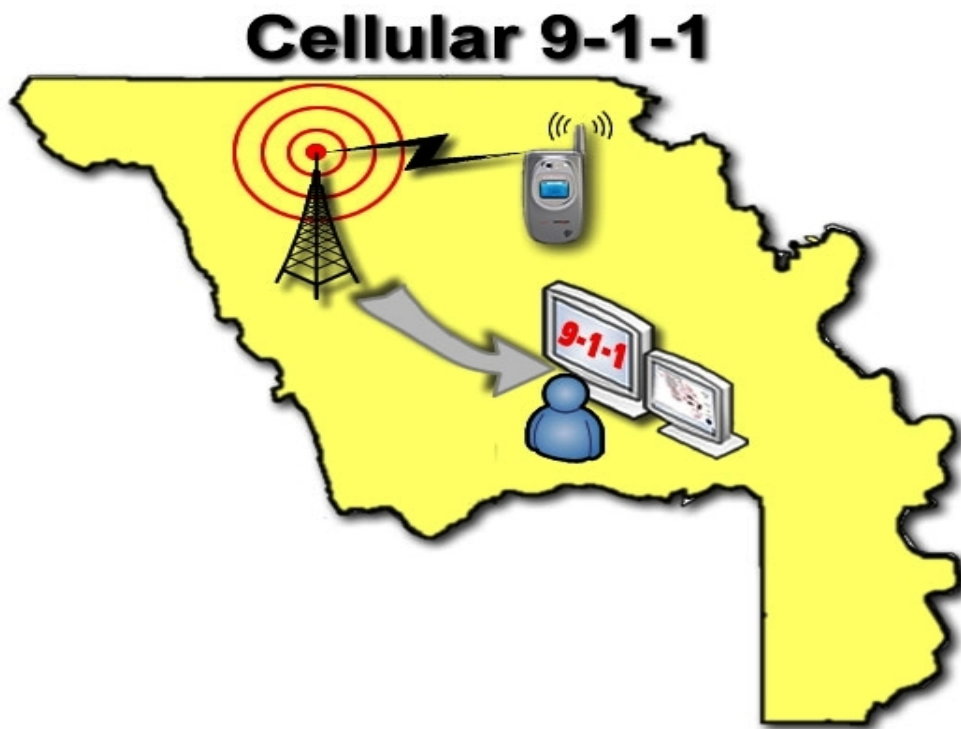


YOLO COUNTY COMMUNICATIONS
EMERGENCY SERVICES AGENCY
(YCCESA)

Wireless E9-1-1
Call Taker Training Manual



January 2005

Wireless Enhanced 9-1-1 Program Phase I – Phase II Overview

WIRELESS ENHANCED 911 POLICY

It is the policy of YCCESA to make all reasonable efforts to verify the existence of an emergency, the location of the emergency, and dispatch or otherwise coordinate an appropriate response based on the circumstances of each 9-1-1 call received via a wireless service provider.

A. Phase I Calls (W911)

All calls on the wireless 9-1-1 network come into the system as a Phase I call. Depending on the circumstances listed on the matrix in Appendix B, it may be possible to determine the callers' location using the Phase II technology. Phase I calls display the following information:

- Callers telephone number
- Cell site address
- Emergency Service Number (ESN) – determines which PSAP gets the initial call
- Class of service displays **W911**
- Wireless Service Provider name and contact number
- “Pseudo-ANI” (P-ANI) is the routing key used by SBC to route the call to the correct PSAP
- Thomas Brothers map page and coordinates
- Depending on the site, the directional face of the antenna
- Tell tale descriptor reminding the call taker to “**QUERY CALLER FOR LOCATION**”
- In some cases, the map coordinates of the cell site
- The “confidence” and “certainty” values are irrelevant on Phase I calls

B. Phase II Calls (WPH2)

Voice communication is immediate, but the location information takes a few moments (up to 15 seconds) for the system to determine the callers' information, when it is available. The call taker can retrieve the **WPH2** data after 15 seconds by clicking on the RE-TRANSMIT key on Vesta. This is known as “re-bidding” the ALI data. If **WPH2** data is available, it will then be displayed on the ALI screen. Phase II calls display same information as a Phase I call, except for the following differences:

- Callers telephone number continues to be displayed in the top line
- Cell site location continues to be displayed in the location field – this is not the caller's location!
- Class of service display changes to **WPH2**

- Depending on the site, the directional face of the antenna; again, this is for the cell site, not the callers' location.
- Wireless Service Provider name and contact number
- Where WPH2 data is available, map coordinates of the caller will be displayed in decimal value.
- The location determination system may display two values that indicate the "confidence" and "certainty" that the location is within X meters of the displayed coordinates Y percent of the time.

