After Action Report
October PSPS

Cupertino Citizens Corps
7 November 2019
Version: v1.13

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Overview

Description:	PG&E Public Safety Power Shutoff Cupertino Event
Event Type:	City of Cupertino Activation
Event Name	October PSPS
Activation No:	CUP-19-100
Managing Entity:	Cupertino Office of Emergency Services
Event Date:	8-Oct-2019
Report Date:	21-Oct-2019
Report Revision:	1.13, **REVIEW**
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Requirements for Reporting[1]

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

Terms

AAR[2]: 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.

AAR/IP: Improvement Plan; identifies specific corrective actions, assigns them to responsible parties, and establishes targets for their completion.

AFN: Access and Functional Needs; refers to individuals who are or have: physical, developmental or intellectual disabilities; chronic conditions or injuries; limited English proficiency.

ARP: Alternate Response Plan; a set of CARES-owned equipment and plans for using it when Comm 469 is not available or insufficient.

CAL FIRE: The California Department of Forestry and Fire Protection (CAL FIRE) is an emergency response and resource protection department. CAL FIRE protects lives, property and natural resources from fire; responds to emergencies of all types, and protects and preserves timberlands, wildlands, and urban forests.

CAP: Corrective Action Plan; FEMA; HSEEP[3]: actions identified during activations or exercises that are tracked to completion, ensuring that exercises yield tangible preparedness improvements.

[1] 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

[2] https://training.fema.gov/programs/emischool/el361toolkit/glossary.htm

[3] https://www.fema.gov/media-library-data/20130726-1914-25045-8890/hseep_apr13_.pdf

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.
Comm 469:	City of Cupertino Public Safety Communications Vehicle #469.
CPAP:	Continuous Positive Airway Pressure machine; a machine that increases the air pressure in your throat to prevent your airway from collapsing when you inhale.
CPUC:	California Public Utilities Commission
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. Advices EOC Staff on CCC capabilities, readiness, and activities.
DPW:	Department of Public Works; a function within the City with responsible for physical assets throughout the city.
GIS:	Geographic Information System.
IC:	Incident Commander, the person responsible for all aspects of an emergency response at an ICP.
ICP:	Incident Command Post; the physical location of the tactical-level, on-scene incident command and management organization.
H&W:	Health & Welfare; used within the context of a Health & Welfare Check. Usually check of field teams to sure they are OK.
Medical Baseline	PG&E's Medical Baseline Program, also known as Medical Baseline Allowance, is an assistance program for residential customers who have special energy needs due to qualifying medical conditions. The program includes two different kinds of help: (i) lower rate on your monthly energy bill, and (ii) extra notifications in advance of a Public Safety Power Shutoff.
MRC:	Medical Reserve Corps; a network of community-based units established by local organizations to meet the public health needs of their communities.
MVA:	Monta Vista ARK; the location of the event ICP
NCO/NCS:	Net Control Operator / Net Control Station; the control function that ensures the efficient passing of messages between stations on the frequency.
NWS:	National Weather Service, an organization within the National Oceanic and Atmospheric Administration (NOAA).
OES:	Office of Emergency Services.
PSPS:	Public Safety Power Shutoff; see description in the Summary.
SCC:	Santa Clara County; used in reference to County RACES
SJWC:	San Jose Water Company; a CARES Served Agency.
Served Agency:	An agency, special district, City critical service provider, or other recognized organization with which CARES has a signed Memorandum of Understanding to assist in time of need.
WUI:	Wildland Urban Interface.

Background and Timeline

Introduction

The purpose of an After-Action Report (AAR) is to analyze the management and/or response to an incident, exercise or event by identifying the strengths to be maintained and built upon, as well as the potential areas for improvement.

The focus of this AAR is on the Cupertino Citizen Corps' (CCC) response to the October PSPS event and is submitted to Cupertino OES by Cupertino Amateur Radio Emergency Service (CARES) on behalf of Cupertino Citizens Corps as a record of our findings, planned follow-up activities, and recommendations to the City.

