



## SACOG Board of Directors

## Item #06-6-18 Workshop

June 8, 2006

### **Sacramento Region Public Safety Committee: Status Report on 911 Emergency Communications System**

**Issue:** The Sacramento Region Public Safety Committee is an ad-hoc organization of local public safety officials who have come together to coordinate a comprehensive and orderly review of and report on 911 emergency communications systems in the region.

**Recommendation:** None. This item is for information only.

**Committee Action/Discussion:** Sheriffs and chiefs of more than a dozen Sacramento-area police and fire agencies together with representatives of local emergency communications centers are conducting a review of the current 911 emergency communication system.

That review is prompted by:

- Increased public scrutiny of emergency response capabilities.
- New state and federal legal requirements for local handling of 911 emergency response calls through Public Safety Answering Points (PSAPs) without corresponding operational funding.
- Telephone number portability that permits someone living in Austin, Texas, to carry a mobile phone with a Sacramento telephone number.
- The need to keep pace with rapid evolution in both technology and the way people prefer to communicate.

As responsible stewards of the 911 system and public safety providers, it is our responsibility to plan ahead, identify challenges, anticipate problems and develop strategies to respond.

The Sacramento Region Public Safety Committee believes there is an urgency to respond to the challenges facing the 911 communications system. Our goal is to develop the ability to provide the quickest, best response to an emergency call. In order to meet that goal, we offer the following recommendations:

- Conduct a public outreach effort to educate residents on 911 communications systems and the challenges they are facing.
- Ask local agencies to solicit public input on short-term and long-term solutions to address the current and future challenges to 911 communication systems.
- Report back in 180 days with findings and recommendations to address the challenges facing area 911 communication systems.

Approved by:

Mike McKeever  
Executive Director

MM:gg  
Attachment

Key Staff: Pete Hathaway, Director of Transportation, (916) 340-6235

## **Sacramento Region Public Safety Committee Status Report on 911 Emergency Communications System**

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### **Introduction**

Sheriffs and chiefs of more than a dozen Sacramento-area police and fire agencies together with representatives of local emergency communications centers are conducting a review of the current 911 emergency communication system.

That review is prompted by:

- Increased public scrutiny of emergency response capabilities
- New state and federal legal requirements for local handling of 911 emergency response calls through Public Safety Answering Points (PSAPs) without corresponding operational funding
- Telephone number portability that permits someone living in Austin, Texas, to carry a mobile phone with a Sacramento telephone number
- The need to keep pace with rapid evolution in both technology and the way people prefer to communicate

The Sacramento Region Public Safety Committee is an ad-hoc organization of local public safety officials who have come together to coordinate a comprehensive and orderly review of and report on 911 emergency communication systems in the region.

The 9/11 terrorist attacks and Hurricanes Katrina and Rita have brought new focus to the public's attention on emergency response capabilities. While planning and preparation for such disasters is ongoing and essential, it is the day-to-day communication demands on law enforcement and fire services that have prompted this review.

The challenges facing the 911 emergency communication system are not insignificant. They include:

- E-911 requirements
- Advances in technology
- Rising demand on the system
- Emergency preparedness needs
- Homeland Security requirements

As responsible stewards of the 911 system and public safety providers, it is our responsibility to plan ahead, identify challenges, anticipate problems and develop strategies to respond.

Nine years ago the Federal Communications Commission ordered the creation of the Wireless Enhanced 911 system (E-911), with a November 2005 deadline for implementation. E-911 is a response to the new dominance of cellular or wireless telephones in American society, with new requirements for locating, tracking and responding to those mobile sources of emergency calls. But the federal government didn't give local governments any money to cover the cost of that new requirement.

Likewise, the State of California now is encouraging local PSAPs to take a greater share of the call load from the California Highway Patrol, the agency that now has responsibility for fielding wireless 911 emergency calls. It's an acknowledgement that the understaffed CHP has been overwhelmed by the growing volume of calls. While the state doesn't require local agencies to actually take the calls, many first-responder agencies, frustrated with delays in the current system, want to cooperate in order to improve response times.

And while California has a statewide funding program for 911 equipment and communication infrastructure, it also provides no operational funding.

The way Americans communicate is changing rapidly. Only a decade ago, few 911 calls were placed from mobile phones and most of those were

related to roadway incidents. Today, more than a third of all 911 calls originate from wireless sources that can be anywhere – from office or school, automobile or river raft.

Meanwhile, lack of resources have limited the ability of many government agencies to upgrade their communication systems to meet the new demands.

In short, rapid changes in the way Americans communicate, new laws, challenges posed by still-emerging technology and financial constraints on replacement of aging communication systems and operational staffing have all converged at once.

Sacramento Region Public Safety Committee members are concerned that most 911 communication systems do not meet either their expectations or the public's.

