After-Action Report
2007 S.E.T. – 7.8 Earthquake

Cupertino
ARES/RACES

1. Overview

Description:	2007 S.E.T. – 7.8 Earthquake
Event Date:	3-Nov-2007
Report Date:	6-Nov-2007
CARES Event:	CUP-07-26T
RACES Event:	CUP-07-26T
Control:	Cupertino ARES/RACES
Report Revision:	1.0 Final
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Requirements for Reporting

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, section 2900(j)."

i. Introduction and Background

Terms

ARK: Fixed position shipping containers placed throughout the City by Cupertino OES that contain emergency supplies for the purpose of supporting community-based search and rescue, and first aid.

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

ISA: Infrastructure Safety Assessment, procedure performed by CARES to confirm the state of key structures throughout the city.

NCO: Net Control Operator, may be indicated by M-NCO (Message Net) or R-NCO (Resource Net)

PSA: Preliminary Safety Assessment, a home-based assessment that develops a quick snapshot of the state of the city based on the distribution of CARES members.

RRO: Radio Room Operator

SET: Simulated Emergency Test, an annual drill sponsored by the City of Cupertino CA OES and hosted by CARES.

Introduction

CARES executed the 2007 S.E.T. as a full field communications deployment exercise to test updated processes specific to the CARES mission. The purpose of this exercise was to respond to and practice what we believe will be the 1st shift of activity that CARES will likely perform during an infrastructure-impacting event such as an earthquake.

Specifically, the three response activities that were exercised during this drill were: Preliminary Safety Assessment, Field Responder deployment, and Infrastructure Safety Assessment. Resource Net Management procedures were also exercised.

On 3-November-2007, the City of Cupertino authorized a CARES training activation under the designation CUP-07-26T.

This report covers the activities undertaken by responding CARES members during this event and the subsequent findings.

ii. Type/location of Event / Drill / Exercise
Event Type: City of Cupertino, CARES Training Activation
Event Identifier: CUP-07-26T
Event Name: 2007 S.E.T. (Hayward Fault Rupture)
Location: City of Cupertino

iii. Description of Event / Drill / Exercise

The following CARES objectives were developed for this exercise.
1. Test the first release of the EC (Response) Playbook
2. Test the Infrastructure Safety Assessment (ISA) Process
3. Exercise EOC position shift changes
4. Exercise the Resource Net concepts and procedures
5. Use standard ICS and/or Cupertino OES documentation

All 5 objectives were in play, with the results described below.

Event resources came from the following organizations:
1. Cupertino ARES/RACES: Responsible for staffing the City's EOC radio room, resource net control position, message net control position, and field communications resources. Eighteen (18) CARES members participated.

The simulated event was a 7.8 earthquake that occurred in the San Francisco East Bay (Hayward Fault) with the drill starting immediately on detection of the earthquake event. There were no pre-drill conditions imposed on drill participants.

Once the drill was initiated, CARES's planned response procedures and sequence was executed. This included:
1. Preliminary Safety Assessment: All members were required to perform this assessment and submit their findings to the EOC.

2. Field Response. CARES members were polled for their availability for a field deployment. Scenario sheets were previously placed at 8 of the standard response locations throughout the city that included ARKS, Fire Stations, and the city's medical center.

    CARES members were dispatched to field assignments based on member location and availability. After retrieving the scenario sheet, traffic was initiated between these locations and the EOC based on scenario information that was provided.

3. Infrastructure Safety Assessments. CARES members where then deployed to perform ISAs. All Santa Clara Valley Water District, Cupertino Sanitary District, and some San Jose Water Company assets were available for inspection.

    CARES members were dispatched in teams of 2 to retrieve ISA assignment sheets and perform the assessment. On completing an assessment, the results of each assessment were radioed back to the EOC. On completion of the final assessment, the field assignment was completed.

CARES established the Emergency Net for initial check-ins and coordinate PSA traffic. On determining this was a significant event, the net was split into the Resource Net (TAC-1) and the Message Net (TAC-2). Assignments were made on the resource net and the responders were tracked to their assigned location. On arrival, they checked out of the Resource Net and checked into the Message Net. When the assignment was over, they checked out of the Message Net and into the Resource Net to travel back home, to their next destination, or to wait for another assignment.