Summary

Wildfires are more destructive and deadlier than in the past, and the threat of wildfires is more prevalent throughout California and calendar year. The California Public Utilities Commission (CPUC) works with Cal Fire and the California Office of Emergency Services to reduce the risk of utility infrastructure starting wildfires, strengthen utility preparedness for emergencies, and to improve utility services during and after emergencies.

The State's investor-owned electric utilities, notably Pacific Gas and Electric Company (PG&E), Southern California Edison, and San Diego Gas & Electric (SDG&E), may shut off electric power, referred to as "de-energization" or Public Safety Power Shut-offs (PSPS), to protect public safety under California law, specifically California Public Utilities Code (PU Code) Sections 451 and 399.2(a)[4] PG&E delivers power to more than 16 million people throughout Northern California including the City of Cupertino.

On 8-October-2019, PG&E initiated a PSPS event that impacted more than 500,000 customers of which 3,300 homes and businesses were in Cupertino. The City of Cupertino activated its EOC to Level 3 (Monitor), developed a plan to contact its impacted residents and businesses, and deployed volunteers and city staff into the field to execute the plan. The city EOC's primary objectives were:

1. Public outreach to affected residents and community
2. Personal contact with affected residents; leave flyers
3. Establish personal electronics charging stations at City facilities
4. Monitor the situation; participate in County conference calls

Cupertino Citizens Corps was activated and took the lead at managing the field response to address Objectives #1 and #2 by establishing an ICP at Monta Vista ARK (MVA). The city's GIS department developed and delivered detailed maps of the planned outage area. The Office of the PIO developed the information to be handed out.

Over the course of the activation, the EOC defined three operational periods, one for each of the three days of the activation. The initial mission for the MVA ICP was to (i) contact all impacted residents and businesses to ensure they were aware of the pending power outage and (ii) inform them of what the City has put in place to support them. All this was to be on a best effort basis. A second mission was defined to provide Alternate 9-1-1 communications support for any resident who needed assistance. However, power was restored before this was task was put in place.

[4] De-Energization (PSPS), California Public Utilities Commission

Event characteristics:

1. Homes and businesses impacted: 3,300
2. Total canvasser hours: 304 hours
3. CCC volunteer canvas hours 189 hours
4. City staff canvas hours: 115 hours
5. Duration of the power outage: 14 hours
6. Days activated: 3 days

Key Findings

Following the October PSPS event, Cupertino Citizen Corps performed an after-action review of our preparation for and immediate response to the PSPS event specifically related to the MVA ICP field operations and experience. Additional elements of community readiness were also discovered and are covered here for completeness. The lessons learned from this review will drive specific improvements within key areas of the CCC response operations. Recommendations will be made to the city on areas uncovered during this activation.

The specific findings from this PSPS are:

1. ***(Process) Practice makes perfect.*** CCC successfully deployed several processes and procedures that have been well practiced during exercises and public service events. Our ability to focus on specific activities relevant to a live activation, then critique and incrementally improve them paid off.

   This event was not without lessons learned. See the *Observations and Recommendations* section below and the Corrective Action Plan (CAP) report for where additional improvement investments should be made.

2. ***CCC Resource Availability***. CCC resource turn-out level was anticipated, but insufficient to cover the entire field response. The chief factor contributing to this was that the PSPS event took place during the work week and only 38,000 county residents (about 2% of the county population) were impacted. Since this event was not an infrastructure- or economic-impacting event, we think the threat and impact was probably not perceived to be that large. As a result, only one CCC member took off work to participate in the response.

3. ***Community Readiness.*** Canvassers encountered a large sampling of residents who were not only ill prepared for an extended power shutoff, but also were totally unaware that a shutoff was even imminent. The largest category of these residents were the elderly and AFN individuals. This was also true for many of the working-age residents that we encountered, the difference being that they understood the risk and immediately started to think through a course of action to mitigate the effect of a power outage to themselves and their families.

   While the PSPS event impacted 15% of the city's residential homes, we cannot ignore the fact that this situation could be representative for residences across the city.

   This was by far the most concerning of our findings since, if at-risk residents are not prepared for an event that was well publicized in the media and through County and PG&E outreach, then they will not prepared for the inevitable earthquake that will hit unannounced.

