

## **Cupertino Amateur Radio Emergency Service**

Topic: Field Deployment Drill Discussion

Speaker: Jim Oberhofer KN6PE, EC Cupertino ARES

Date: Thursday, 4-June-2009, 19:30

Event: Cupertino ARES Meeting, Orientation Training

# Topics

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- 1. Phone outage in Santa Clara, Santa Cruz Counties**
- 2. Drill Prep**

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# Phone outage – Santa Clara, Santa Cruz Counties

# Communications problems

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## Loss of Communications infrastructure from a variety of causes

1. Earthquake
2. Urban fire
3. Terrorist attack
4. Unspecified failures

# The problem

## Phone outage in Santa Clara, Santa Cruz Counties

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**On Thursday 9-April-2009, Santa Clara County officials declared a local emergency after someone intentionally cut an underground fiber optic cable in south San Jose, causing a widespread phone service outage in southern Santa Clara and Santa Cruz counties that included disruption to 911 emergency phone service.**

**The outage affected some cell phones, Internet access, and about 52,200 Verizon household land lines in Morgan Hill, Gilroy and Santa Cruz County, according to the Santa Clara County OES. The cell phone networks affected were Verizon, Nextel, Sprint and some AT&T.**

**Full network service was restored by 6:00am Friday 10-April-2009.**

# The response

Local Time	Reported event
9-May-09	
0130	SJM: Fiber-optic cables are cut in two underground locations in San Jose
0200	Gilroy 9-1-1 detected as down, extra police staff brought in
0330	SJM: A cable in San Carlos, owned by Sprint Nextel, was also reported as cut.
0630	Morgan Hill RACES activated; Police knocking on home doors of volunteers for activation
0715	SCC: 1 <sup>st</sup> RACES responder in County EOC, Emergency Net is activated
0830	Morgan Hill: request to County for Mutual Aid Communicators
0900	SCC EOC Staffed
0900	Gilroy: EOC activated
0930	Gilroy: EOC Briefing, understands the extent of the event
0930	Morgan Hill: first MACs on scene
1030	ATT: The cut has been located off of Monterrey Highway in Blossom Hill. Crews are onsite assessing the damage to plan how the restoration will proceed
1158	ATT: 3 of the 4 cables are completely severed and the 4th is partially severed. There is slack on one side only and all cables must be fusion spliced.
1200	SCC: gets a sense of the Gilroy/Morgan Hill event
1300	Gilroy: request to County for Mutual Aid Communicators
1420	SJM: SJ Police: Sabotage caused phone outage in Santa Clara, Santa Cruz counties.
1420	ATT: Best case ETR for completing splicing of these 3 cables is 8PM PDT. It has been determined that the most critical services are on the 3 48-fiber cables. The 360-fiber cable previously believed to be partially severed was completely severed and is now spliced.
10-May-09	
0100	SJM: All service reported as restored to fixed and mobile customers of AT&T, Verizon and Sprint Nextel.
0600	ATT: network is fully restored

# The assignments

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## Where were Field Responders assigned?

- Hospitals; phones were out to the outside world
- Intersections, Freeway on/off ramps: ARES/RACES provided points of contact for passers-by
- ARES/RACES relieved Police and fire at intersections for communications support

# The concerns

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## Observations from the debrief

1. Someone observed that in the military, the first attack is to take out Command and Control (includes communications). While the city was responding to the telephone outage, there was a sense that this was not the complete event, and EOC staff was waiting for the “other shoe to drop”.
2. Banks did not open. ATMs did not work. Some opened to one person at a time to make a withdrawal. Apparently, the intent was to reduce the risk of a hold-up since there would be no way to contact the Police.
3. General uneasiness knowing that, in our telecom/ connected society, that none of the phone worked.

# The debrief

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## What worked

1. MAC Training; deploying, tracking, and managing Mutual Aid Communicators worked out well.
2. Good net control handling both at County and at the Cities.
3. Use of South County Repeater for command chat between Morgan Hill and Gilroy
4. MAC response was enthusiastic and welcomed by the city EOC staff; plenty of good visibility for their efforts; positive press reports.

## What didn't work

1. Signage. Nothing available to help the public know that MACs were communications points
2. Volunteer notification. This was resource intensive given that the phones were out.

# The recommendations

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1. Signage. Need to pre-plan this type of event (big signs readable by a passing car, Orange, large print, multi-purpose, i.e.: “Emergency Communications Here”).
2. Vests. Putting RACES on our vests is meaningless to the public. Consider COMM or COMMUNICATIONS to clearly ID our function. Same for FIRST AID responders, etc.
3. Investigate alternate ways of making first responder, volunteer, and community notifications of non-evident events when phones are inoperative.
4. Carry a book in your go-kit... assignments can get boring.
5. Banks and ATMs were inoperative... credit cards did not work. Carry money; put change and bills in your Go Kit.

