



YCCESA WIRELESS E-9-1-1

FAQ's

Introduction

As we move forward in handling wireless emergency calls many questions have developed as to what this means for dispatch operations in call volume, process, procedures, technology and staffing. In an effort to begin answering these questions we have prepared this Frequently Asked Questions (FAQ) document to address these issues.

Background

The State of California Wireless E9-1-1 Department has setup the mechanism to work with the local PSAPs and the Wireless Service Providers (WSP) in delivering Phase I and Phase II wireless calls. Traditionally in California the Highway Patrol received all wireless calls and transferred these callers to the local PSAP. The State of California has been rolling out Wireless E9-1-1 in Southern California and parts of the Bay Area. Yolo County is part of the Sacramento Region wireless rollout and will begin testing Phase I and Phase II wireless E9-1-1 calls on October 20, 2004 with one wireless carrier (Verizon Wireless).

Many questions were submitted to YCCESA and we have grouped these questions within several categories in an effort to address all the questions/issues submitted. We expect to update these FAQ as we move forward in the project and as we gain more experience during and after our initial wireless rollout for the Sacramento Region.

It is important we all realize the current limitations of the wireless technology in order to educate and better manage the expectations of the public. It is the intent of this document that we begin this process.

A. CALL VOLUMES -

1. WHAT IS THE EXPECTED INCREASE ON YCCESA CALL VOLUME?
2. CHP RECEIVED 7 MILLION CALLS IN 2003, HOW MANY IN 2004?
3. USING THE "MAGIC" SOFTWARE THAT CAME W/VESTA DETERMINE WHEN A HEAVY VOLUME OF INCOMING CALLS ARE (WE GET THE MOST BETWEEN 1300-1400 EVERYDAY) AND STAFF CALLTAKERS ACCORDINGLY.

The way in which Wireless 9-1-1 calls will be implemented in Yolo County will minimize our risk of having any extensive call volume increase. Initial assumptions were that Phase II wireless could potentially increase call volumes ten to forty percent of existing wire line 9-1-1 call volumes. We do not believe the higher percentage will be true at YCCESA for several reasons. First, we are implementing in small, incremental steps, beginning with only one out of a potential eight wireless carriers (Verizon is the first) that provide service in Yolo County. Secondly, we are only going to be handling a segment of wireless calls being distributed by the cell site antennas. This segment will be a portion of the wireless coverage area. Third, the higher percentage stated earlier assumes you are in a high traffic section/region. If a PSAP is in a more rural area then the potential increase will be minimized which will be our case here at YCCESA. Finally, the Highway Patrol will continue to handle wireless calls from freeways, state routes and other CHP roadways which will minimize the initial call volume potential.



To quantify this, we have downloaded the raw call data provided by SBC (see 'Exhibit A' at end of this document) which depicts the 91-1- call volumes for YCCESA over the past four months. Looking at this table you will see that YCCESA has received a total of 9,159 - 9-1-1 calls in the past four months (119 days). This means the average number of 9-1-1 call in a twenty-four hour period equals 79.96 calls. Break this down hourly and YCCESA 9-1-1 call volume equals 3.2 calls per hour. If you take the ten (10) percent increase ($3.2 \times .10 = .32$) YCCESA 9-1-1 call volume would go from 3.2 to 3.52 calls per hour. If you increase this by forty (40) percent the hourly 9-1-1 volume goes from 3.2 to 4.48 calls per hour. Not a significant average increase in volume on a per hour basis.

If we use data from our current hourly wire line "peak" telephone call volume (which averages 32 calls an hour -as taken from the February 2004 Staffing Study - this included 9-1-1 and seven digit call volumes) multiply that by ten (10) percent, our hourly increase for wireless calls would be 3.2 calls per hour. On the high end - a forty (40) percent increase in the peak hourly call volume will increment the calls to 12 calls per hour. With six positions we can absorb 3.2 calls and up to 12 calls per hour. At this time with only one wireless carrier (Verizon) to rollout out, we do not see the potential for any extensive call volume increase.