Response Resources

CCC was activated under activation number CUP-19-100. Insurance for volunteers was provided by the City of Cupertino, because this was not a DSW activation. CCC was tasked with the following OES objective:

1. Develop and implement a plan to personally contact residents and businesses in the affected area.

Event resources came from the following organizations:

1. ***Cupertino ARES/RACES.*** CARES is a volunteer organization of FCC-licensed amateur radio operators who will respond to requests from the city during times of emergencies. Their focus is on understanding risks facing the city and putting plans, communications processes, and tools in place to respond to these risks. Fifteen (15) CARES members participated during various operational periods over the three days of the event. Total CARES volunteer hours were 132.
2. ***Cupertino CERT***. CERT is a volunteer organization of residents that want to assist the community during and after an activation. CERT participated in the community outreach to the effected residents and businesses. Fourteen (14) CERT members participated in the field deployment over the 3 days of the event. Total CERT volunteer hours were 55.
3. ***Cupertino City Staff***. The city management allowed its employees to participate in the field operation. Staff participated in the community outreach to the affected residents and businesses. Thirty-five (35) city employees participated in the field event over the 2 of the 3 days of the event. Total city staff hours were 115.

CCC established an ICP at Monta Vista ARK, co-located with Santa Clara County Monta Vista Fire Station. Minimal ICP staffing was put in place with the emphasis on resource management, team assignments and tracking, and field communications.

The PSPS event was anticipated based on public and agency communications about the state of the weather.

Timeline

The following timeline is a compilation from ICS-214s submitted as part of this event.

Time	Description, Notes, Comments
Friday 4-Oct	NWS forecasts a Red Flag Warning and warm weekend temperatures for North Bay Hills
Monday 7-Oct	PG&E announces a possible Power Safety Power Shutoff incident that is expected to affect up to 29 counties in the State of California, including Santa Clara County
Tuesday 8-Oct	NWS Fire Weather Watch was upgraded to Red Flag Warnings issued for the North Bay Mountains, North Bay Interior Valleys, East Bay Hills and Diablo Range, and East Bay Interior Valleys from 5 AM Wednesday through 5 PM Thursday; a Red Flag Warning has been issued for the Santa Cruz Mountains from 5 PM Wednesday through noon Thursday.
Tuesday 8-Oct	PG&E announces the possibility of a Public Safety Power Shutoff (PSPS), starting 10/9
Tuesday 8-Oct, 09:00	Cupertino OES meets, reviews results from Op Area teleconference, decides to activate the EOC to Level 3 and Citizen Corps to Level 1.

Time	Description, Notes, Comments
12:00	Citizen Corps is activated by the City to notify residents that they will be affected by the PG&E power shut-down. Notifications were made to Citizen Corps. Activation No: CUP-19-100 Event Name: October PSPS Op Period: 12:00 – 18:00
13:45	MVA Opened, ICP setup started; Jim KN6PE filled the IC role.
14:17	Comm 469 arrived, began setup; Judy KK6EWQ was the Net Control Operator.
15:20	Team briefing. Teri/GIS reviews coverage area; 2700 residences impacted. Introduces the Collector for ArcGIS phone app. If we can't get it to work, we will fall back to paper.
16:12	Six teams deployed. A request for additional staff was submitted to the EOC for tomorrow's op period.
18:15	All teams returned. Rough calculation: 40 homes covered per 2-person team per hour. Made a resource request to EOC for additional staff to continue canvassing on Wednesday. Shut down the ICP.
Wednesday 9-Oct	PG&E announced a Public Safety Power Shutoff that is expected to impact about 38,250 customers in Santa Clara County, including 1,086 Medical Baseline Customers.
07:50	MVA opened, ICP setup started; Jim KN6PE is in the IC role. Comm 469 arrived, begin setup. Judy KK6EWQ is the Net Control Operator.
10:00	Check-in complete
10:30	Briefing complete, Teri/GIS reports the refined coverage area now includes 3300 impacted residences. Field assignments made; 14 teams deployed. Staffing: CCC 16, City staff 24
12:50	Lunch arrived (pizza)
13:40	Remaining teams go back out to finish up.
14:20	CuSD District Inspector stopped by, confirmed they are aware of the PSPS, have staff and equipment in place to handle the wet wells that do not have generators.
15:45	All teams returned, check out. Started ICP shutdown
23:00	Power goes out for affected residents.
Thursday 10-Oct, 7:50	MVA Opened, ICP setup started; Steve KK6FPI is in the IC role. Begin communications setup; Darryl KI6LDM is the Net Control Operator.
09:00	Check-ins begin
10:10	Field assignments made; 13 teams deployed. Staffing: CCC 11, City Staff 21. Last team departs to the field.
12:00	Lunch arrived.
13:00	We have reports that the power is back on. Field teams confirm. Canvasing ended. There was then a request for CARES members to work 1 hr. shifts from 14:00 to 18:00 [for Alternate 9-1-1 support].
15:30	On instructions from the EOC, MVA ICP was ordered to secure and demobilize. Cupertino EOC is shut down.
15:34	Closed Cupertino PSPS Emergency Net. Completed demobilization, departed.

