August 12, 2013

The Honorable Mignon Clyburn, Chairwoman
Federal Communications Commission
445 12th Street S.W.
Washington, D.C. 20450

Subj: 9-1-1 Wireless Location Accuracy Issues

Dear Chairwoman Clyburn:

I am writing to inform you and the Federal Communications Commission about, and ask for your action on, a serious public safety problem regarding 9-1-1 location accuracy. When calling 9-1-1, the public has an expectation that their location is known by emergency responders. This is not always true with wireless 9-1-1 calls. I'm hoping that the FCC gives this problem immediate attention.

I have been in public safety communications for over 30 years. I have been involved with 9-1-1 in Ventura County (California) – an area with almost one million residents which covers both urban and rural environments – from the inception of FCC regulations requiring carriers to provide accurate "Phase II" location information with wireless 9-1-1 calls. I serve as the Communications Manager for the Ventura County Sheriff's Office and oversee the Sheriff's Communications Center, which handles 9-1-1 calls. I am also the President of the California Chapter of the National Emergency Number Association, or CALNENA, representing 9-1-1 professionals and PSAPs throughout the State of California.

Ventura County has been capable of receiving Phase II 9-1-1 location data for years, allowing us to more accurately locate wireless 9-1-1 callers countywide. For emergency responders, as you know, this Phase II location data can be critical to finding a 9-1-1 caller in crisis, as Phase I data only includes the location of the cell site, with a phone number, and the geographic area served by each cell site can be very large.

About two years ago, we started noticing a significant decrease in the percentage of wireless 9-1-1 calls that delivered Phase II location information to our public safety answering points (PSAPs). Without this Phase II data, we are unable to locate 9-1-1 callers in need, unless they are able to tell us where they are. For emergency responders, cell site location alone is generally of little value in finding the victim or 9-1-1 caller, since the geographic area served by a cell site is so large.

In Ventura County, the problem is urgent. On a regular basis less than half of the wireless 9-1-1 calls we receive daily deliver accurate Phase II information to emergency

responders. Of the 87,000 wireless 9-1-1 calls we received over the past 18 months, over one-half did not have Phase II location information delivered with the call as required by FCC regulations.

This is a serious public safety concern and a significant stress on our public safety assets, both the dispatchers and first responders who have to spend considerable time obtaining the location of wireless 9-1-1 callers. Given the emergency nature of these calls, lives are at stake without that critical Phase II location information for Ventura County.

In my role as President of CALNENA, I know that the problem is equally severe in other counties and cities throughout California. PSAPs throughout the state have told me that they are experiencing the same decline in wireless 9-1-1 accuracy, as the Phase II data they used to receive no longer gets delivered with the call. This problem appears to be happening in all areas of the state, but the problems seem more pronounced in urban areas, possibly suggesting that whatever 9-1-1 technologies the wireless carriers may be using lately are not working for wireless calls placed in or near high rise buildings.

We also have hard data highlighting the urgency and scope of this problem. In addition to the data from my own PSAP, I reached out to several of my manager colleagues at other PSAPs in California. A review of these data indicates that the decline in Phase II location information being delivered with wireless 9-1-1 calls is a widespread problem in California. Public Safety Network (PSN), a prominent data analysis and visualization company, assisted in the preparation and analysis of the attached reports. This analysis is very valuable since it shows what the PSAPs are actually experiencing in the delivery of Phase II location information, its accuracy and usefulness to first responders.

I have seen these reports and reviewed them with public safety and wireless experts, and the reports show that only Phase I location information is being consistently delivered in cities and counties that are Phase II ready. I have requested copies of that data for San Francisco, San Jose, Pasadena, Bakersfield and Ventura County, representing significant population areas throughout the state. I have enclosed that data for your review and for the FCC's record.

These data show the alarming drop in the delivery of location information on 9-1-1 wireless calls beginning in 2009 throughout California. The current delivery of Phase II location information to the PSAP is shockingly low across all carriers. According to the California State 9-1-1 Office, of the 1,589,580 wireless 9-1-1 calls received statewide in March 2013, more than 55% did not have Phase II location information delivered with the call.