SAMPLE WIRELESS ALI SCREEN DISPLAY FOR W911 & WPH2 CALLS

**Thomas Brothers
Map Page**

**Phase I/Phase II
Indicators**

Verizon Wireless WALI04 Screen Display

```
(510) 552-0122 09:10 03/16
525 UNIVERSITY AVE.
PA CW 700 W911
VERIZON WIRELESS 800 451 5242 4
(650) 511-3125
PA TB 790 J4 SE
PALO ALTO PD
QUERY CALLER
FOR LOCATION
LAT 37.90640000 LON -122.545300
METERS 1708 PERCENT 100
```

```
(510) 552-0122 09:10 03/16
525 UNIVERSITY AVE
PA CW 700 WPH2
VERIZON WIRELESS 800 451 5242 4
(650) 511-3125
PA TB 790 J4 SE
PALO ALTO PD
QUERY CALLER
FOR LOCATION
LAT 37.96400000 LON -122.558000
METERS 27 PERCENT 095
```

Phase I Call

Phase II Call

**Cell Sector
Direction**

**Cell Site
Address**

**Latitude/Longitude
Coordinates
Of the Callers
Location**

**Wireless Caller
Phone Number**

**PANI/ESRK
(PSAP Routing Key)**

**Confidence/Certainty
Indicators**

Metro PCS WALI04 Screen Display

```
(925) 594-1027 09:37 03/04
260 SHERIDAN AVE.
PA CW 700 W911
METRO PCS (800) 959-3749
(650) 511-4134
PA TB SW
PALO ALTO PD
QUERY CALLER
FOR LOCATION
LAT LON
METERS PERCENT
```

```
(925) 594-1027 09:37 03/04
260 SHERIDAN AVE.
PA CW 700 WPH2
METRO PCS (800) 959-3749
(650) 511-4134
PA TB SW
PALO ALTO PD
QUERY CALLER
FOR LOCATION
LAT 37.42622400 LON -122.143807
METERS 64 PERCENT 095
```

Phase I Call

Phase II Call

**Wireless Enhance 9-1-1 WALI04 Vesta Pallas
Screen Display**

C. WPH2 METHODS USED IN DETERMINING LOCATION

WPH2 location is presented to the 9-1-1 call taker from one of two distinctly different methods: either a “network assist” process that uses Time Difference of Arrival (TDOA) or it draws the callers location using data collected on a Global Positioning System (GPS) chip in the handset.

- TDOA measures the time it takes for the radio signal to arrive at more than one cell tower. Based on the differences, the location is estimated in latitude and longitude coordinates using decimal values. This is sometimes referred to as “triangulation.”
- GPS determines the latitude and longitude by comparing signals from at least two satellites, so if the handset is out of view of a satellite, it will not be able to plot the location.

Primary wireless service carriers in Yolo County include:

WSP	Hand set type	WPH2 Data
Verizon Wireless	Analog legacy	TDOA
	Digital legacy	TDOA
	Digital w/GPS chip	GPS
Metro PCS	<i>Analog legacy</i>	<i>None</i>
	<i>Digital legacy</i>	<i>None</i>
	Digital w/GPS chip	GPS
Cingular Wireless	Analog legacy	TDOA
	Digital legacy	TDOA
T-Mobile	Analog legacy	TDOA
	Digital legacy	TDOA
Nextel	<i>Analog legacy</i>	<i>None</i>
	<i>Digital legacy</i>	<i>None</i>
	Digital w/GPS chip	GPS
Sprint PCS	<i>Digital legacy</i>	<i>None</i>
	Digital w/GPS chip	GPS
Surewest	<i>Digital legacy</i>	<i>None</i>
	Digital w/GPS chip	GPS

WIRELESS CALL TAKING - THINGS TO KNOW

A. CREATING A CAD RECORD

Wireless 9-1-1 calls will require manual entry of the incident location and caller information. The only way to determine the callers' location is to ask them, or use the map coordinates (latitude/longitude on a WPH2 call) to plot their location.