Observations and Recommendations

Resource Management

Observation #1

Resource Management tools, specifically T-Cards, were useful in defining field teams, but their shared use across the ICP was insufficient to provide visibility and tracking of team status.

During the check-in process, individuals were instructed to sign in on ICS-211 check-in sheets. Several sheets were used to avoid delays getting responders signed in. Each responder was also instructed to fill in a T-card with their name, cell phone number, organization, and call sign if Amateur Radio licensed. Drivers were also asked to sign and date the back of the T-card. Because teams would be arbitrarily formed, responders were asked to hold their T-Cards until their team assignment. Two or more individuals made up a team (two-person / buddy rule). Their T-cards were collected and stapled/paper-clipped together as a team T-card packet. The team number was marked on the top card.

What did not happen was associating each T-card packet with a team T-Card. Additionally, T-card packets were delayed getting to the net control operators. The following additional information should have been collected:

1. Date and time of the team assignment
2. Team communication method: Amateur Radio, cell phone, etc.

Recommendations:

Citizen Corps

1. Review the CCC resource management policies and procedures and address areas where improvements could be made.
2. Develop better procedures for using T-Cards for assignment and resource tracking.

Observation #2

The short notice for the initial activation resulted in only 16 Citizen Corps volunteers responding. A portion of the City's cadre of volunteers is the Block Leaders program; however, this program is managed outside of CCC resulting in no understanding of their efforts or coordination with the broader city response.

The Block Leader Program was initiated over 10 years ago by the City Manager and has since been managed out of the City Manager's Office. Block leaders not only know their neighbors, but support them with extra steps to connect neighbors and build community. One of the tenets of the Block Leader program is to "… help neighbors look out for each other and get to know each other before emergencies." While this is definitely critical to support each other once an event occurred, it lacks the linkage with the city's Office of Emergency Services to help prepare block leaders with information, tools, and processes to get residents ready for an event that is known to be coming, such as a PSPS.

Because the Block Leader program is outside the auspices of OES, there does not appear to be any common expectations, training, linkages, and coordination between this program and Citizen Corps. As a result, there could have been duplicate efforts at contacting residents since OES had no visibility into when, where, and how a block leader might have passed information to their respective neighborhood.

Recommendations:

City Manager's Office

3. The Block Leader Coordinator should work with Cupertino OES to enhance the role of block leaders to include an emergency response component. Define and strengthen the linkage with OES so better resource utilization could be achieved when the city is activated.

Observation #3

During Day 3, no Comm 469 operator was available, causing the field response to fall back to an ARP field deployment.

Per the City, a Comm 469 qualification is required to access, drive, set up and operate Comm 469. Over the last year, Comm 469 staffing was reduced by attrition from resignations, disqualifications for medical reasons, and expected re-deployment to other OES functions. CARES staff recognized this and put a plan in place to build up the Comm 469 qualification bench strength. This is in progress.

Additionally, the initial agreement with the City was that five qualified members would be issued key and card access to the city's Service Center where Comm 469 is stored. This limit should be re-evaluated, especially in light of the risk of future extended activations. While four keys are currently issued, only two key holders are likely to respond and deploy Comm 469.

Recommendations:

CARES

4. Identify at least three candidates to pursue the Comm 469 qualification. Put a plan in place to complete their Comm 469 training and qualification.

