

After Action Report CERT Communications Exercise CUP-24-0427T

Cupertino Citizen Corps

6 May 2024

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Overview

Description: CERT Communications Exercise
Event Type: Cupertino Citizen Corps Exercise
Event Name: Extreme Wind Event Exercise
Activation No: CUP-24-0427T
Managing Entity: Cupertino Citizen Corps
Event Date: 27 April 2024
Report Date: 2 May 2024
Report Revision: 1.0, **DRAFT**
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Introduction and Background

Terms

- AAR¹: 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.
- ARK: Cupertino ARKs are the “disaster communication link” between the local community and the City of Cupertino, acting as an information exchange point about existing local hazards and available disaster services. When authorized by the EOC, the ARK can coordinate the local neighborhood response.
- BL/NW: Block Leaders, Neighborhood Watch
- CCC: Cupertino Citizen Corps - the City’s umbrella organization for CARES, CERT, and MRC.
- CERT: Community Emergency Response Team (CERT).
- FRS: Family Radio Service; an FCC license-free a private, two-way, short-distance voice and data communications service to be used for facilitating family and group activities. Adopted by CCC as the tool of choice for CERT & Block Leaders/Neighborhood Watch (BL/NW) in the field.
- GMRS: General Mobile Radio Service; an FCC licensed radio service commonly used for short-distance two-way voice communication using handheld radios, mobile radios, and repeater systems. Shares frequencies with the FRS. Adopted by CCC as the tool of choice for ARK-based communications with the field.
- MRC: The Medical Reserve Corps (MRC) is a national network of more than 300,000 volunteers, organized locally to improve the health and safety of their communities. MRC volunteers step up to keep their family, friends, and neighbors safe and healthy. MRC focuses on emergency preparedness, response, and health equity needs.
- NCO/NCS: Net Control Operator / Net Control Station - the person and location that ensures the efficient passing of messages between stations on the frequency.

¹ <https://training.fema.gov/programs/emischool/el361toolkit/glossary.htm>

Background

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 Citizen Corps (CCC) exercise to test the CERT and BL/NW radio communications tools between the neighborhoods and the ARKs. This report is submitted to Cupertino OEM as a record of our findings, planned follow-up actions, and recommendations.

Summary

Cupertino Volunteers play a critical role in supporting the City's emergency response through neighborhood organization, information sharing, community outreach, and volunteer staffing to name a few. These capabilities are documented in the City's Emergency Operations Plan, Volunteer Annex.

This exercise was designed for city volunteers to create and exchange simulated damage observations between their neighborhoods and their respective ARKs. All CCC members were encouraged to participate. Five of the six Cupertino ARKs activated their local radio message nets.

Key Findings

Following the exercise, CCC performed an after-action review of our tools and procedures under test. The lessons learned will drive specific activities within key areas of the CCC response. Two specific findings from this exercise are:

1. **ARK zone coverage.** Five ARKs were activated. However, the Lawson ARK (Zone 4) yielded no participants other than the Net Control Operator. In contrast, Garden Gate ARK (Zone 3) had participants but no active radio net. This exercise points out the need to focus on ARK zones that are made up of a truly active user communications population.
2. **Expanding training.** The general consensus from the participants was that this exercise was interesting, worthwhile, and insightful. Participants saw how a communications system such as what was used could provide real value to the community and the city. If growing the operator ranks and increasing their skills is a priority, then training will follow.

Type / Location

Event Type: City of Cupertino, Citizen Corps Training Activation

Event Identifier: CUP-24-0427T

Event Name: Extreme Wind Event

Location: City of Cupertino

Description of the Event / Drill / Exercise

The objectives for this exercise were:

1. Operate FRS and GMRS radios between the neighborhoods and the ARKs
2. Pass damage observation messages from the neighborhoods to the ARKs

Event resources came from the following organizations:

1. Cupertino CERT, Block Leaders, Neighborhood Watch (BL/NW): 27 CCC responders took on ARK NCO and neighborhood support roles; communications was by FRS and GMRS.

Performance against Objectives

Objective #1

Operate FRS and GMRS radios between the neighborhoods and the ARKs

Results: Pass

With this first exercise exclusively focusing on CCC communications, it showed there is interest in emergency radio communications throughout the community. Participation came from both CERT and B BL/NW who expressed a good understanding with how neighborhood and city zone communications could help. This was clear from the 27 volunteers who participated. Participants came from the following “Home Zones” and checked into specific ARK “Net Zones”.

Participant’s Home Zone (where participants live)				Participant check-in’s per ARK Zone (where participants checked in)			
Event	HomeZone	Home ARK	2024	Event	Net Zone	Net ARK	2024
CUP-24-0427T	Z1	MVA	11	CUP-24-0427T	Z1	MVA	11
	Z2	RSA	5		Z2	RSA	5
	Z3	GGA	2		Z4	LSA	1
	Z5	DZA	5		Z5	DZA	9
	Z6	CSA	4		Z6	CSA	4
					27		

Notes: (i) All counts (the 2024 column) included the Net Control Station. (ii) After passing messages on their primary ARK net, some participants moved to other ARK nets and checked in for practice.