### **Calls Frequently Exceed Capacity**

*"Currently, through the CHP communications centers, a single event can immediately overload the system and tie it up for long periods of time. A recent tanker truck fire on a Sacramento freeway resulted in over 1,000 cell phone calls to the Sacramento 911 call center and tied-up all five operators for over an hour."*

***—California Performance Review Commission***

Too many legacy and newer 911 systems still suffer from too many routing and transfer problems that delay notification to first-responders in an emergency, increasing the potential threat to property and lives.

### **Statement of Problem**

Since 9-1-1 was established as the universal nationwide emergency telephone number in 1968, the very nature of communication has changed significantly. While 911 systems continue to improve, local and regional communications networks created to handle emergency calls face myriad challenges:

- Populations have grown beyond the capacity of the infrastructure.
- Emergency service responsibilities have become more complicated as state and federal laws have imposed new requirements.
- The public's expectations of their emergency services have increased.
- Technological limits on the ability of current equipment to locate and track wireless callers prevent many systems from meeting E-911 requirements.
- Constrained budgets make it difficult for many local agencies to properly staff their communications systems, even if they have state-of-the-art equipment.

And perhaps most importantly, the ways society communicates are evolving faster than the emergency communications infrastructure that serves it.

As a result, today's 911 emergency communications systems in the Sacramento region suffer from:

- Peak overloads, with many cellular callers hanging up in frustration after waiting on hold for several minutes
- Confusion and delays in transferring some emergency calls from the CHP to other police or fire agencies
- Limited ability to reach the correct agency because of legal limitations on transferring a call more than once

With the restructuring of America's emergency responses under the Homeland Security umbrella, local agencies also are shouldering a heavier burden, both with Patriot Act responsibilities and the practical need for increased inter-jurisdictional cooperation.

A number of local agencies are proceeding with improvements to their systems. For example, some are setting up '311' call centers that in some cases can relieve the PSAP of non-emergency calls. Others are establishing mutual aid agreements between 911 centers. And some have received sufficient state and local funding to install the most advanced facilities available.

Nevertheless, progress is uneven. Many agencies have been unable to get the funding needed for improved facilities. And virtually all complain they don't have the staffing to properly operate at the peak efficiency.

No detail is more revealing than the rapidly changing world of cellular communication. Landline phones by definition are installed in fixed physical locations, so most 911 call centers have long had "enhanced" service, which automatically displays the phone number and street address of any call.

Yet, the same technology doesn't work for cell phones. In fact, developing the wireless technology and protocols to pinpoint the location of callers has turned out to be a monumental task involving multiple layers of government, local phone companies, and carriers, to say nothing of the enormous cost.

Nationally, more than a third of the 200 million calls placed to 911 each year now come from cell phones -- and in many California communities it's nearly half of all calls. The situation is getting more complicated with the growing popularity of Internet-based phone services (VoIP) -- many of which can't access traditional 911 service.

**E-mail from Elk Grove Resident  
To Elk Grove Police Department**

*"I called 911 on September 16<sup>th</sup> around 3:45 p.m. I was calling because as I drove into my neighborhood on Laguna Star, I witnessed what appeared to be a violent gang fight covering the main street. I was on hold for over 5 minutes, just got an answering machine. I'm thankful my child hadn't stopped breathing. It would have been too long of a wait before I got a person. Once I did get a person, she was still unable to get to the police, the lines were busy on her end, and she told me I could hang up and she would keep trying to get the police."*

It is fair to say that citizens are unaware that -- too often -- cellular phones are ineffective tools for reporting emergencies, in part because they are a moving target. As Consumer Reports magazine puts it, "Cellular's biggest failing may well be its limited usefulness in an emergency. If you call 911 from a cell phone, rescuers cannot readily find you."

To attack that problem, Congress required public agencies to provide wireless E-911 service before the end of 2005 but provided no funding. E-911 is capable of pinpointing a caller's phone number and address. That is generally not a problem in the case of a traditional landline phone, in which the phone number is tied to a physical location. When you dial 911, your call is automatically routed to the local PSAP -- the correct fire or police department. However, few cellular phone companies and public agencies were able to meet the federal deadline for calls from cellular phones and other wireless devices, which are not tied to a fixed location.

In the State of California, "mobile" 911 emergency calls by law are routed to the nearest appropriate California Highway Patrol communications center. It's an

outmoded system created at a time when most wireless calls were placed through “mobile radio” car phones traveling the state’s highways. At the time it made sense because most emergency calls were highway-related. But the communication world has changed drastically since then.

Today, wireless telephones have become the norm rather than the exception. Calls may originate from anywhere and, in fact, the vast majority are not placed from highways. Despite that communication evolution, all wireless calls still go to the CHP, which has been overwhelmed by call volumes. The CHP takes virtually all wireless 911 calls. It must answer every call, even if hundreds are related to the same emergency.

The result is a system that has become seriously flawed. Governor Schwarzenegger’s California Performance Review Commission found:

“CHP 911 operators are regularly overloaded during peak commute hours and callers often get a busy signal or are put on hold for up to 10 minutes. Current technology used by CHP still cannot transfer calls from a PSAP that is over its volume capacity to another that has operators available.”