City DPW

5. CARES to work with DPW to evaluate the current key allocation of five to determine if this level is still valid. We recommend increasing it to eight keys.

Field Communications

Observation #4

Communication among field teams using cell phones was problematic.

During Day 2, 8 CARES, 10 CERT, and 24 city staff responded to assist with the outreach. As a result, there were not enough CARES communicators available to include one with every team. Where a CARES member was assigned, contact with the team was maintained by UHF radio. For all other teams, the decision was made to use personal cell phones as the primary method for communicating with the ICP. However, there were problems with this approach.

- Some teams did not recognize the calling phone number used by the ICP Phone Net Control, thereby not answering the phone (they thought it was a spam call) causing the call to go into their voicemail.
- When texting was attempted, text message delivery had varying time delays.
- During Day 3, there was no cell service once the power went out.

Recommendations:

CARES

6. Identify and make plans for using alternative radio communications methods that could be deployed. These include city trunk radio, GMRS, and FRS.
7. Complete the testing of GMRS from Comm 469 for FRS city-wide coverage. This task has been started but is pending the GMRS radio roll-out to the ARKs.

8. Develop just-in-time instructions and training for operating on a telephone net. This training should be delivered as part of the event and safety briefing before deploying teams to the field.
9. Investigate and install a 144/440 MHz radio at the EOC to accommodate deployments where Comm 469 is supporting a Field Operation.
10. Complete ALT911 implementation and deployment to County Comm by August 2020.
11. Understand the "Red Phone" implementation (direct line to County Comm) located at each County Fire Station and determine how we factor it into our response plan.

Observation #5

For Day 3, only one operator was assigned to cover both the CARES Emergency Net and the Telephone Net, and was thereby was overloaded.

This event was hectic with up to 14 teams in the field. During Day 2, the mix of a radio net and telephone net was handed by two operators. The thinking for Day 3 was that that power would be (and was) out resulting in no cell service, and one operator could cover both. This changed as power, and subsequently cell service, was restored. It was unrealistic to expect one person to cover both the radio net and cell phone nets on the 3rd day.

Recommendations:

CARES

12. Re-engage the resource management planning activity, and develop staffing levels and policies based on different response types.
    - Field: Review team sizes based on WUI Fire, ARK deployment, and ISA experiences
    - Comm 469: Review team size and make-up

Fire Station Operations

Observation #6

The Santa Clara County Monta Vista Fire Station crew was very supportive of the CCC ICP that was set up at the MVA ARK.

While five of the six Cupertino ARKS are stand-alone, the Monta Vista ARK is co-located at the SCC Monta Vista Fire Station. The ICP had access to lobby restroom and a power plug in the lobby. The station was on generator power on Day 3. The command post was located so the fire crews could continue using the Prado Vista driveway.

Recommendations:

CARES

13. CARES should further develop a solid working relationship with SCCFD station crews.

Policies, Processes and Tools

Observation #7

The Esri Collector for ArcGIS app worked well for city employees and seems to be a potentially valuable tool. However, there were technical problems that prevented some volunteers from using it.

The operating model of the Esri Collector for ArcGIS app[5] is:

[5] https://www.esri.com/en-us/arcgis/products/collector-for-arcgis/overview

Works anywhere, anytime. Users can add new assets and update existing GIS data in any environment, remote to urban, on your authoritative maps. In connected environments, your data will feed directly into ArcGIS. In disconnected environments, it will reside on your device then sync as soon as connectivity is available.

Cupertino GIS deployed Esri's smartphone, information-collection app for the city Department of Public Works. Upon short notice, it was configured for the PSPS event with the intent of capturing when an affected resident was personally contacted and when only a flyer was left at a home. As an entry was made, the contact record was transmitted, processed, and displayed on an Esri ArcGIS web-based dashboard in the EOC and in Comm 469. When cell service is not available, the data is transferred by bringing the phone to City Hall or by moving to an area where cell service is still available.

The city staff members arrived at the event with the app already installed on their phones and ready for use. They used it during their canvassing, and it worked well. However, difficulties arose when volunteers tried to install it on their phones, partly arising from having multiple people trying to log in to the app simultaneously. Some volunteers were eventually able to utilize the app.

