Specific FAQs

S.1 What do I have to do to get W E9-1-1 at my PSAP?

Be interested, committed, and patient. The following are the top-level steps.

1. Contact your assigned 9-1-1 Office consultant to make known you are interested in answering W E9-1-1 calls directly. He/she will inform you how your PSAP fits into the statewide implementation plan.
2. When the implementation plan gets to your area, the 9-1-1 Office will ask you for a letter of agency to represent your PSAP in discussions with the ILECs and WSPs. The letter has been pre-written by the 9-1-1 Office, but needs to be tailored for your PSAP, signed by the appropriate PSAP authority, and sent to the 9-1-1 Office. This tells the State 9-1-1 Office that you intend to answer wireless E9-1-1 calls directly.
3. Once a letter of agency has been received by the 9-1-1 Office, the 9-1-1 Office will develop a letter package with requests to each of the WSPs that must be signed by the PSAP, CHP, and the State Department of General Services, and mailed to WSPs. From this point the WSPs have 6 months to provide service in accordance with the Federal Communications Commission (FCC) Order.
4. Shortly thereafter, you will be required to participate in the routing meetings with the CHP and wireless carrier representatives to determine which cell tower sectors should go to your PSAP.
5. During the 6-month implementation timeline, PSAPs may need to order additional 9-1-1 trunks and possibly upgrade their 9-1-1 equipment. The equipment upgrade typically includes some minor parts and programming or a software upgrade. If the PSAP wishes to incorporate a geographical information system (GIS), this usually takes longer, but should not delay the receipt of W E9-1-1 calls from the WSPs. There also may be an issue with computer aided dispatch (CAD) compatibility, which will need to be addressed.
6. When WSPs are ready to test, the PSAP will need to coordinate a time for each one to perform functional tests and then operational tests. Functional tests are needed to ensure the system and network connections are working and take only a few hours to complete. Operational tests validate the routing from each cell sector and can take longer (up to days) to complete. The duration of the operational test depends on the PSAP's available time along with the number of cell sectors they've agreed to receive. For example, San Francisco Consolidated Emergency Communications Center (SF CECC) staff coordinated their operational testing in the evening for 4-6 hours and took 20 calls per hour. Because they are a large city with hundreds of sectors, the operational test lasted for a few days with each of the five WSPs. Some WSPs may require additional testing when they cut to Phase II service. This is going to vary depending on the specific Phase II technology selected by the WSP.
7. Once the operational testing is completed, the PSAP can begin receiving W E9-1-1 calls from that WSP.

S.2 Are there designated funds available for W E9-1-1, or will it come out of my PSAP's funding allotment?

Yes, there are designated funds for W E9-1-1 to be used for 9-1-1 circuitry, equipment, and software, if needed. In addition, there are designated funds for GIS. All funding requires pre-approval by each PSAP's respective 9-1-1 Office consultant.

S.3 What is GIS?

GIS is short for geographical information systems, sometimes referred to as electronic mapping systems, which reference geographical points on the earth. A GIS is comprised basically of two parts: digital map data files and map-reader software. The map data files are structured in layers so that a PSAP can choose whether or not the map-reader software will display them on a screen. Typical data layers include: street center lines (with labels and addresses), major structures, rivers and lakes, fire hydrants, elevations

(topographical layer), and anything else needed that a PSAP is willing to procure or build into the GIS. GIS is important for W E9-1-1 because, unlike wire-line 9-1-1, many wireless 9-1-1 calls do not originate from a street address and therefore cannot be located by street address.

S.4 Do I need GIS at my PSAP in order to be considered ready for W E9-1-1?
No. The FCC Order does not require GIS at your PSAP in order to be considered ready for the service. However, if Phase II latitude/longitude coordinates are delivered with a call, a GIS will be the best way to utilize the data. PSAPs should begin researching and considering GIS for both wireless and wire-line E9-1-1 and potentially other applications (automatic vehicle location for example). It will be a couple more years before Phase II longitude and latitude coordinates are delivered with all wireless 9-1-1 calls. Most PSAPs that plan on using GIS will need to develop a GIS/ALI interface to display the ALI information in an electronic map format. PSAPs interested in GIS should contact their State 9-1-1 Office consultant.

S.5 Who qualifies for GIS funding?
GIS funding is currently limited to those primary PSAPs that commit to answer W E9-1-1 calls directly and all secondary PSAPs where W E9-1-1 is to be implemented within one year. For a statewide W E9-1-1 schedule, see the Wireless E9-1-1 Statewide Plan Map at:
http://www.documents.dgs.ca.gov/td/911/WE911Statewideplanmap.pdf.

S.6 Does my PSAP qualify for GIS funding for all our existing 9-1-1 call taker positions?
Not necessarily. GIS funding is based on the 9-1-1 call volume in your PSAP, which in turn specifies a number of "qualifying" positions. Your qualifying positions (for GIS purposes) would be equal to that quantity used to compute your customer premise equipment (CPE) funding allotment. This does not preclude a PSAP from purchasing more than this quantity of GIS software licenses with available state residual or local funds.