On January 1, 2001, a state law (AB1263) went into effect that allows for routing of wireless 911 calls to local PSAPs under specific conditions. There is no requirement that the local agencies actually take the calls, however. While some local PSAPs, particularly those in rural areas or with other funding sources, have begun to accept the wireless 911 calls from CHP, most PSAPs in this region do not have that capacity.

While transferring some of the cellular call load to local PSAPs will relieve pressures on the CHP communication system, it will not solve the real problems – overwhelming call volumes, outdated equipment, understaffing and technical deficiencies. The Governor’s California Performance Review Commission acknowledged the problem:

“When three cities tried to assume responsibility for answering wireless 911 calls in their areas, all three returned the responsibility to CHP because they were unable to handle the volume of calls.”

In the Sacramento region, communications operations vary considerably:

- Metro Fire and the City of Sacramento Fire Department have merged their communications into a consolidated center.
- Yolo County operates a consolidated PSAP serving the Yolo County Sheriff, police departments in Woodland, West Sacramento and Winters, and fire/emergency medical services for the majority of Yolo County residents.

- The City of Sacramento Police Department has a new 911 system with state-of-art technology and greater capacity but limited staffing.
- Multiple other police agencies in Sacramento County operate through the Sacramento County Sheriff's aging system.
- Some jurisdictions are setting up '311' call centers to help relieve the PSAP of non-emergency calls

Beyond capacity issues, there remain unresolved technical issues. E-911 communication equipment is expensive and the routing technology for wireless 911 calls is imperfect. In many instances, neither wireless 911 callers nor 911 operators can properly identify their exact location. It is not uncommon for citizens to have no idea whether they are calling from a location in the City of Elk Grove or the County of Sacramento, for example.

As a result, callers too often face frustrating delays on "hold," emergency calls are received at or transferred to the wrong agency, and police and fire agencies find themselves unable to coordinate emergency response as quickly and efficiently as they would like to.

### **Recommendations**

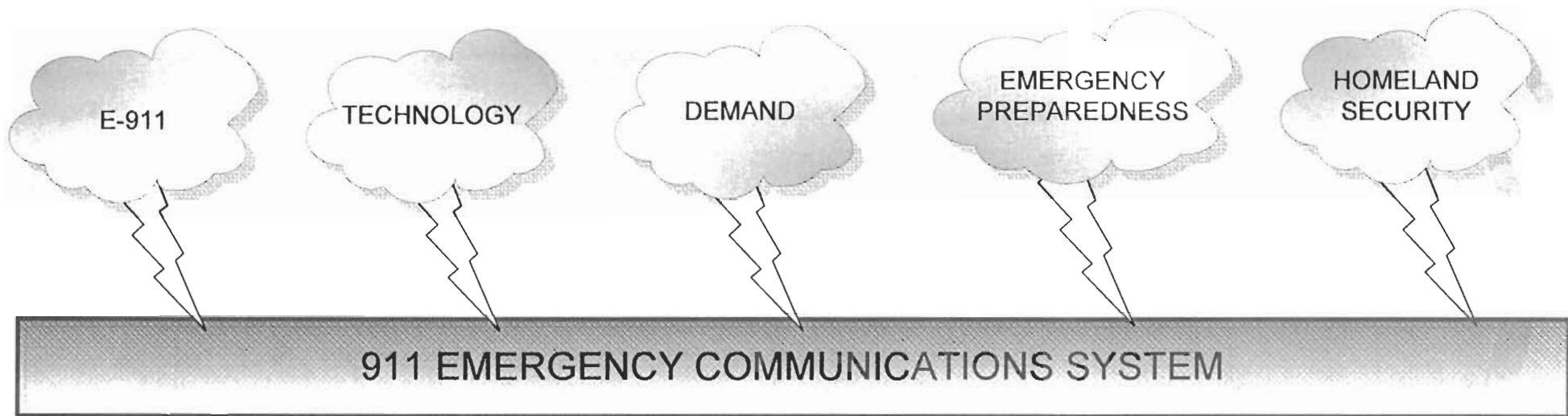
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- Report back in 180 days with findings and recommendations to address the challenges facing area 911 communication systems.

**Sacramento Region Public Safety Committee  
List of Participating Organizations**

Citrus Heights Police Department  
Davis Police Department  
Elk Grove Fire Department  
Elk Grove Police Department  
Folsom Fire Department  
Folsom Police Department  
Galt Police Department  
Placer County Sheriff  
Rocklin Police Department  
Roseville Police Department  
Sacramento County Sheriff  
Sacramento City Fire Department  
Sacramento Metropolitan Fire Department  
Sacramento Police Department  
Sacramento Regional Fire Communications  
West Sacramento Fire Department  
West Sacramento Police Department  
Yolo County Communications Emergency Services Agency

# CHALLENGES



*Sacramento Region  
Public Safety Committee  
Status of 911 Emergency Communication System*