In the case of one carrier, the delivery of Phase II location information has dropped from the high 90th percentile in 2008 in Ventura County, to less than 35% at the end of 2012. As a result, today many wireless 9-1-1 callers in Ventura County who cannot communicate their location may have no better than a one in three chance that first responders will know where they are located. In more urban areas of the state, wireless 9-1-1 callers may have no better than a one in five chance of their location being delivered

with their call to first responders. As you will see from the graphs attached, the location accuracy problem is not limited to just one wireless carrier. And, even the best performer delivered accurate location information to the PSAP no better than 64% in December 2012. This is unacceptable given that life and property of California's citizens are at stake.

Although widespread, this phenomenon is much worse in urban areas, which suggests that assisted global positioning system (AGPS) technology may be a significant factor, as GPS signals are known to struggle to penetrate inside metal, stone and concrete structures or reach cell phones outside in the urban "canyons" created by high-rise buildings. Slide number 2.3 shows the Phase II performance of all the major carriers for San Francisco in December, 2012. The following are the percentages of wireless 9-1-1 calls for which Phase II location information was actually delivered to the PSAP with the call:

a. AT&T 20%

b. Metro PCS 12%

c. Sprint 21%

d. T-Mobile 10%

e. Verizon 37%

In 2011, there were 15 million wireless 9-1-1 calls in the State of California, which accounts for more than half of the total 24 million 9-1-1 calls that were placed. By the FCC's own estimate, nationwide 70% of 9-1-1 calls are placed from wireless phones and that number is growing. This data drives home the risk we are facing today as a large and growing percentage of those callers have their location unavailable to dispatchers and emergency responders due to the decline in the delivery of accurate location data with wireless 9-1-1 calls. Our 9-1-1 professionals are challenged to perform their jobs effectively without this information, and our first responders are losing precious time trying to find victims when that information should be delivered to them within seconds using available technologies.

I would add that, in California, the location accuracy problem is magnified by the fact that English is not the first language for many emergency callers. This makes it more difficult for first responders to obtain accurate location information, adding urgency to having the location delivered with the wireless 9-1-1 call. Additionally, with 35% of U.S. households disconnecting landline telephones in favor of wireless devices, the problem has the potential to be compounded and could disproportionately impact poorer communities.

CALNENA urges the FCC to issue all necessary orders to require carriers to deliver accurate Phase II location information with the wireless 9-1-1 call, in a timely manner, throughout their communities of service, and correct this problem as a matter of public safety.

On a very important related matter, we know that the FCC has been studying the problem of indoor wireless 9-1-1 location accuracy for several years. Now is the time for action on existing rule compliance and on establishing indoor accuracy requirements before more lives are put at risk.

I hope that these data help the FCC in resolving this urgent public safety issue. I am more than willing to help in any way that I can. Thank you very much for your time and for providing the leadership that we need to quickly resolve this widespread public safety problem.

Sincerely,

Danita L. Crombach

Danita L. Crombach, ENP

Enclosures

cc: The Honorable Jessica Rosenworcel, Commissioner
The Honorable Ajit Pai, Commissioner
The Honorable Diane Feinstein, U.S. Senate
The Honorable Barbara Boxer, U.S. Senate
The Honorable Mark Pryor, U.S. Senate
The Honorable Roger Wicker, U.S. Senate
The Honorable Julia Brownley, U.S. House of Representatives
The Honorable Lois Capps, U.S. House of Representatives
The Honorable Buck McKeon, U.S. House of Representatives
The Honorable Greg Walden, U.S. House of Representatives
The Honorable Anna Eshoo, U.S. House of Representatives
Chief David Turetsky, Public Safety & Homeland Security Bureau
Chief Ruth Milkman, Wireless Telecommunications Bureau
Dr. Brian Fontes, CEO, National Emergency Number Association