

Do Hams Still Matter?

Darryl Presley
KI6LDM

PAARA Board Member (Director)

Are we as hams still relevant and can we provide a critical service to our communities? Does amateur radio still matter? Given all of the latest advances in technologies that we now have with smart phones, commercial radios, broadcast alerts to various devices, etc., isn't the Amateur Radio Service old and obsolete? Isn't the Amateur Radio Service just a hobby? These questions have been raised several times in recent years. Let me answer these questions using the recent PG&E power outage in Northern California as a case study.

Pacific Gas & Electric (PG&E), which serves central and northern California, has implemented a new policy called the Public Safety Power Shutoff (PSPS). The purpose of this policy is to de-energize the PG&E electric infrastructure when it comes to dangerous conditions such as high winds and low humidity.

In the early morning hours of October 9th, PG&E implemented PSPS, which at its peak impacted approximately one million customers people across 32 counties in the state of California. A primary goal of this PSPS strategy was to prevent high voltage transmission lines from sparking wildfires during a high wind and red-flag warning fire condition as predicted by the National Weather Service. Compared to previous power shutoffs in similar conditions that were more localized, this was a "nuclear option" that shut down several main high-voltage transmission lines affecting multiple counties. This response was based on how the Camp Fire was started due to high voltage transmission lines igniting that fire. The Camp Fire destroyed the entire town of Paradise.

The City of Cupertino, along with other nearby cities and the County of Santa Clara, activated their Office of Emergency Services (OES) prior to the start of the planned power shutoff. According to the PSPS map provided by PG&E, East San Jose, parts of West San Jose, and

areas west of Foothill Blvd. in Cupertino would be impacted. The Cupertino Director of the Office of Emergency Services requested that the volunteers of Cupertino's Citizens Corp be activated. Cupertino Amateur Radio Emergency Services (CARES) was officially activated at noon on Tuesday, October 8th. In addition to CARES, CERT and city employees reported to the Monta Vista Fire Station, where there is an ARK (a staging area that also contains emergency supplies). Cupertino has several such ARKs located throughout the city.

The mission objective for CARES, CERT, and the city employees was to canvas the impacted neighborhoods in Cupertino, inform residents of the planned PSPS event, and hand out flyers with information about advance preparation. CARES provided communications



CARES ComVan

support and deployed its communications van (ComVan 469) for this effort. The canvassing activity took place Tuesday afternoon, all day Wednesday, and Thursday morning -- after the PSPS power shutoff was implemented. These volunteers visited approximately 3,300 homes.

On Thursday, during the power outage, sever-

(Still Matter — Continued on page 2)

(Still Matter — Continued from page 1)



ComVan Interior

al issues were discovered. The teams canvassing the neighborhoods reported that some homes only had cell phones and no other service such as VoIP or a simple copper-based POTS landline. Cell service was barely available at the Monta Vista Fire Station (maybe one bar of signal strength) and non-existent in the neighborhoods. This was true for all cellular carriers. Those who had VoIP and cordless phones would find them useless because the base stations for cordless phones and internet/Wi-Fi routers require power. Per a presentation to PAARA given by Allan Thompson about the Camp Fire, phone companies are no longer installing copper POTS landlines to new homes and are no longer providing new services on existing ones.

Other issues involved residents who depended on medical equipment that requires power. Some had battery backup for a period of time but, if the outage were to last more than a day, this could become a life-critical issue. In addition, medicine that required refrigeration would be lost in a prolonged power outage.

Most residents will have the challenge of keeping frozen and cold food items from spoiling during a prolonged power outage lasting more than 24 hours. This was also brought up as a major concern by residents during the canvassing activity. Many grocery stores would be closed during the outage so it would not be possible to purchase food.

Now, back to our question: Do hams still matter? In short, yes. Here is my experience working with CARES during this power outage event. On Thursday, October 10, several hours after PG&E had implemented the PSPS, it was determined that several cell sites were no longer providing service; hence, no cell service was available in several areas. The city EOC asked CARES if we could stay activated until 1800 hours (6 pm) to provide an "alternate -911" capability. The flyer handed out during the canvassing said that, if residents could not call 911 in an emergency, they could come to the Monta Vista ARK and we would pass their 911 request to the EOC by radio. Our mission was now changed -- CARES now served as a critical communication link between residents and the EOC for 911 emergencies.

I had set up a portable station with my ICom IC-7000 as a base station at the ARK. We used the W6TDM Cupertino repeater in cross band repeat mode between 2m and 70cm. The Cupertino EOC was operating on 70cm. We had established a net for handling both canvassing activities and any emergency traffic. While we did have many concerned residents, who might need emergency assistance if the outage persisted, we did not actually have any emergency situations. We were prepared to assist should the need arise.

Fortunately, at approximately 1300 hours power was being restored and, by 1400 hours, nearly all neighborhoods impacted in Cupertino and parts of San Jose had their power restored. At 1534 hours, demobilization was ordered by the EOC, and CARES was officially deactivated by 1600 hours.

The Cupertino City manager, the Director of OES, and city officials were impressed by how organized we were in our deployment and how professional we were in the execution of the mission. They saw the value of CARES, how the amateur radio service played a primary "front and center" role in the mission, and how their investment in the ComVan paid out as a

(Still Matter — Continued on page 3)

(Still Matter — Continued from page 2)

force multiplier.

The PG&E PSPS exposed several things about our current infrastructure. Our lives are very dependent on electrical power. You will need to find some place to charge your cell phone and even if you do, there is no guarantee of cell service. If additional important alerts were sent to cell phones, they would not have been received.

All-electric vehicles won't have a way of charging unless they can do so from an alternate power source such as solar. Most homes that have solar power do not have any form of battery backup. When there is a power outage, they too are experiencing the outage. Medicine that requires refrigeration can be lost when there is no power to run the refrigerator. Those who are dependent on life-critical medical equipment have an even bigger challenge. Many of these devices have backup power with a capacity of only a few hours, not days.

During the PSPS event, CARES demonstrated that, with proper training, hams can deploy almost anywhere, can be flexible, and can provide critical communication where needed.

Craig Fugate, a former FEMA Administrator, spoke at an FCC forum in May, 2011. Here is a quote from his speech at that forum:

"We get so sophisticated and we have gotten so used to the reliability and resilience in our wireless and wired and our broadcast industry and all of our public safety communications, that we can never fathom that they'll fail. They do. They have. They will. I think a strong Amateur Radio community [needs to be] plugged into these plans. Yes, most of the time they're going to be bored, because a lot of the time, there's not a lot they're going to be doing that other people aren't doing with Twitter and Facebook and everything else. But when you need Amateur Radio, you really need them."

See:

<http://www.arrl.org/news/fema-administrator-calls-amateur-radio-the-last-line-of-defense>

While these comments were made eight years ago, it appears that YES, hams still do matter!!