S.7 Is W E9-1-1 going to cost my PSAP more money?
Typically, no. The State has budgeted funds to pay for any necessary upgrades to the 9-1-1 CPE and GIS. Funds are not available, however, to cover the cost of personnel used to answer W E9-1-1 calls, nor is there any specific funding for computer assisted dispatch (CAD) upgrades. Most PSAPs should be able to absorb the increased volume of 9-1-1 calls with no additional staff costs. If required, CAD-related costs can be funded from designated CPE and/or GIS allotments. See the CAD FAQs.

S.8 Will my PSAP need to increase staffing?
Typically, no. There will be an increase in the number of W E9-1-1 calls received (see next question), however for most PSAPs it should not be a great burden. Calls transferred from the CHP to local PSAPs should decrease significantly.

S.9 How many more W E9-1-1 calls will I get at my PSAP if I choose to receive them directly?
We have estimated it is between 2-3 times the current quantities of W 9-1-1 calls that are transferred from the CHP. For example, if CHP is transferring 20 calls a day, receiving W E9-1-1 calls directly means you should receive about 40 to 60. This is because the CHP is filtering out the inadvertent and multiple calls on the same incident, and only transferring the initial callers to the local PSAP. Another way of estimating the potential wireless 9-1-1 call volume in advance is to factor in between a 10 and 40 percent increase to your existing wire-line 9-1-1 volume. Sheriff's departments will typically be on the low end of this scale. Police departments that have a large part of their jurisdiction away from freeways, state routes, and other CHP-patrolled roadways may experience closer to a 40 percent increase. Absent specific data, a 25 percent increase is a good rule of thumb.

S.10 Will my PSAP need additional workstations?

Typically, no. However, if the call traffic calculation shows a need for additional positions, the 9-1-1 Office will provide funding for the increase.

S.11 How accurate is the Phase II information delivered with a W E9-1-1 call?

The FCC Order specifies two different accuracy standards for WSPs; one for handset-based solutions, such as a global positioning system (GPS) solution, and one for network-based solutions, such as network triangulation.

- Handset-Based Solutions – Must provide the location of the caller within 50 meters 67 % of the time and within 150 meters 95% of the time.
- Network-Based Solutions – Must provide the location of the caller within 100 meters 67 % of the time and within 300 meters 95% of the time.

However, one must keep in mind that WSPs must meet these criteria across their total subscriber base (number of calls made) and not necessarily across a particular PSAP jurisdictional boundary. In general, since most wireless 911 calls are made in the major metropolitan areas where the concentration of cell sites is most dense, it is reasonable to assume that the accuracy will usually be best in the urban areas. In California, some of the major WSPs are using combinations of both handset-based and network-based technologies.

S.12 What are the busy hours for W E9-1-1?

Busy hours are hard to predict but generally follow the busy traffic "rush" hours at the CHP communications centers. This could be less true for local PSAPs who should not be answering calls from freeways and other roadways patrolled by the CHP.

S.13 What is a dropped call?

A dropped call, is a call that has been received by a 9-1-1 call taker, and then is disconnected due to poor cell site coverage. The caller usually calls back when they get a signal.

S.14 What is a "butt" call?

A butt call is also known as an inadvertent call or an unintentional call. A butt call is a term coined from callers sitting on wireless phones and accidentally dialing 9-1-1. These calls can be very annoying to the 9-1-1 call taker as the caller does not know they have called 9-1-1, nor are they usually responsive to the dispatcher. The National Emergency Number Association (NENA) and the International Association of Public Safety Officials have a task group working with WSPs to educate wireless phone users to prevent WSPs from pre-programming the "9" key to dial 9-1-1 automatically and to seek other alternatives that might reduce the number of these types of calls.

S.15 How many inadvertent 9-1-1 calls will I receive at my PSAP?

We have estimated that approximately 15-50% of the total wireless 9-1-1 calls received are inadvertent "butt" calls.

S.16 What does the ALI record look like with a wireless call?

We call this the "W-ALI display," short for wireless automatic location information. This is the information PSAPs will view when a wireless call is directly received or transferred to them on a 9-1-1 trunk. There will be two different formats, one for Phase I and one for Phase II. The incumbent local exchange carriers (ILECs), SBC and Verizon, support both of these W-ALI formats. As a PSAP, you will receive your W-ALI format from either SBC or Verizon and will either receive Phase I information with the existing wire-line ALI format or be upgraded to the new Phase II W-ALI format.

- Phase I W-ALI Format - The Phase I W-ALI format uses the existing wire-line ALI fields and supports all of the wireless Phase I information. PSAPs should not need to modify their 9-1-1 or CAD systems to accommodate this format. For a visual display of what this format may resemble,

see the "Phase I W-ALI Display" on this web site at http://www.documents.dgs.ca.gov/td/911/Wireless_ALI_Display_for_Phase_I_(aka_option_3C)10-3-02.pdf.