Recommendations:

City GIS

14. Review the feedback provided by CCC on suggested changes to the app (separate cover). Include a usability review with the CCC leadership.
15. Investigate creating line segments as selectable points representing portions of a street between two points (cross-streets).

City IT

16. Determine a method to getting data back to the EOC if all cell service is out (think: city-wide outage).

CARES

17. Develop and execute a program to train CCC members in the use of this app. This program should include having as many CCC members as possible pre-install the app on their smartphones.[6]

Observation #8

It took 300 canvasser hours spread over 3 days to contract the targeted 3,300 residents. If a larger outreach effort (i.e.: city-wide) was required in the same timeframe, then this staffing level would be insufficient given the time constraints needed for an effective personal contact.

Fifteen percent of the Cupertino resident/business addresses were affected by the PSPS. This canvassing event occurred on weekdays when most residents were at work (on average, each team talked to about 25% of their assigned residents over the three-day shutdown period; the other residents received a flier left on their property). Even then, the math points to a canvasser contact rate of about 11 residents per hour. If all 22,000 Cupertino residents needed a contact, it would take about 2,000 canvasser hours. If we were given eight hours to complete this task, then 250 canvassers would be required.

In short, given the same time constraints as this PSPS event, contacting every Cupertino resident with a "knock-on-the-door" will not scale due to insufficient time or resources.

Recommendations:

City

[6] The City and County are working on adopting Esri's Survey123, a companion app to Collector.

18. Investigate options for expeditious delivery of PSPS-like public safety information, such as a USPS EDDM[7] solution.
19. Determine the necessity and requirements for a personal contact vs. a successful "drop (the flyer) and go" approach. Success implies that residents have a previous understanding of the general risks that we all regularly face (PSPS, earthquakes, dam breaks, etc.), and understand the information delivered on "door hangers".
20. Plan to augment the efforts of CCC with block leaders. One purpose of the city's Block Leader program is to ensure communications and mutual assistance within neighborhoods during emergencies. The PSPS is a perfect example of a situation where this program would be useful.
21. Leverage the PSPS experience to encourage more neighborhoods in the city to join the Block Leader program.

Observation #9

The city GIS response was outstanding in delivering updated and timely canvas event maps for each operational period.

The pre-activation meeting at the EOC helped define what the mission was for Cupertino and the volunteer organization. The city's GIS function was tasked with developing and producing "affected area" maps based on the best (and changing) information received from PG&E. Realizing that the affected area was west of Rt 85, establishing an ICP at Monta Vista ARK was a reasonable choice since it fell within the affected area and was a logical location from which to dispatch canvassers.

GIS's support with timely and accurate canvas maps was critical to the success of the ICP mission. For all three days, GIS enabled field canvassers to hit the streets with a solid understanding of what areas were still outstanding and needed contacts.

Recommendations:

CARES

22. CARES should build on the working relationships with the city GIS that were established with this event, with the goal of a tighter working relationship for future events. We should look for similar synergies with other city departments that align with the various city emergency response scenarios.
23. CCC should integrate the printed canvas maps in the ARK to give teams a larger scale picture of their assignment that leaves room for notes on the map about each property.

City GIS

24. See the list of recommendations in a separate document.

Observation #10

Multi-day canvasing provided CCC with several opportunities to confirm and refine its canvasing processes. Each day's activity was refined based on the previous day's results.

This was the first activation where there were large numbers of city staff working alongside CCC volunteers. The operation went well, and we should try to have more mixed teams in the future.

The concept of assigning each team a certain number of houses worked well. Many teams returned to the ARK in two to three hours. By Day 3, the GIS team had refined the process of defining a survey zone for each team, and produced a map delineating the zones. Each team was issued a map.

[7] https://www.usps.com/business/every-door-direct-mail.htm, USPS EDDM (Every Door Direct Mail, 18.7 Cents each)

The standard ARK setup was used for check-in, status and mapping, and operations. On all three days, the Monta Vista ARK was operated on a "lean staff" concept. With a low relative number of CCC volunteers and the need to maximize the number of field teams, staffing was limited to two people the first day and three on the second day.