If you attempt to import a wireless 9-1-1 call into CAD using F2 or Shift F2 key strokes, it is important to understand that the information may not transfer to the appropriate fields, and the address that is given will be the cell site address or centroid address for the cell sector, not the calling parties actual location.

DO NOT RELY ON THE F2 or Shift F2 CAD FUNCTION TO IMPORT THE ADDRESS OF THE CALLER!

The only reason to use the cell site or centroid address is when you are dealing with a silent call, abandoned call, or other circumstance where you are having police or sheriff units check the area covered by a cell site or sector for a possible emergency.

If the caller tells you their location, enter that information into CAD. If you must use the map coordinates from the latitude and longitude display, enter the nearest intersection or commonplace name into the address field. Include the latitude and longitude information in the details of the CAD record. All fire departments in the county are equipped with a minimum of one or two GPS devices and this information will be particularly helpful if a search is occurring in a rural area.

B. MAPPING

Each workstation is equipped with GeoComm GeoLynx mapping. There is an interface between the 9-1-1 phone system's ALI server and the map server. When a Phase 1 (W911) call is received, the cell sector transmitting the signal will highlight on the map display. When a Phase 2 (WPH2) call is received, the caller's location will plot on the map based on the latitude and longitude being transmitted. Each time you select the "retransmit" button in the telephone ANI/ALI window, the information will be refreshed and the latitude and longitude information will be updated on the map display.

You can manually plot a location by latitude and longitude using the following instructions:

1. Go to the GeoComm GeoLynx Map and click the "Find" menu item on the bottom of the screen; then select the "Latitude/Longitude" option. A new window will appear.
2. Along the top of the new window, select "Decimal Degrees" from the three choices.
3. Enter the first six numbers in the latitude box beginning with "38". Enter the second six numbers in the longitude box beginning with "-121".
4. Click "Locate" and the Map will take you to the coordinates listed which should be the location of the caller when the call was made. Log the information in the CAD event record.

C. UNINITIALIZED WIRELESS HANDSETS

Federal law requires that Wireless Service Providers (WSP) deliver any 9-1-1 call originating on their systems to a Public Safety Answering Point. This not only allows the WSP's direct customers access to 9-1-1 via their network, it accommodates roaming customers from other providers. **An important note for the call taker is that uninitialized wireless phones can dial 9-1-1.**

A phone is considered "uninitialized" under the following circumstances:

- Customer purchases wireless phone services and later discontinues service. The telephone number is removed from the phone by the Wireless Service Provider, but the phone is still capable of dialing 9-1-1.
- Customer buys a wireless phone, but does not subscribe to a wireless service provider. No telephone number is ever assigned to this phone, but the phone is still capable of dialing 9-1-1.
- Customer replaces their old wireless phone with a new handset, and keeps the old handset. Their telephone number is transferred to the new handset, so the old handset no longer has a telephone number assigned to it. This phone is still capable of dialing 9-1-1.
- Customer donates an old handset to a charity; the charity in turn donates it to an at-risk person (domestic violence victim, senior citizen, etc.) for use in an emergency. The original telephone number is stripped from the handset, but the phone is still capable of dialing 9-1-1.
- Customer buys a "9-1-1 Only" phone handset. They generally pay the one-time cost of the phone and no monthly charges. This handset is never assigned a telephone number, but the phone is still capable of dialing 9-1-1.
- Customer buys a disposable wireless phone, sometimes referred to as "Trac" phones. The phone has a preset number of minutes and can make outgoing calls only. This phone is still capable of dialing 9-1-1.

In each of these scenarios, the handset can dial 9-1-1, but no actual telephone number is displayed to the call taker, nor is there any way whatsoever to dial into that handset if the call is disconnected. Unfortunately, there is no way to identify the caller through other means that might normally be available (e.g. through the Wireless Service Provider's customer data base).

The Wireless Caller Phone number on the Vesta ALI display will indicate a pseudo number of some kind. The FCC has directed the wireless providers to present the area code, the prefix "911" followed by the numbers 1234 (**925-911-1234**) as the only warning to the call taker that the caller is using an uninitialized handset.