- Phase II W-ALI Format –The new Phase II W-ALI format adds the caller's latitude, longitude, uncertainty (in meters), and confidence (in percent), to the existing ALI format. In order to receive the new format, PSAPs may need to modify their 9-1-1 and computer aided dispatch (CAD) systems accordingly. For a visual display of what this format may resemble, see the "New Phase II W-ALI Display" on this web site at http://www.documents.dgs.ca.gov/td/911/PhaseIIWirelessALIDisplay6_11_03.pdf.

S.17 How were the W-ALI formats determined?

A W-ALI committee was formed in April of 2001, and through several meetings different formats were developed. The goal was to include wireless call information in existing available fields that would have the minimum impact to all the stakeholders, especially PSAPs with all their various equipment. The W-ALI committee consisted of the ILECs (Verizon & PacBell) and their Data Integrity Units, CAD providers, all wireless service providers, the 3rd party database providers (TCS & Intrado), PSAPs, PSAP equipment providers, CHP, and the 9-1-1 Office. In November 2001 all stakeholders agreed that they could use the Phase I W-ALI format for both Phase I and Phase II. However, as more was learned about the capabilities of ILECs, database providers, and WSPs, it became evident that another format would be needed to adequately support Phase II. That led to the development of the Phase II W-ALI format that includes the uncertainty (in meters) and confidence (in percentage) of the latitude and longitude coordinates.

S.18 Will the W-ALI display impact CAD at my PSAP?

The Phase I W-ALI Display should not impact CAD. PSAPs will simply see different information in the existing wire-line fields. However, as we migrate PSAPs over to the new Phase II W-ALI display, 9-1-1 CPE and CAD systems could be impacted. To receive all the Phase II data, PSAPs will probably need the new Phase II displays. At a minimum, a GIS interface will need to be developed so the latitude, longitude, uncertainty, and confidence information delivered with a Phase II call can appear in an electronic map display.

S.19 Will the State fund any CAD changes needed to accommodate the new Phase II ALI format?

No additional funding is currently allocated specifically for CAD interface issues. However, CAD changes can be funded from available PSAP CPE and GIS allotments. The issue of CAD funding for W E9-1-1 is currently under consideration by the State 9-1-1 Office pending a review of CAD modifications required in the Los Angeles County and Bay Area regional implementations.

S.20 How does the PSAP call taker recognize a W E9-1-1 call?

The ALI display will show the following:

The State Name field will usually show "CW" for California Wireless. It could also display CX, CY, or CZ.

The Class of Service field, will show "W911" for Wireless 911 or "WPH2 for Wireless Phase II.

The Customer Name field will show the wireless service providers name and 24x7 contact number.

The Location field will show the Thomas Brothers map page and grid with the cell sector directional.

Please see the W-ALI displays on this web site for additional information. Additionally, if you have the Phase II display you will usually see the latitude, longitude, uncertainty, and confidence fields populated.

S.21 Do I need to provide additional training to the call takers?

Yes. Call takers will need to be trained on the new W-ALI displays to interpret the information being delivered (see next question for example). There are some subtle differences, especially with regard to Phase II, between the individual WSP solutions. PSAP call takers that are well-trained will be best suited

to make use of the new information at their disposal. Also, new policies may be needed in PSAPs to address the W E9-1-1 ANI/ALI , inadvertent, and dropped W E9-1-1 calls.

S.22 What happens when a "non-service initialized" (NSI) wireless phone dials 9-1-1?

The FCC Order mandates that WSPs always deliver a 9-1-1 call, even if the phone is not currently subscribed to a wireless service. These phones, classified as "non-service-initialized" (NSI) by the FCC, include 9-1-1-only phones and many older phones that have been donated to schools, women's shelters, etc. specifically for the purpose of dialing 9-1-1. Most are not capable of receiving a call.

For NSI phones, the FCC had mandated that WSPs standardize the call-back number (CBN) display as "123-456-7890;" so that PSAPs can identify this as a non-dialable number. However, on September 30, 2002, the FCC granted a Request for Stay filed by the Emergency Services Interconnection Forum (ESIF), a group comprised of WSPs, wireless handset manufacturers, and public safety representatives. This allows for other alternatives to be considered such as one that would provide the digit string 911-XXX-XXXX. Exactly what is displayed now varies with the phone technology and is sometimes difficult to identify by the PSAP call taker, as an invalid CBN.

For the time being, this issue will continue to present some interesting scenarios at PSAPs regarding CBNs. A small percentage of wireless calls will deliver an incorrect CBN. Such might be the case where a subscriber has purchased a new phone (with the same TN), cancels the service on the old phone, but keeps the old phone to dial 9-1-1. With some wireless technologies, if the phone number is not physically removed from the old non-subscribed phone, the new phone user will receive the call from the 9-1-1 call taker in the event the user of either phone dials 9-1-1.

S.23 Who do I contact for W E9-1-1 outages?

W E9-1-1 troubleshooting is similar to wire-line. Most likely, a PSAP's 9-1-1 system provider is the place to start. Most providers are responsible for making the original diagnosis regarding where the problem stems. If not resolved at that level, both the local exchange provider (SBC or Verizon) and the respective WSP(s) may need to become involved. The State 9-1-1 Office is currently working with W E9-1-1 providers and PSAPs to develop a protocol that makes trouble reporting easy for PSAPs.