC:** Cupertino Citizen Corps; the City's umbrella organization for CARES, CERT, and MRC.

**CERT:** Community Emergency Response Team; trained members who can assist others in their neighborhood or workplace following an event when professional responders are not immediately available to help.

**CuSD:** Cupertino Sanitary District, a CARES Served Agency.

**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.

**IP:** Improvement Plan; includes the key recommendations and corrective actions to be taken as a result of this exercise.

**ISA:** Infrastructure Safety Assessment, a CARES Process. The focus for this drill.

<sup>1</sup> <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>

MRC:	Medical Reserve Corps; volunteers who are practicing or and retired physicians, nurses and other health professionals, as well as other citizens interested in health issues, who are eager to volunteer to address their community's ongoing public health needs and to help their community during large-scale emergency situations.
NCO/NCS:	Net Control Operator / Net Control Station. The control function that ensures the efficient passing of messages between stations on the frequency.
PSA:	Preliminary Safety Assessment, a CARES Process.
RRO:	Radio Room Operator. The position that originates and receives messages for exchange with field responders.
SCVWD:	Santa Clara Valley Water District
SJWC:	San Jose Water Company, a CARES Served Agency.
Served Agency:	An agency, special district, or other recognized organization with which CARES has a signed Memorandum of Understanding to assist in time of need.

**Introduction**

The City of Cupertino supports testing the community emergency response plans and ongoing disaster preparedness training as an essential component to a successful community disaster response. One element of the CARES response is the Infrastructure Safety Assessment (ISA).

CARES performs the Infrastructure Safety Assessment (ISA) on selected Cupertino critical facilities that are deemed to be important to the City or our agencies. SJWC has 21 assets in Cupertino; the CuSD has another 10. These served agencies have requested an eyes-on assessment of these assets because they may not have the manpower to inspect them all immediately after a disaster occurs. Additionally, there are other assets belonging to SCVWD, PG&E, and the City that are also part of the review.

We perform the ISA to:

- Develop a picture on the state of the city’s critical infrastructure.
- Help the EOC focus attention on problem areas that may only get worse or impede the recovery if not immediately addressed.
- Provide an early report of asset status for our Served Agencies.

The purpose of this exercise was to test the ISA Process as performed by CARES.

The City of Cupertino authorized this drill with training activation number CUP-15-20T. This report covers the activities undertaken by CARES and the findings from that drill.

**ii. Type / Location of Event / Drill / Exercise**

Event Type: City of Cupertino, CARES Training Activation  
 Event Identifier: CUP-15-20T  
 Event Name: Infrastructure Safety Assessment  
 Location: City of Cupertino

**iii. Description of the Event / Drill / Exercise**

CARES drill objectives:

1. Exercise resource and message net concepts and procedures.
2. Exercise emergency voice communications message handling procedures, all message priorities between deployed field units and the EOC/Comm Van.
3. Test the ISA procedure and documentation.
4. Exercise Comm Van to DOC information handoffs.
5. Exercise information handoffs to Served Agencies (SJWC, CuSD).

6. Manage information using OES documentation procedures and tracking methods.
7. Exercise the Staging Process.
8. Perform Radio Checks from each ISA asset location.

Event resources came from the following organizations:

1. Cupertino ARES/RACES: Responsible for checking into the CARES emergency net, responding to the field to perform the ISA process, rolling up the results, and transmitting the results to the Cupertino EOC Staff. Seventeen (15) CARES members participated in the test.

<b>Name</b>	<b>Call Sign</b>	<b>Assignment</b>
Dick Blaine	K6ODK	ISA Field Responder, Team 1
Ken Ericksen	KI6SYY	DOC
Doug Frierson	KJ6LLY	ISA Field Responder, Team 2
Gerd Goette	KI6WEJ	DOC
Judy Halchin	KK6EWQ	Net Control Operator
Steve Hill	KK6PHI	ISA Field Responder, Team 3
Janet Motha	Kf6PUQ	ISA Field Responder, Team 4
Jim Oberhofer	KN6PE	Shift Supervisor / Comm Team Lead
Darryl Presley	KI6LDM	Message Net Control Operator
Dick Sherman	N6IK	ISA Field Responder, Team 2
Skip Stephens	WA6VFD	ISA Field Responder, Team 4
Tony Stieber	KJ6OHT	ISA Field Responder, Team 7
Hella Bluhm-Stieber	KJ6OHF	ISA Field Responder, Team 7
Mary Tanner	KI6GCX	ISA Field Responder, Team 1
Leroy Wilkinson	KG6OGA	ISA Field Responder, Team 3

The drill was initiated as a pre-announced event with CARES members knowing to respond to the EOC at the appointed time.