**Uninitialized
Wireless handset
indication**



```
(925) 911-1234 09:37 03/04
250
PA SHERIDAN AVE.
METRO PCS (800) 959-3749 CW 700 WPH2
(650) 511-4134
PA TB SW
PALO ALTO PD
QUERY CALLER
FOR LOCATION
LAT 37.42622400 LON -122.143807
METERS 64 PERCENT 095
```

D. UNKNOWN LOCATION

It is YCCESA's policy to make every reasonable effort to locate a wireless 9-1-1 caller. This includes those attempting to report an emergency, but who are either unable to report their location or is unsure of their location. The call taker needs to gather as much information as possible to determine the location of the caller, using the tools available. The call taker will create the appropriate CAD event using whatever information the caller is able to provide, so emergency responders can be dispatched to the scene, or can conduct an area check for the cell sector or the coordinates.

Consider the following methods to locate the caller:

- Identify landmarks in the area they are calling; if they indicate a common name, such as a 7-11 store, Safeway store, etc., try to be more specific.
- If it is a WPH2 call, manually enter the latitude/longitude on the GeoLynx map, using the computer mouse, scroll over the location plotted to reveal the address or a near-by address.
- Ask the caller if there is anybody else around who can help identify their location.
- Are they near a pay phone or a landline phone? If so, have them dial 9-1-1 from that phone, but don't disconnect the wireless 9-1-1 call until contact has been made on the other line. (The call may route to another dispatch center.)
- Have the caller describe how they got to their current location.
- If the caller may be at their home, but is unable to communicate, contact the Wireless Service Provider at the number displayed on the WALL to ascertain their home address.
- If there are obvious signs of duress, notify the police and/or sheriff units in the vicinity of the cell sector, or if a Phase II, the map coordinates.
- Be aware of danger to the caller – some situations have developed where a person is abducted and stuffed in the trunk of a car, and they happen to have access to their cell phone. This, or other similar situations, would require the caller to be very quiet. The call taker may need to use alternative methods for communicating, such as having the caller tap on the mouthpiece of their phone in response to yes or no questions.
- Be creative – use your best resources! If you are not familiar with the general location the caller is providing, ask a co-worker to assist you, especially if they are more knowledgeable of the area.
- If there are indications of a fire or medical emergency, notify the dispatch centers serving the general area of the cell sector or the map coordinates.

E. SILENT CALLS OR CALLS WITH NOISE HEARD, NO VOICE CONTACT

It is the policy of YCCESA to make every reasonable effort to determine if an emergency exists with a silent wireless 9-1-1 call.

If the call taker answers a wireless 9-1-1 call, they may notice that there is no noise on the call or there may be music or other background noise heard, but they are not able to get the caller to speak.

This may be an inadvertent dialing, where the caller accidentally dialed 9-1-1 with the phone on their hip, in their purse, etc, or it may be a hearing or speech impaired person who is unable to communicate, or the caller may be in distress and cannot communicate verbally.

The call taker will need to determine the more likely scenario with the call in progress.

The first step is to handle it like any other silent call, verbally challenge the caller by saying, “9-1-1 Communications, what is your emergency”. If there is no answer, use the TDD component of the Vesta Pallas telephone system to see if they will react by typing on their TDD. Listen intently for any indications of a caller in distress.

If no contact is made using the TDD, follow the procedures for abandoned call handling.

F. ABANDONED CALL HANDLING

It is the policy of YCCESA to attempt to verify the existence of an emergency, the location of the emergency, and dispatch or otherwise coordinate an appropriate response based on the circumstances of each event.

We have added two event types for wireless 9-1-1 calls that are consistent with landline 9-1-1 event types.

W911A: No indications of duress or trouble; background noise of normal conversation or children playing; nothing heard or perceived by the 9-1-1 call taker to indicate a problem may exist.

W980: Hearing sounds of a dispute or person in distress; unable to establish communication with the caller due to an open line or unable to re-contact the caller via call back at the wireless phone number.

