Santa Clara County ARES/RACES Quarterly Drill

April 17, 2010

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1. Overview

Description	SCCO ARES/RACES Quarterly Drill – Repeater Outage
Event Date	April 17, 2010
RACES Activation	N/A
Plan Date	4/7/2010
Plan Revision	1.3

2. Planning

Event Objectives

1. Familiarization of communicators with locations in their city areas that are likely to experience communication difficulties during the loss of City repeaters.
2. Familiarization with simplex coverage in each City and the equipment and minimum power levels that are necessary to make communications work.
3. Packet operation
4. Message handling
5. Practice with busy nets

Scenario

The drill will focus on operations where the City has lost all repeater communications. There is a fast approaching storm that has the potential for significant amounts of water during the nighttime hours. Minor urban and small stream flooding is already expected with potential for upgraded watches and warnings. Your Emergency Manager has asked your City Emergency Coordinator to verify the simplex coverage for the City in anticipation of the repeater service not being restored in time. The focus will be on areas of previously know problems, particularly any unincorporated areas of the City.

Santa Clara County OES has requested and updated simplex coverage report for each City based on Thomas Bros. Map grids for each respective City. They are requesting that each City use it's ARES resources to map out the coverage. Therefore each City should activate under its own system. County RACES will not be activated by OES.

Intergovernmental Communications: The OpArea is in need of information about areas affected and needs for assistance. Amateur radio field operators will pass traffic using voice to their respective City EOCs. City EOCs will coalesce these reports and provide the information to County using the SCCo Packet BBS System. Voice communications support will be available on the message net. Command and EOC-EOC nets will only be monitored only and are not expected to play a significant role in this exercise.

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Local Communications: Individual City EOCs need to have information on communications black out areas within their City so when fielded responders are deployed to the field to report on localized flooding and stream conditions and areas affected, particularly at night, there will be a high probability of success of getting those field reports, and not having issues of lost responders or critically needed status information.

Each city should operate according to their city's plans for the given scenario.

It is expected that cities will deploy operators into the field to perform tasks typical of a severe storm. Suggested tasks typical of this scenario include:

1) Obtain RACES activation authorization from your City
2) Staff your EOC Amateur Radio Station or if access to the EOC cannot be gained, a location that is proximate to your EOC.
3) Set up operations to staff a local tactical net and county communicators as appropriate.
4) Assign activated amateur radio operators to various locations throughout the city as communicators.
5) Conduct the simplex coverage survey following the suggested methodology:
    a) Pick a central locations, your EOC, alternate EOC or other agreed upon location as you central communications hub.
    b) Conduct this survey using the following suggested stepwise methodology until acceptable communications are established. Once acceptable communications are established for that location, move to next location.
        i) HTs set on low power using standard antenna. Increase the power as needed to make contact. Try and ascertain the <u>lowest</u> possible power setting for acceptable communications.
        ii) HTs using a magnetic mount. Increase the power as needed to make contact. Try and ascertain the lowest possible power setting for acceptable communications.
        iii) Mobile radio with standard magnetic mount. Increase the power as needed to make contact. Try and ascertain the lowest possible power setting for acceptable communications.
    c) Focus your initial survey on known communications problem areas.
    d) Pick strategic targets, schools, fire stations, or what would be significant critical rallying points for the public during flood or other emergencies. Choose a minimum of two points (no more than four) within each grid to check simplex communications.
    e) Check the communications signal strength and quality using the Reference Readability and Signal Strength guideline at the end of this document.
    f) Report the findings to SCCo RACES every half hour using the City Scan PacForms. See attached example of the reporting format on the City Scan PacForms.
    g) At the conclusion of the exercise report all of your City Responders that participated in this exercise by call sign and their assignment. Also report the location of your primary communications hub (EOC or alternate location) This may done on your final City Scan Report.