**Performance against Objectives:**

1. Exercise resource and message net concepts and procedures.

Results: **SATISFACTORY**. Resource net control was in place for tracking responders to the EOC. Message Net Control procedures were in place. All messages were passed to the EOC. However, there was some lack of clarity as to the roles of the NCO and the RRO given the brief messages that were passed.

2. Exercise emergency voice communications message handling procedures.

Results: **SATISFACTORY**. With a focus on the ISA Process, the status of all observed assets were passed and recorded.

3. Test the ISA procedure and documentation.

Results: **SATISFACTORY**. All documented were updated. All directions, images, and instructions were reported to work. Some minor changes were recommended.

4. Exercise Comm Van to DOC information handoffs.

Results: **SATISFACTORY**. The Van-to-DOC network was successfully brought up and made operational.

1. Telephony service was established between all available VoIP phone locations.
2. This drill also introduced a File Share. A common ISA tracking spreadsheet was created and updated in the Comm Vann, and then viewable by the DOC.

5. Exercise information handoffs to Served Agencies (SJWC, CuSD).

Results: **SATISFACTORY**. An SJW / ISA asset report was created and sent to the SJWC EOC (packet address) and the SJWC Emergency Manager (email address) by AX.25 Packet Radio. No asset report was created for CuSD.

6. Manage information using OES documentation procedures and tracking methods.

Results: **SATISFACTORY**. All ICS and Cupertino OES Standard documents were produced and used.

7. Exercise the Staging Process.

Results: **SATISFACTORY**. All ICS and Cupertino OES Standard documents were produced and used. Additionally, Resource T-Cards were created and maintained as part of the resource tracking process.

8. Perform Radio Checks from each ISA asset location.

Results: **Inconclusive**. No explicit radio check was made at each asset location. Field Team contact was maintained by shifting to the Repeater.

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**iv. Chronological Summary of Event / Drill / Exercise**

CARES ran this test under activation number CUP-15-20T. The following is a summary of the activities as reported on ICS-214s that were submitted after the test. All times listed here are in local time. The following is a very high level summary.

<b>Time</b>	<b>Description, Notes, Comments</b>
0650	Retrieve the Comm Van, Drive to City Hall.
0715	Comm Van at City Hall.
0730	CARES Emergency Net was activated, taking Resource travel check-ins.
0800	Field responders at City Hall, start ISA briefing, assignment handouts.
0838	KK6EWQ opens Message Net, KI6LDM staffs RRO position.
0838	Field responders deploy to their assignments.
0856	First ISA Report received.
0917	Health and Welfare Check.
0944	Health and Welfare Check.
1010	Health and Welfare Check.
1030	First Packet message to SJWC.
1041	Last ISA Report received; total messages passed: 25
1100	Final Packet message to SJWC.
1103	Message Net secured.
1115	Drill concluded; Full debrief at City Hall.

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**v. Response at SEMS Levels (as appropriate):**

Include a summary, conclusions, the field response, and other local, operational area, regional, state or federal response.

Participating CARES members responded from their home locations to perform the ISA per the actual Served Agency asset locations. The following specifics are noted here:

- The Two-Man Rule (buddy system) was in effect for all ISA responders.
- CARES fielded 4 vehicle teams and 1 bicycle team. ; the Six Team ISA Set (defines the ) was used, and was modified to take advantage of the bicycle mobile team.
- 23 of the 35 assets were assigned and located. The remaining assets were excluded due to team availability and the desire to focus on the ISA process.
- Radio packet messages containing ISA summaries were originated and transmitted to one served agency as a test of the ISA asset status delivery report.
- It took 2 hours for 5 teams to perform the assigned ISA.

The CCC DOC was also staffed. The following specifics are noted here:

- SitStat process for incoming ISA reports was prototyped. An ISA tracking Map was developed with improvement recommendations forthcoming.

No other organizations or entities participated in this drill.

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**vi. Interacting Systems, Agencies, and Programs:**

Include mutual aid systems (law enforcement, fire/rescue, medical, etc.); cooperating entities (utilities, American Red Cross, Sheriff's Office, City Departments, etc.); telecommunications and media interactions.