ABANDONED CALL HANDLING MATRIX		
Circumstances	Initial effort	Resolution
<p>PHASE I CALL (W911) No indications of duress are heard or perceived by the 9-1-1 call taker</p>	<ol style="list-style-type: none"> 1. Make two attempts to contact the 9-1-1 caller at the telephone number listed. 2. Leave a voice mail message if that service is available referring the caller to 530-666-8920 if they have any questions 	<ol style="list-style-type: none"> 1. Document the incident and the attempt the contact the caller in CAD as a “W911A” call type and close the event. 2. If contact is made, handle as appropriate for the situation.
<p>PHASE I CALL (W911) <i>Indications of duress; unable to re-contact the caller</i></p>	<ol style="list-style-type: none"> 1. Create a CAD event “W980” 2. Broadcast an announcement of the situation to police and/or sheriff units in the vicinity of the cell sector 3. Contact the Wireless Service Provider at the number listed on the Vesta ALI display 4. Determine the home or 	<ol style="list-style-type: none"> 1. Document the incident and the attempt the contact the caller in CAD as a “W980” call type and close the event. 2. If contact is made, handle as appropriate for the situation. 3. If the location is outside of our area of responsibility for police/sheriff or

	<p>other address of the caller</p> <ol style="list-style-type: none"> 5. Dispatch police or sheriff units to the home address if it is within several miles of the cell sector 6. Take any other reasonable measure to locate the caller 	<p>fire/EMS, notify the appropriate agencies per normal procedures</p>
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ABANDONED CALL HANDLING MATRIX		
Circumstances	Initial effort	Resolution
<p>PHASE II CALL (WPH2) No indications of duress are heard or perceived by the 9-1-1 call taker; Location is within 100 meters (328 feet) of the coordinates presented</p>	<ol style="list-style-type: none"> 1. Create a CAD event "W911A" 2. Make two attempts to contact the 9-1-1 caller at the telephone number listed. 3. Leave a voice mail message if that service is available referring the caller to 530-666-8920 if they have any questions 4. Use the mapping tool to determine the location of the coordinates 5. Dispatch the beat police or sheriff to conduct a visual check in the vicinity of the coordinates 	<ol style="list-style-type: none"> 1. Document the incident and the attempt to contact the caller in CAD as a "W911A" call type and close the event. 2. If contact is made, handle as appropriate for the situation. 3. If the location is outside of our area of responsibility for police/sheriff or fire/EMS, notify the appropriate agencies per normal procedures
<p>PHASE II CALL (WPH2) <i>Indications of duress; unable to re-contact the caller</i></p>	<ol style="list-style-type: none"> 1. Create a CAD event "W980" 2. Make two attempts to contact the 9-1-1 caller at the telephone number listed. 3. Leave a voice mail message if that service is available referring the caller to 530-666-8920 if they have any questions 4. Use the mapping tool to determine the location of the coordinates 5. Dispatch the beat police 	<ol style="list-style-type: none"> 1. Document the incident and the attempt to contact the caller in CAD as a "W980" call type and close the event. 2. If contact is made, handle as appropriate for the situation.

	<p>or sheriff to check the vicinity of the coordinates</p> <p>6. If there are indications of a fire or EMS incident, add those units to the area check</p>	
--	--	--

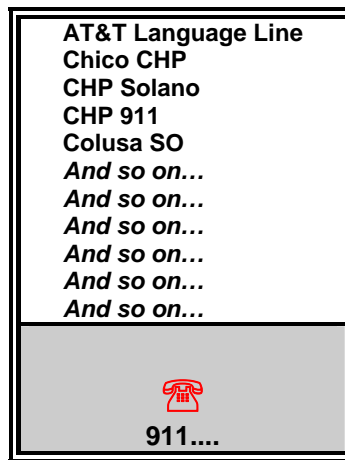
G. TRANSFERRING WIRELESS 9-1-1 CALLS

It is the policy of YCCESA to transfer wireless 9-1-1 callers to the appropriate Public Safety Answering Point (PSAP) as quickly as possible. In conformance to State guidelines, no 9-1-1 call will be transferred more than two times.

1. Wireless 9-1-1 Calls Routed Directly to YCCESA

The wireless 9-1-1 (W911) calls that are routed directly to YCCESA will be received on our existing 9-1-1 phone trunks and they can be transferred the same way that landline Enhanced 9-1-1 (E911) calls are transferred because they will have the same routing table at the SBC "Tandem" Selective Router.