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Event Organizers and Planning Contacts
Event Contact: Larry Carr, SCCo DEC, 650-269-9638
Planning contact prior to the event: Patrick Moore, SCCo ADEC 408-464-1084

Event Plan
Day Schedule
1200 Open County EOC RACES Radio Room - those assisting county can show up any time after 1230
1315 Those assisting at County should be at County EOC RACES Radio Room
1330 County will start taking City check-ins on Message Net
1400 Drill begins
1600 Drill completes

3. Preparation

Event Material N/A

Communication Requirements N/A

Communications Approach SCCo will be operating on the following frequencies:

County Nets

Channel Name	Resource Name	R/S	Freq	Off	PL	Comments
Message Net	W6TI	R	147.360	+	110.9	Used to pass formal traffic to/from city EOCs and County EOC
Command Net	WB6ZVW	R	442.500	+	100.0	Used for tactical and command traffic to/from city EOCs and County EOC

Packet Nets

Call Sign	2m Access	1.25m Access	Location	Comments
W6XSC-1	144.910 *(1.1)*	223.660 *(1.1)*	San Jose	JNOS; 24/7; UPS
K6MTV-1	144.310	223.540	Mountain View	JNOS; 24/7; UPS
TBD *(1.2)*	145.690	223.700	West County	JNOS; 24/7; UPS
TBD *(1.2)*	145.730	TBD	South County	JNOS; 24/7; UPS

Notes:
(1.1) The access frequencies for W6XSC-1 are temporarily maintained on their historical frequencies to ease user transition to the new backbone nodes. These frequencies will migrate to new frequencies (144.990 and 223.620) as soon as practical.
(1.2) Two additional backbone nodes are currently being tested and will be added in a future phase of deployment.

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Cities should try to pass all of their formal traffic using packet operation on the W6XSC BBS. If packet is not possible, the traffic should be passed on the message net.

Packet Operation

The following procedures should be used on the packet net:

1. Outpost should be set to **NOT** poll.
2. All messages should have a city-assigned message ID and description of the type of message in the subject.
3. County will announce on the message net the message IDs for the packet messages they have received.
4. County will announce on the message net if and when there are messages waiting for the cities.

Resource Plan

County Operations

County will need a minimum of 6 personnel. These personnel will be assigned as follows:

1. Shift Supervisor
2. Message Net Control
3. Message Net Scribe
4. Command Net Control
5. Packet station operator
6. EOC simulator

If additional personnel are available, the following positions will be staffed. If additional personnel are not available, these positions will be covered as additional duties by the existing staff.

1. Resource Net Control
2. Runner
3. T-card manager
4. EOC Net monitor
5. Packet station scribe/assistant

City Operations

Each city will determine its own staffing and resources needed. The following are possible resource assignments:

- **EOC operations:**
    1. Shift supervisor
    2. Tactical Net control
    3. Message Net control
    4. Packet station operator
    5. Scribes

- **Field operations:**
    1. Field survey teams

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Command and Control **Authorization**

County will not be activating RACES/ACS for this drill, since there are no field responders for the County.

If the cities plan to have field responders, they should activate RACES/ACS with their city.

Equipment

Persons responding for the cities should follow their city's guidelines for equipment. Field responders should review the go-kit suggestions on the scc-ares-races.org website at;
http://www.scc-ares-races.org/gokit/SCCo_Go_Kit_rev091017.pdf

City Preparations

While County is setting the general scenario for the drill, and is providing guidelines that the cities can use, each city is free to customize the drill to suit their particular situation. In fact, we strongly encourage the cities to tailor the drill for their city.

It is also advisable to check with your Emergency Manager and/or Corporation Yard Manager for any maps or other information they can provide and to see if they have suggestions of responses they would like tested during the drill.

Reference Readability and Signal Strength

Reference the attached chart for readability and signal strength measurements.

Readability

1 Unreadable
2 Barely readable, occasional words distinguishable.
3 Readable with considerable difficulty.
4 Readable with practically no difficulty.
5 Perfectly readable.

Signal Strength

1 Faint signals, barely perceptible.
2 Very weak signals.
3 Weak signals.
4 Fair signals.
5 Fairly good signals.
6 Good signals.
7 Moderately strong signals.
8 Strong signals.
9 Extremely strong signals.