**ISA Process**

A review of the ISA process was presented to the membership at the March and April 2015 CARES General Meeting. The key success factors for this drill were:

1. CARES members can operate in the field in ad hoc teams (one driver and one radio operator).  
**Results:** Teams were effective with a 2-person driver/Radio Ops approach.
2. The ISA Assignment sheets are clear on where to find the asset and what to look for.  
**Results:** Changes made from the 2013 ISA drill, plus a review of CuSD assets this year resulted in only 2 CuSD updates and 7 SJWC updates.
3. The message handling of ISA reports is clear and succinct.  
**Results:** Reports, both nominal condition and trouble reports, were passed effectively.
4. ISA status can be delivered to the EOC and appropriate served agencies.  
**Results:** Enhancements to the VAN-to-DOC network improved DOC visibility to ISA status.
5. Field Teams operate safely and do not take any unnecessary risks.  
**Results:** Safety Briefing impresses the need for personal safety at all times. No reports of personal hazards or risks were made.

**Communications Systems**

1. All radio systems performed as expected.
2. CARES activated the resource net on VHF TAC-1. Some coverage problems were observed. The Message Net was opened on TAC-2 and was linked to the CARES UHF repeater.
3. Simplex radio coverage from the van was not sufficient to maintain radio contact with all mobile field units, specifically at SJW-T1. All field teams had access to the UHF Repeater if problems on the simplex channel occurred.
4. We observed an intermod problem with TAC-2 (146.460s), this time with a National Weather Service channel at operating position #1 (CARES Message Net). This was intermittent, but noticeable.
5. We observed situations with what sounded like a stuck Mic. Part of the pre-deployment briefing included comments to Yeasu FT-60 owners to ensure any lapel mics are set up to handle this.

**WiFi Network Systems**

1. Van network booted without problems.
2. All configured Phones were deployed and booted successfully.
3. DOC network kit was configured and installed without issue (despite not having the Network Setup documentation available).
4. A Network Share was configured using an outboard server. This was configured into the Van and DOC PCs, allowing for a common location to share files.

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**vii. Improvements, Conclusions, Recommendations:**

As applicable, include a description of actions taken, assignments, associated costs or budget, timetable for completion or correction, and follow-up responsibility.

The following is a summary of the key Conclusions and Recommendations.

**What worked**

- Found all assets; good access to all sites, directions were clear.
- Good repeater coverage.
- File share between Van and DOC worked well; plotting on a local map for EOC sharing.

**What didn't work / needs improvement**

- Radio issues, stuck mic's
- Passing traffic; was not sure if the message was received.
- RRO operator (on hand mic) was louder than NCS operator (on boom mic).
- Did not correctly set expectations on message passing: role of NCO vs RRO.
- Sunnyvale Sanitary District has coverage in Rancho Rinconada area.
- Few people answered H&W calls... away from their radios?

**Recommendations**

See Section A: Improvement Plan

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**viii. Logs, attachments:**

As applicable, include a description of actions taken, assignments, associated costs or budget, timetable for completion or correction, and follow-up responsibility.

The following reports are attached:

1. Corrective Action Plan
2. ICS 214 Event Unit Log
3. COES 201 Net Control Station Log
4. Packet Message, Printed ISA Report

End of Report.

### A. Improvement Plan

This IP has been developed specifically for CARES as a result of 2015 ISA Drill (CUP-15-20T) conducted on 16 May 2015. These recommendations draw on the After Action Debrief. The IP has been formatted to align with the Corrective Action Program System.