To transfer WE911 callers to other dispatch centers, use the Vesta "911 Speed Calls" drop down list. Choose the dispatch center from the list (i.e., Davis PD PSAP, CHP - 911, Sac PD PSAP, etc).



2. Wireless 9-1-1 Calls Routed to CHP

Wireless 9-1-1 calls that are answered by CHP that are for incidents in Yolo County and require local public safety response will be forwarded to YCCESA in one of two ways. Some wireless service providers have updated their network so that 911 calls placed on their network can be routed through the SBC Selective Router the same way as

wireline/landline 9-1-1 calls, passing the ANI/ALI information to the receiving PSAP. You will be able to tell which calls were answered first by CHP as the ALI will display "CHP – SAC" in the PSAP field. The second way is for CHP to transfer the caller to 666-6612. If this method is used, CHP will announce the call and confirm the connection before dropping out of the call.

H. WIRELESS CALLS FROM AIRBORNE AIRCRAFT IN-FLIGHT EMERGENCY

It is the policy of YCCESA to make every reasonable effort to assist a wireless 9-1-1 caller reporting an in-flight emergency on an aircraft, and to notify the appropriate authorities of the circumstances.

While we hope these circumstances will never happen, the fact is, many airlines approaching Sacramento International Airport (SMF) fly over or in the vicinity of Yolo County. Additionally there are private airstrips (Yolo Flyer's Club) and several private fixed wing and helicopter services that operate within Yolo County. The need to act quickly is obvious; and if there is a hijacking in progress, the federal and state authorities will need to take immediate action to mitigate or eliminate the threat posed by the in-flight emergency.

Three things need to happen:

1. Identify the flight and general information about the aircraft
2. Determine the nature of the emergency
3. Notify the appropriate authorities

a. Procedure for Handling Emergencies Reported on an Airborne aircraft

If the YCCESA Communications Center receives a call from a passenger or crewmember onboard an airborne aircraft, reporting a hijacking or other violent potential terrorist event, the call taker needs to secure as much information as possible. Simultaneously, federal authorities must be notified, so a second dispatcher needs to immediately notify the California Warning Center on the NAWAS drop line; the Warning Center should bring NORAD onto the line to monitor your report. A separate notification should be made to the Transportation Security Administration (**TSA**) at **703-563-3240**. The Yolo County OES Manager should be notified however it is not necessary for them to respond to the dispatch center.

b. *The Call Taker Should Attempt to Determine the Following Information:*

- The callers name, seat number, cellular telephone number and if possible, their home telephone number.
- The flight information, including the name of the airline (United, Delta, etc.), the flight number, the departure city and the destination city.
- Determine if the caller knows the intent of the persons who have taken control of the aircraft or have interfered with the flight crew? Have the suspects taken control of the cockpit?
- If the aircraft is being used as a bomb/missile, does the caller know the possible target?
- Stay on the phone with the caller as long as possible, use normal caller interrogation techniques and questions to keep them calm and to determine the number of suspects, descriptions, weapons, hostages, etc. Convey all known information to NORAD, FAA and CALWAS.

- Continue with secondary questioning by having the caller be very specific with what has happened or is happening, including the number of persons involved, any indication of weapons (hand held or bombs), are there any individual hostages, has there been any violence?
- Inform the caller that federal authorities have been notified. The dispatcher who has contacted NORAD should ask if they would like to conference into the call with the person on the aircraft. If you are going to conference the caller, let them know who they will be talking with the military, and if they get disconnected, they will be called back.
- If the caller says “No” to talking with NORAD, continue obtaining information and using calming techniques to keep the caller on the phone as long as possible.
- If the call is disconnected, make all efforts to re-contact them by telephone.
- Keep NORAD, FAA and CALWAS informed of the current situation.

I. ERROR REPORTING PROCEDURE

Wireless 9-1-1 calls are supposed to route to local agencies only if the particular cell sector coverage area does not include any areas that are within the jurisdiction of the California Highway Patrol. This includes I-5, I-80, Hwy 50, Hwy 113, Hwy 505, Hwy 16, and all state or county roadways in the unincorporated communities. YCCESA works closely with CHP and the Wireless Service Providers in deciding which cell sites and sectors will be routed to YCCESA.