# What the city is considering

## Alternative to Telephone contacts

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### Problem

- Stevens Creek Dam has an inundation area that would impact several thousand residents
- How do you notify them quickly and effectively in the event of an imminent dam failure?

### Option

- NOAA Alert Radios w/ SAME
- No decision yet to commit to this approach for notification

# What the city is considering

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## NOAA Weather Radio All Hazards (NWR)

1. A nationwide network of radio stations broadcasting continuous weather information directly from the nearest National Weather Service office.
2. NWR includes 1000 transmitters (162.400 MHz to 162.550 MHz) covering all 50 states, adjacent coastal waters, Puerto Rico, the U.S. Virgin Islands, and U.S. Pacific Territories.
3. NWR broadcasts official Weather Service warnings, watches, forecasts and other hazard information 24 hours a day, 7 days a week.
4. NWR is an "All Hazards" radio network, making it a single source for comprehensive weather and emergency information.
5. NWR also broadcasts warning and post-event information for all types of hazards – including natural (such as earthquakes or avalanches), environmental (such as chemical releases or oil spills), and public safety (such as AMBER alerts or 911 Telephone outages).
6. SAME, or Specific Alert Message Encoding, allows you to specify the particular area for which you wish to receive alerts.

# Sample radio

(not an endorsement)

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- Monitors U.S. Emergency All Hazards, and Emergency Alert System (EAS) weather bulletins, warnings, & forecasts
- Receives all National Oceanic & Atmospheric Association (NOAA) reports, which provides all available emergency advisories on tornadoes, severe thunderstorms, floods, evacuations, civil danger warnings & more
- Flexible programming—select Specific Area Message Encoding (SAME) broadcasts in up to 6 different counties
- 100 decibel audio alarm with visual alert signal
- 3 levels of NOAA messages: Statement, Watch, Warning
- Non Volatile Memory Back-up
- Dual alarm with snooze function
- Includes convenient stand (to hold unit) and AC Adapter



# What the city is considering

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## Problem

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- How do you notify them quickly and effectively in the event of an imminent dam failure?

## Option

- NOAA Alert Radios w/ SAME
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## Opportunity

- City-wide alerting for non-evident events in the phone outage

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# Cupertino Citizen Corp Drill Prep

# Drill Overview

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## Drivers

1. Recent ATT Fiber cut and the impact on communications

## Objectives

1. Understand information handoffs from field organizations (Ark and Neighborhoods) to the EOC
2. Exercise the CARES Message and Resource Net concepts and procedures
3. Assess the use of Packet Radio in the field

## Approach

1. A small group of CCC members will activate the EOC to receive simulated traffic, log situation status, and dispatch CCC members as necessary.
2. CARES assignments are made based on the CARES response model, resource management, and priority.
3. CERT members will open the Arks and dispatch teams to surrounding neighborhoods and originate test message traffic back to the Arks.
4. Message Traffic will originate in the field and be relayed to the EOC