Capability	Observation Title	Recommendation	Description	Capability Element	Responsible Agency	POC	Start Date	End Date
1. DOC Procedures	Data Collection	1.1 Add GIS Overlay for ISA assets	1.1.1 Add GIS Overlay for ISA assets	Planning	DOC	Gerd G	6/1/2015	9/1/2015
1. DOC Procedures	Procedures	1.2 Review Procedures	1.2.1 Review Activation and CAS notification process (ISA who will get the request for ISA following SEMS)	Planning	OES	Ken	6/1/2015	9/1/2015
1. DOC Procedures	Procedures	1.3 Review Procedures	1.3.1 Review check in (DSW), operations section assignment (how do we use EOC intelligence to assist with safe deployment of field teams)	Planning	OES	Ken	6/1/2015	9/1/2015
1. DOC Procedures	Procedures	1.3 Review Procedures	1.4.1 CAS notification process needs to change over to a different site per Robert Kim	Planning	OES	Ken	6/1/2015	9/1/2015
2. ISA Process	Procedures	2.1 Leverage proximity to assets	2.1.1 Investigate how knowledge of local assets by members would work.	Planning	CARES	Staff		
2. ISA Process	Procedures	2.1 Leverage proximity to assets	2.1.2 Ability to deploy someone near an asset instead of having them come in and then go out to the asset.	Planning	CARES	Staff		
2. ISA Process	Procedures	2.2 Review ISA data sets	2.2.1 Investigate and update ISA Asset Sheets per feedback.	Planning	CARES	Jim	6/1/2015	6/12/2015
2. ISA Process	Procedures	2.2 Review ISA data sets	2.2.2 Confirm all maps are complete across all sets.	Planning	CARES	Jim	6/1/2015	6/12/2015
2. ISA Process	Procedures	2.3 Data Collection	2.3.1 Send the data to GIS to map in common operating picture	Planning	OES	Ken		
2. ISA Process	Procedures	2.3 Data Collection	2.3.2 Could pictures be used as well as geocoded pictures	Planning	OES	Ken		
3. ISA Coverage	Served Agencies	3.1 Expand ISA coverage	3.1.1 Complete engagement with SCVWD	Planning	CARES	Jim	5/19/2015	8/1/2015
3. ISA Coverage	Served Agencies	3.1 Expand ISA coverage	3.1.2 Investigate Sunnyvale Sanitary District Cupertino coverage	Planning	CARES	Jim	6/1/2015	8/1/2015

Capability	Observation Title	Recommendation	Description	Capability Element	Responsible Agency	POC	Start Date	End Date
3. ISA Coverage	Served Agencies	3.1 Expand ISA coverage	3.1.3 Investigate Cal Water Cupertino coverage (See Ken, need a name)	Planning	CARES	Jim	6/1/2015	8/1/2015
3. ISA Coverage	Served Agencies	3.1 Expand ISA coverage	3.1.4 Investigate PG&E Cupertino coverage (gas piping, See Ken, need a name? See Anthony Lin/PG&E Govt Relations)	Planning	CARES	Jim	6/1/2015	8/1/2015
4. Van Network	Van Net Ops	4.1 Update Network configuration	4.1.1 Configure RPi Server for Wifi Access	Planning	CARES	Jim	5/19/2015	7/1/2015
4. Van Network	Van Net Ops	4.1 Update Network configuration	4.1.2 Update RPi Software	Planning	CARES	Jim	5/19/2015	7/1/2015
4. Van Network	Van Net Ops	4.1 Update Network configuration	4.1.3 Add File share to the basic config (samba)	Planning	CARES	Jim	5/19/2015	7/1/2015
4. Van Network	Van Net Ops	4.1 Update Network configuration	4.1.4 Add web service to the basic config (apache)	Planning	CARES	Jim	5/19/2015	7/1/2015
4. Van Network	Van Net Ops	4.1 Update Network configuration	4.1.5 Update sip.conf, add phone number range for 20 phones; renumber.	Planning	CARES	Jim	5/19/2015	7/1/2015
4. Van Network	Van Net Ops	4.1 Update Network configuration	4.1.6 Update extensions.conf to add phone number playback, test message	Planning	CARES	Jim	5/19/2015	7/1/2015
4. Van Network	Van Net Ops	4.2 Update Network Docs	4.2.1 Redistribute to Van, DOC positions	Planning	CARES	Jim	5/19/2015	7/1/2015
5. Van Mat'l Support	Van Forms	5.1 Revisit Forms Management	5.1.1 Need a stock of T-Cards for events like this.	Planning	OES	Ken		
5. Van Mat'l Support	Van Forms	5.1 Revisit Forms Management	5.1.2 Move forms to File Box. Align with ARKs (?)	Planning	CARES	Judy		
5. Van Mat'l Support	Van Forms	5.1 Revisit Forms Management	5.1.3 KE: Maps set for Comm Van	Planning	OES	Ken		
6. Comm Ops	Audio Performance	6.1 Audio Performance	6.1.1 Investigate report of Pos #1 (on hand mic) was louder than Pos#3 (on boom mic)	Planning	CARES	Phil		
6. Comm Ops	Audio Performance	6.1 Audio Performance	6.1.2 Check TM-D710 function to reduce sensitivity for intermod.	Planning	CARES	Phil		
6. Comm Ops	Repeater Feature	6.2 Add Repeater Feature	6.2.1 Investigate Repeater macro addition to turn on / off the repeater to speak "Drill Operations" at the end of each transmission.	Planning	CARES	Marcel		