The nature of wireless telephone services is generally predictable, so the coverage areas are fairly well known based on the routing maps provided by the Wireless Service Providers and/or their database providers (TCS and Intrado). However, some anomalies may occur causing a particular cell site to occasionally receive calls that it normally wouldn't. This can be caused by terrain, foliage, weather, water, and other factors. These should not be in any easily repeatable pattern, and in these cases cannot be easily fixed by routing changes. but are being delivered to YCCESA instead, a ROUTING ERROR REPORT must be completed and forwarded to YCCESA's MSAG Coordinator for processing with CHP and Yolo County's WE911 Coordinator. The Wireless Service Provider's database provider can verify the routing for the cell sector and if it is in error, easily change the routing back to CHP.

The ROUTING ERROR REPORT must be completed accurately in order to make the routing table changes.

If there is a clear case or obvious pattern of calls that ought to route to CHP locally, the cell site address and the cell sector direction must be included in the report. Refer to the diagram in the policy section on Phase I/Phase II Overview for the location of that information on the Vesta ALI.

**YOLO COUNTY COMMUNICATIONS
EMERGENCY SERVICES AGENCY**

**WIRELESS ENHANCED 9-1-1 CELL SECTOR
ROUTING ERROR REPORT**

Fill in the blanks on the ALI screen format below, or attach a print of the record from the CAD system

Wireless callers telephone number (_____) _____ - _____		Time of call	
Date of call			
Cell tower address			
Cell tower city	Wireless indicator CW	ESN	Class of service
Wireless Service Provider Company Name		WSP call back number	
		Psuedo-ANI number (PANI) (_____) 511 - _____	
Cell tower city	Thomas Brothers Map Page	Cell sector direction	
ALI Tell Tale			
(Name of Law Jurisdiction) QUERY CALLER FOR LOCATION			
Latitude coordinate LAT _____	Longitude coordinate LON - _____		
Confidence factor METERS _____	Certainty factor PERCENT _____		

This call was placed from an area that is CHP jurisdiction. Please investigate the routing to determine if this call should be routed to CHP-Capitol (Sacramento) Communications Center instead of YCCESA. The caller reported they were at the following location:

Dispatcher ID#

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Wireless Enhanced 9-1-1 Program Glossary of Terms/Acronyms

Abandoned 9-1-1 Call	Someone has dialed 9-1-1 and hangs-up or the call is disconnected prior to the 9-1-1 call being answered by an available call taker/dispatcher. This type of call is similar to a "Hangup 9-1-1" call.
AGPS (Advanced/Assisted Global Positioning System)	A system utilizing orbiting satellites to determine location on the earth.
ALI (Automatic Location Identification)	The automatic display at the PSAP of the caller's telephone number, the address/location of the telephone and supplementary emergency services information. Also see "WALI".
CDMA (Code Division Multiple Access)	Digital cellular phone technology. A method of transmitting simultaneous signals over a shared portion of the spectrum. Some CDMA phones are capable of delivering "X,Y" coordinates after the initial 911 call has been answered and a re-bid is transmitted for the location information.
Cell Sector	The coverage pattern of a cell site based on the antenna direction. Cell sites operate with either one antenna pointed in a particular direction, one "omni" antenna that covers a 360-degree radius, or two or three directional antennas that split the coverage pattern of a particular antenna, much like a pie might be cut.
Centroid	Term used with delivery of wireless Phase I 911 calls. Instead of providing the address of the cell site, Verizon and Sprint PCS provide latitude and longitude for a location in the center of the cell sector. The geometric center of an area.
CPE (Customer Premise Equipment)	YCCESA utilizes phone equipment manufactured by Plant Equipment, Inc. The system includes the Vesta Pallas workstation for displaying the caller location and telephone information, the Vesta Instant Recall Recorder for immediate playback of telephone and radio audio records; and the MaGIC Management Information System for storing 911 and 7-digit telephone call activity records. They system was installed and is maintained by SBC.
ESN (Emergency Service Number)	A ESN is a unique number assigned by the phone company for 911 call routing purposes. A ESN contains the name of the police agency, fire agency and EMS agency that has jurisdiction at each address. The ESN is part of the Master Street Address Guide (MSAG) data record; and the assigned public safety agency information typically appears in the ALI record display.
GIS (Graphical Information System)	Computer based mapping system. YCCESA is currently in the process of selecting a GIS solution for installation in the communications center. This system will interface to the Vesta CPE, the PRC CAD system and the VisionAir Mobile Data system.
GPS (Global Positioning System)	Satellite based location system using a chipset in the wireless telephone handset. The handset includes the location data with the stream of data when 9-1-1 is dialed.
Hang-up 9-1-1 call	Someone, either through malicious intent or accidental occurrence, has dialed 9-1-1 and the call has passed through the emergency network. The initiating caller has hung up prior to the 9-1-1 call taker/dispatcher answering the call." This type of call is very similar to an abandoned 9-1-1 call.
Phase 0 Wireless 9-1-1 Call	The delivery of a wireless 9-1-1 call to a designated answering point; the telephone number display comes from Caller-ID, so if the caller has privacy on their number, it will not display. The call is routed to the Primary PSAP based on the cell site location.
Phase I Wireless 9-1-1 Call	The delivery of the caller's phone number (ANI) regardless of privacy on their number; the wireless service provider name and 24/7 phone number, and the address of the cell site transmitting the signal. The call is routed to the Primary PSAP based on the cell site and the