3,300 homes and businesses were impacted by the PSPS. The first day gave us a chance to estimate the rate of coverage and anticipation duration of the operation based on resources, thereby allowing us to estimate the staffing needs for the following day. The calculated Day 1 contact rate was about 20 residents an hour per field responder. About 500 residents were contacted during Day 1 (2.5 hours per field team, 6 teams, 2 persons per team). Resource requests were passed back to the EOC for city staff support. During Day 2, city staff were recruited and participated, and 14 teams were put into the field. During Day 3, city staff augmented CCC, and 13 teams were deployed. At the end of Day 3, all affected residents and businesses had been contacted.

Community Preparedness, Health, and Safety

Observation #11

Canvassers encountered several residents who were not prepared for an extended power shutdown and several who did not have any idea of what they should do about it.

Clearly, the messaging sent by PG&E, social media, and the commercial media outlets was insufficient in reaching and informing all residents of the risk. What canvassers reported about some community encounters was visible alarm when residents learned the power could be out for up to seven days.

This is a public education issue on the risks that we live with in the Bay Area. It is also clear that if city residents were not prepared for a PSPS (for which we knew was coming), then they are *not* likely to be prepared for the damage and disruption to their lives that an earthquake will cause.

Municipal governments walk a fine line between ensuring residents are aware of the risks we face around us and providing recommendations about what a person should do and being viewed as intruding in people's lives.

Recommendations:

City

25. Review the community risk assessment and develop the crisis communication annex for the city.

Observation #12

Canvassers encountered elderly and AFN residents who were ill prepared and/or had medical problems that required electricity for refrigeration of medications and for medical devices (e.g. CPAP, wheelchairs, etc.).

This was a tough assignment for canvassers as they encountered residents who were not prepared for a power shutdown. Besides the stories of residents expressing anger toward the responders, the city, and PG&E, several stories emerged of individuals in potential trouble.

- Two residents told one responder that a neighbor had Alzheimer's disease / dementia. In one case, the resident had 24/7 caregivers, and we wondered what would happen if the next shift didn't show up. In another case, the resident had part-time caregivers and a relative in Sunnyvale. The neighbor agreed to contact the relative.
- One canvasser reported finding three or four residents who had medication and medical device problems.

- One elderly female, whose husband had died recently, had no idea as to what she needed to do. She was totally lost and started crying. Both canvassers tried to give her some ideas, but she needed much more. Fortunately, the power came on a few hours after they talked.

The key take-aways for the city are:

- We should assume residents are not prepared, especially the elderly and AFN residents.
- The city needs to recognize that they do not own the [disaster] problem but needs to manage the problem.

Recommendations:

City

26. Determine the extent of the questions that canvassers can ask, such as whether a resident has a medical/health issue that might be impacted by the power shutoff. Configure a Collector screen for these special questions.
27. Determine how to address the health care and life safety risk that a PSPS or earthquake will present for vulnerable Cupertino residents.

Conclusion

Wildland fires have become common in Northern California over the last several years. Years of drought have contributed to huge areas of forest land being littered with dying or dead trees. Weather patterns are changing and show larger seasonal swings than those to which we have been accustomed.

As a result, the area considered by state officials to be at high risk of wildfire within PG&E's service area has grown from 15% in 2012 to more than 50% today[8].

The 8 October 2019 PSPS event is likely to be the first of many such power shutoffs to affect Northern California during the next 10 years, Cupertino included. From a wildland fire perspective, this PSPS worked, resulting in no fires due to any power line problems. While this is good news for the state, it is not much comfort to those who were impacted by a PSPS event. Fortunately, this outage was short-lived.

The City of Cupertino does not own the power shutoff problem or the lack of its residents' preparedness. However, the city can effectively manage the problem through its emergency plans, educational outreach, and response coordination. This requires clear and shared plans with public safety agencies, community volunteers, and city residents.

We will have other PSPS events, just as surely as there will be an earthquake in our future.

[8] http://www.pgecurrents.com/2019/10/17/pge-ceo-we-hear-the-anger-are-working-hard-to-avoid-power-shut-offs/?cid=em_ResNL_20191007-REE-ResEE-ResNewsletter_20191019_article1_email_na_na, Bill Johnson, CEO, PG&E