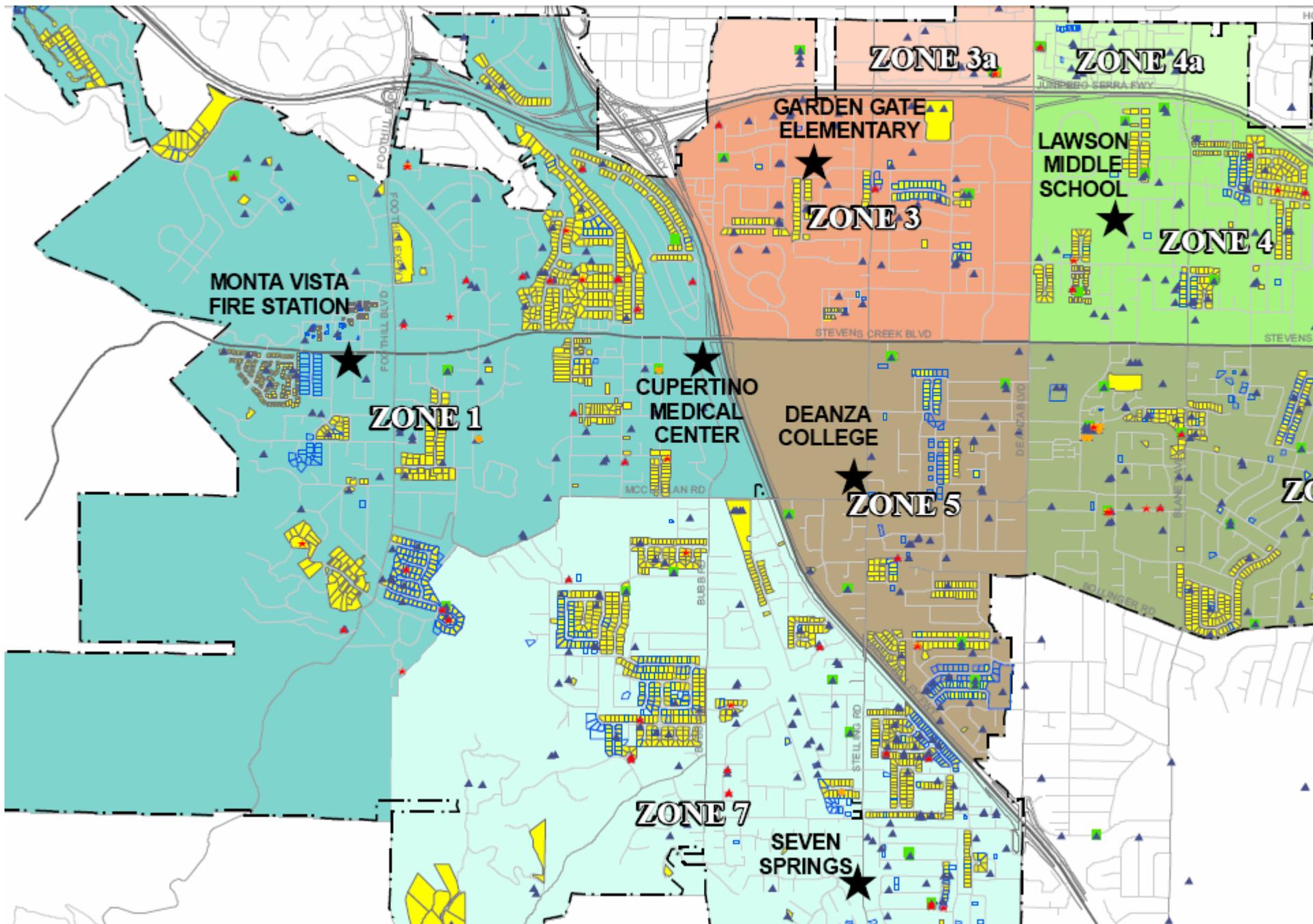
# Assumptions

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**The EOC will not be completely staffed. Simulated command and control will be executed by drill participants.**

**Situational matters are stated in the narrative.**

**Wired and cell phones are not initially working. All message traffic will be passed by radio.**



# CARES Affiliations with

## Ark & Organized Neighborhoods

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Type	Location	Responder	Other Position
Ark	Stevens Canyon Road	Eben, K6EBN	
Ark	Monta Vista	Muni KI6HYS	
Ark	Lawson		
Ark	Seven Springs	Gerd KI6WEJ	
Ark	Garden Gate		Daniel Nguyen, SAR
Ark	DeAnza College		
Ark	Medical Center		Muni KI6HYS
Ark	Hyde Middle School		Lisa Guinn K6AMP
OrgN	Highlanders	Leroy Wilkinson, KG6OGA	
OrgN	Fairgrove	John Skinner, KC6FGX	Lisa Guinn K6AMP
OrgN			

# Drill Scenario

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**0845: Earthquake event occurs**

**0900: CARES emergency net is activated. Check for field assignment availability, and dispatched to cover ISA and field assignments.**

**CERT Teams begin responding to Arks, Neighborhoods.**

**Pass simulated or CERT-originated traffic**

**1130: End of drill. After-action reviews will be held on amateur radio immediately following the exercise.**

**1230: After-action reviews complete.**

# Drill Scenario Sheets

**Event:** CUP-09-26T  
**Scenario:** Ark, DeAnza College

## Situation

You arrive at the ark-site and see that it is already set up and pretty well organized. Against the ark wall facing the parking lot a tent is set up and the Operations, and Planning & Intel Section Chiefs are having a discussion. Behind the ark you see the First Aid tent and 4 CERT First Aid members are treating 3 walk-in injured residents.

The P&I Section Chief looks up and appears glad to see you. He gives you the following briefing:

- There are 5 Search and Rescue (SAR) teams in the field... SAR-1 and 2 went east of Stelling, SAR-3 and 4 went North across Stevens Creek, SAR-5 went South across McClellan.
- The first aid team has been busy, and has kept up with the steady stream of minor injuries.
- DeAnza College has offered 20 nursing program students to the Ark to assist (they will get credit!)

You ask where you should set up and they tell you over by the Planning Intel table. They hand you an FRS and tell you that you need to listen for the SAR teams in the field.

## Instructions

1. Look at your watch and note the time on the line below.
2. add the minutes in the first column to the time recorded, and assume what is stated occurs.

T=

T+ 0:05 min	SAR-5 reported in. They have several houses on Lilac Way with water rushing from under the garage doors. They need the water company to shut off the water.
T+0:15 min	SAR-1 (tactical call) calls in for a radio check. They are at 5423 Parkwood Drive. Several neighbors reports a heavy smell of gas. No one knows how to shut it off.
T+0:35 min	The DeAnza College nurses show up and ask how they can help. IC does not have a

*Any Questions?*

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