Performance against Objectives:

1. Test the first release of the EC (Response) Playbook

The EC Playbook is a collection of information on people, scenarios, deployment sites, etc. designed to support the Shift Supervisor. The most notable improvement attributed to its use was in the speed of deploying CARES members to the field. Further improvements will be incorporated as required.

2. Test the Infrastructure Safety Assessment (ISA) Process

This was the 2nd year that CARES exercised this process. The ISA process was significantly restructured to essentially give responders more latitude in managing ISA activities in the field. This approach worked well; minor refinements are also planned.

3. Exercise EOC position shift changes

All EOC shift changes were performed with no reported problems.

4. Exercise the Resource Net concepts and procedures

CARES invoked the 2-net structure on opening the EOC. General observations point to a hand-off problem where the original NCO hands off the net to the Resource NCO and then transitions to the Message Net. This procedure requires more clarification.

5. Use standard ICS and/or Cupertino OES documentation

Where standard CARES forms were used, data collection appeared to go smoothly. However, not all required forms were readily available to CARES responders resulting in some members improvising with their local record keeping. As a result, the information captured was inconsistent across the event participants. See the recommendations section below.

The drill ran for about 6 hours. A debrief was held afterwards with all participating members.

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iv. Chronological Summary of Event / Drill / Exercise

All events took place on Saturday, 3-Nov-2007. All times listed are in local time. This summary is a compilation of submitted ICS-214s, net control logs, and other logs.

Time	Description, Note, Comment
0820	Jim KN6PE requested permission from Marsha Hovey, Cupertino OES Director, to activate CARES. CARES was assigned training activation number CUP-07-26T.
0830	Jim KN6PE described the scenario over Tac-1 and stated that in 30 seconds, they will experience a 7.8 earthquake.
	Event occurs.
	Bill KD6TQJ assumes NCO and opens the CARES Emergency Net. Allan KD6QPP assumes the Shift Supervisor position.
	The following check-ins were taken: K6TD WA6VFD KG6QPT KI6FGR KG6UVS K6FJC KN6PE

Time	Description, Note, Comment
	KC6PJJ KC6FGX WB2GDQ KF6RZR KG6OGA KG6OUG WA2KDX KD6QPP KD6TQJ K6TEN KF6PHO
0835	K6TD and KN6PE were dispatched to the EOC
0850	K6TEN (Engineer in Charge) arrives at the EOC; reports that the EOC has been (simulated) checked out by City Inspectors and was safe to occupy.
0900	KN6PE, and K6TD arrive at City Hall; Radio room is opened
0902	Shift Supervisor is transferred from KD6QPP to KN6PE K6TD assumes Radio Room Operator position
0903	Begin receiving Emergency and PSA traffic
0920	Total of received 8 PSAs to date
0925	Total of received 11 PSAs to date
0927	Urgent message from KC6PJJ on SJW asset Tab01, Tank Break.
0932	Called Jim Wolbrinck/SJW with urgent traffic regarding Asset: Tab01, Tank Break. Left a voicemail. Resource NCO staffed by KF6FGR at the EOC. Resource Net was transferred from KD6TQJ to KF6FGR and continues operation on TAC-1. KD6TQJ establishes the Message Net from the field on TAC-2.
0945	Radio Room Operator shifts to monitor CARES TAC-2

	Begin Field Responder Assignments:
	Med Center: KG6QPT
	Hyde Ark KC6FGX
	                 KG6PHO
	                 WA6KDX
	MV Fire WB2GDQ
	                 KD6QPP
	Cup File: KF6RZR
	                 WA6VFD
	SS Fire: KG6OGA
	                 KC6PJJ

1027	Noticing signal strength differences between County radio operating position and CARES radio operating position. CARES position appears to have a T/R relay problem. K6TEN (Engineer in Charge) begins investigating. Problem identified as a battery problem.

1125	Requested WA2KDX to respond to the EOC for RRO shift.
	Begin ISA Assignments
	MV Fire: K6TD
	                 K6FJC
	                 WA6VFD
	                 KD6QPP
	SS Fire: KG6OGA

1138	Message NCO shift change from KD6TQJ to KF6RZR. Next message is #45.
1146	RRO shift change from K6TD to WA2KDX
1153	Health & Welfare check on Message Net.
1208	Shift Supervisor shift change from KN6PE to KC6PJJ KN6PE responds to SS Fire for ISA assignment.