Participants provided feedback on several aspects of the exercise, both on *what worked* and *what didn’t work/needs improvement*. Here is a summary of that participant feedback:

What worked:

- + Within the neighborhood the channels worked extremely clear and crisp.
- + Radio operation was very simple and straightforward too.
- + Field CERT, BL/NW, and NCO members invited neighbors to participate and give FRS a try.
- + First time we activated CSA Net for an exercise, good initial participation.
- + I’m in Z3 but connected to the Z5 ARK. I could hear NCO, but they couldn’t hear me. I could also hear <another>; asked them to relay my check-in, and she did. Success!
- + It was a wonderful first-time experience overall.

What didn’t work, or needs improvement:

- Many times there was heavy static and an echo noise at the very beginning of the drill.
- Hard hearing some members from different ARK zones.
- We could barely understand what the ARK was saying.
- All the radio features must be learned in advance and having some in depth knowledge of the radio gives more confidence.
- Some people hadn’t checked out of the Net, so they didn’t answer when I called their name for the Health & Welfare Check.
- A neighbor participated, but had forgotten to charge his radio and checked out of the Net right after he had passed in his message.

- Lack of clarity on some net procedures by users.

Recommendations:

1. This exercise activated the Lawson (Z4) ARK. While no one from Z4 participated in the exercise, 2 Garden Gate (Z3) zone participants checked into De Anza ARK (Z5), their closest active ARK.
PLAN: Deploy ARK NCOs to the Garden Gate ARK before Lawson ARK.
2. Questions were raised on the necessity of the check-in, check-out, and Health & Welfare process given the volunteer status of the neighborhood members.
PLAN: Define the minimal radio procedures required for Cup Comm operations; include in CCC comm training.
3. There is a chance that an ARK net may not be activated for an event due to staff limitations.
PLAN: Encourage all FRS users to identify the next closest ARK (secondary) in case their primary ARK net is not on line; include in CCC comm training.
4. Neighborhoods may elect to deploy throughout their neighborhoods for status reporting or other purposes. CCC has defined 7 FRS channels just for that purpose.
PLAN: Encourage local neighborhoods to identify the tactical call channel that they would like to use; include in CCC comm training.
5. Reception issues were a reoccurring theme for some of the responder.
PLAN: document and share strategies for overcoming reception problems. Look for opportunities to demonstrate them.
PLAN: Once defined, schedule a table top to talk through the changes and validate they will work for Cupertino Neighborhood Comm teams.

Objective #2

Pass damage observation messages from the neighborhoods to the ARKs

Results: Success

Twenty-two CERT, BL/NW volunteers participated from their respective neighborhoods and collectively passed over 20 simulated damage observation messages using FRS radios. For the most part, messages were passed in about 5-word blocks allowing time for the Net Control Operator to write them down. Training was limited to the *Radio Basics* class, the *Hands-on Radio* session, and the *Exercise Prep* class. While there is always room for improvement, the bottom line is that messages were created, passed, and received.

What worked:

- + Check-ins and message passing worked well.

What didn't work, or needs improvement:

- Message passing did suffer when there was signal drop out.
- Hard time spelling user names

Recommendations:

1. Message passing will always be a part of what we do. In some cases, it will be about something we never thought about.
PLAN: Look at training opportunities for message passing. Define if the message passing process will more conversational or structured.

Other Observations

Training was a reoccurring theme and referenced by several participants.

For this exercise, the extent of the CCC Communications training was limited to brief reviews of operating on the net and how to pass messages. Not too much of a surprise, other questions and comments came out of the exercise, including:

1. Clarification on operating on the net – check-in, check-out, message passing
2. Message passing; what happens if signal drops out? Interference? For long messages? How to improve my signal?
3. Health & welfare checks; are these really needed?
4. Formality of forms, logs, and documentation. What is really needed and why?
5. How to build interest within your neighborhood.
6. How structured should our Net Control operations be?
7. Radio familiarization.

Recommendations:

1. Form a CCC Comms Steering Committee to review how we want to operate.
2. Identify the actual volunteer status of neighborhood volunteers and the implications of tracking on the radio.
3. Define a basic CCC Net Control class.
4. Define some radio basics, such as (i) message passing, (ii) improving your signal, (iii) forms, (iv) other training content.

Conclusion

As the first CCC-only communications exercise, this went very well. The Extreme Wind Event scenario gave city volunteers the chance to see what it would be like to actively participate on protecting their family, neighborhood, and community during an emergency.

Our volunteers recognized that they cannot do it alone. As stated by one participant: *“Create more awareness! Engage! Educate! Encourage!”* In almost every ARK zone, at least one participant commented how they reached out to their neighbors to join them outdoors and give FRS communications a try. This is a big opportunity for the city to increase the engagement with the community, and radio communications can help. While radio is not the end-all, it is very tangible that can show value fairly easily.

In short, FRS/GMRS radio is the means to an end, and that end is a more connected, prepared, and engaged community.