	sector coverage area of that cell site.
Phase II Wireless 9-1-1 Call	The delivery of Phase I Wireless 911 call information, plus the latitude and longitude of the calling party's location.
PSAP (<i>Public Safety Answering Point</i>)	Public safety answering point, the location at which 9-1-1 calls are answered. The "primary" PSAP is generally the dispatch center for the police jurisdiction, receiving the initial call; the "secondary" PSAP is the dispatch center that receives a call transferred by the primary PSAP.
Re-bid Re-Transmit	Manual or automated request for an update to the location information for Phase II Wireless calls.
Silent 9-1-1 call	Someone has dialed 9-1-1, the call has successfully passed through the 9-1-1 network and has been answered by a 9-1-1 call taker but there is no audio heard on the line.
TDMA (<i>Time Division Multiple Access</i>)	A satellite and cellular phone technology that interleaves multiple digital signals onto a single high-speed channel. For cellular, TDMA triples the capacity of the original analog method.
Uninitialized phone	Wireless carriers are required to process 9-1-1 calls originated on handsets that have not subscribed for regular service, including phones that have been deactivated for non-payment or never registered on the network. These phones do not have telephone number assigned, and therefore cannot be called directly. Some companies capitalize on this call placement requirement and sell phones that are only used to dial 9-1-1, so there is no monthly charge. 9-1-1 calls placed from these phones will display the telephone number (area code) 911-1234
Unintentional 9-1-1 call	Many handsets were designed to automatically dial 9-1-1 when the number 9 button was pressed for 3-4 seconds as a short code. This proved problematic for dispatchers because the button was accidentally pushed when the phone was placed in a pocket, purse or other situation. Some 9-1-1 centers report that 40% or more of the wireless 9-1-1 calls were the result of unintentional dialing. The carriers voluntarily disabled this feature on new sales and encouraged customers to disable the feature.
WALI (<i>Wireless Automatic Location Information</i>)	Same as "ALI", with the geolocation data added to the record, including the latitude and longitude of the caller when Phase II data is available, the cell sector name, location and direction, the wireless service provider name and 24X7 contact information.
Wireless 9-1-1 Disconnect	A wireless 9-1-1 call that is disconnected or one in which the caller hangs up before the 9-1-1 professional is able to ascertain any information
W911	Acronym for "Wireless 911"; also a "Class of Service (CoS)"; when displayed in the Class of Service field on the ANI/ALI record, it means that you should always receive a latitude & longitude, but the initial location fix is usually that of the cell site or centroid and will require a re-bid to obtain the latitude & longitude.
WPHI	Acronym for "Wireless Phase I"; also a "Class of Service (CoS)"; when displayed in the Class of Service field on the ANI/ALI record, it means that you should always receive a latitude & longitude, but the initial location fix is usually that of the cell site or centroid and will require a re-bid to obtain latitude & longitude information.
WPHII	Acronym for "Wireless Phase II"; also a "Class of Service (CoS)"; when displayed in the Class of Service field on the ANI/ALI record, it means that you should always receive latitude & longitude on the initial location fix.
WSP (<i>Wireless Service Provider</i>)	The private telecommunications entity providing the wireless telephone service to the customers.

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