Time	Description, Note, Comment
1243	First ISA report received
1319	Last ISA report received; 6 sent it total
	Drill Secured. All Stations requested to report to EOC for debrief
1345	All Nets secured; begin debrief at EOC.
1500	Debrief completed, end of drill.

v. Response at SEMS Levels (as appropriate):
Include a summary, conclusions, the field response, and other local, operational area, regional, state or federal response.

Not appropriate for this event.

vi. Interacting Systems, Agencies, and Programs:
Include mutual aid systems (law enforcement, fire/rescue, medical, etc.); cooperating entities (utilities, American Red Cross, Sheriffs Office, City Departments, etc.); telecommunications and media interactions.

Cupertino Office of Emergency Services (OES)
Marsha Hovey, Cupertino OES Director; contact was made initially during the drill to provide an update on the event status.

San Jose Water Company (SJW)
Contact was made with Jim Wollbrinck; San Jose Water Company Emergency Preparedness Superintendent, to inform him of the state of SJW's inspected assets.

Communications Systems. The CARES TAC-1 frequency was used as the Resource Net. The CARES TAC-2 frequency was used as the Message Net. There was significant interference from County Fire on CARES TAC-1. This is currently under investigation.

Packet messages were initiated and sent to the Santa Clara County EOC with event status. Draft messages on ISA status were created for the San Jose Water Company.

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 Improvements, Conclusions, and Recommendations.

What worked?
- ▪ EOC Staff shift changes went well.
- ▪ General conclusion was that this extended drill was a good indication of what CARES members could expect in terms of the type and extent of requested activities.
- ▪ Making field staffing assignments based on resource and destination zone locations worked well

What didn't work / needs improvement?
- ▪ Logged times for the same reported occurrence of something varied from log to log. Could not accurately recreate the time sequence of events for the drill from submitted logs.
- ▪ Standard CARES Forms were not available at all operating positions.
- ▪ Occasional excessive radio exchanges between stations and Message NCO to make a contact.
- ▪ Radio interference from County Fire on the CARES TAC-1.
- ▪ Couldn't find some ISA assets.
- ▪ Tracking of stations out in the field. There was some lost stations between the 2 nets and in shift handoff.

Recommendation
Documentation

Where standard CARES forms were used, data collection appeared to go smoothly. However, not all required forms were readily available to CARES responders resulting in some members needing to improvise with their local record keeping. As a result, the information captured was inconsistent across the event participants.

1. Identify, publish, and encourage CARES members to have specific CARES forms readily available as part of their go-kit. This "admin" package should be part of the CARES go-kit check-out.
2. Develop a means for time-synching all participants to ensure log time stamps are reasonably accurate.
3. Update the EC Playbook, Forms Section, with all currently used forms.

ISA Procedure
The revised procedure worked reasonably well and the secondary ISA package distribution method (dispatched couriers) was used. A sample of SJW and CuSD assets were assessed, with some assets not being able to be located. Additionally, feedback from deployed teams raised concern over the physical exertion required to hike to some of the ISA sites.

4. With the appropriate served agency, schedule an event to visually locate each ISA asset. Recommend updates to the respective ISA packages as necessary.
5. Identify and make appropriate notations in the EC Playbook on any deployment requirements that should be noted (i.e.: water entry required; requires physical effort, etc.).
6. Address safety risks from wild animals that may be encountered in remote ISA locations (snakes, cougars, wild boar, etc.).

Resource Net
CARES invoked the 2-net structure on opening the EOC. General observations point to a hand-off problem where the original Resource NCO hands off the net to the Resource NCO and then transitions to the Message Net. This procedure requires further clarification.

7. Refine Net handoff procedures through a table-top exercise to uncover issues and refinements.

Radio Room Equipment

8. Work with City officials to understand the interference problem we are experiencing.

viii. Training Needs
1. Message handling. Practice more efficient message protocol when passing traffic from the field to the EOC. Develop simulations for interested CARES members.
2. Radio interference: Develop information for CARES members on what to do when they experience interference on the frequency.
3. Shift Supervisor Certification and Training. This certification procedure is pending definition, and will be an objective for 2008.

ix. Recovery Activities (as applicable)
Recovery activities were limited to immediate reset and re-stocking of all EOC deployment forms and ISA packages.

x. References: Maps, charts, training materials, etc.
The following material was developed and provided as part of the Volunteer Briefing Packet:
• Event Summary
• Scenario Sheets
• ICS-214 Unit Logs

End of Report.