Regardless, of the call volume estimates, we will monitor the situation closely as we do not want this to adversely affect YCCESA's ability to manage Phase I and II wireless 9-1-1 call volumes and impact our employees, citizens or the dispatch services we provide to our member agencies.



B. OPERATIONAL

4. WHY THE RUSH TO IMPLEMENT?
5. HOW MUCH CELLULAR TAX WILL YCCESA RECEIVE?
6. THE AGENCY WAS AWARE OF THE MAJOR IMPACT AND NEVER MET AND CONFERED WITH YCDA?
7. THIS IS MEET AND CONFER ISSUE, WHY DID THE AGENCY IMPLEMENT WITHOUT MEETING WITH THE ASSOCIATION?
8. WHEN DID YCCESA REQUEST PHASE I AND PHASE 2?
9. CAN WE GET A COPY OF THIS AGENCIES INTENT TO IMPLEMENT WIRELESS 911 CALLS?
10. SALARY INCREASE/INCENTIVE TO EMPLOYEES FOR IMPLEMENTING AND INCREASING WORK LOAD!
11. PERFORMANCE STANDARD FOR CALL ENTRY NEEDS TO BE REVISED!
12. ANIMAL CONTROL ANSWERS THEIR OWN PHONES AND DISPATCH'S THEIR OWN UNITS ON LGJ JUST LIKE THEY SUCCESSFULLY DID A COUPLE OF YEARS AGO. YCCESA ONLY FACILITES THIS AFTER HOURS.
13. WE NO LONGER DO RECORDS
14. PROBABLY MANY OTHER GOOD SUGGESTIONS OUT THERE.....WOULD BE A GOOD BRAIN STORMING TOPIC FOR A FUTURE MEETING

The Federal Communications Commission (FCC) controls the Wireless Carriers and the State provides the funding mechanism to the local PSAPs who accept Phase I & II wireless calls. For the past several years the State of California has worked with wireless service providers (WSP), vendors, and PSAPs (through the Calif. Emergency Services Advisory Board) in developing an implementation plan, or "roll-out" schedule to deploy the delivery of Phase I & II wireless 9-1-1 calls to local jurisdictions throughout the state. The plan includes funding considerations for equipment, mapping, planning and other related activities that a PSAP might incur in order to receive W911 calls.

In January 2001, law was enacted that made it possible for local PSAP's to receive wireless 9-1-1 calls originating within their service area. Our member agencies have long desired that YCCESA answer these calls. Beginning in the early 90's the agency distributed (and still does) stickers for cell phones with the 666-6612 phone number for local residents to use besides 9-1-1 for assistance. The State deployment plan calls for implementation of Phase I & II routing in our region by the end of this calendar year. We delayed moving forward for as long as we can. Not only is the State encouraging this activity, but so are our member agencies.

Technology is also causing our emergency call handling paradigm to change. For years we had only wireline phones and the local phone company to provide our regional 9-1-1 service. Now just about everyone has a wireless phone and the market has created a smorgasbord of wireless carriers who are controlled by the FCC. The 9-1-1 industry took a national stance on the issue of wireless technology and 911 call routing. The FCC, on the recommendation of our professional industries - NENA and APCO, has mandated WSP's to implement the technology to route and deliver wireless 9-1-1 calls to the local PSAP's and the FCC has dictated the timelines for the mandates to be accomplished.

Therefore the decision to implement wireless 911 call answering is NOT a meet and confer issue, but rather the ultimatum of progressive technology which is driving all emergency professionals in all levels of government to address the handling of wireless phones. The future will see additional changes as the phone companies' move to Voice over Internet Protocol (VoIP) and other mobile technologies gain market presence.



YCCESA is in the process of selecting a Geographic Information System (GIS) vendor to provide a digital mapping solution for Phase I and Phase II wireless call mapping at each dispatch position. We have been working with a local consulting firm to assist us with managing this project and in providing assistance in vendor selection, contract negotiations and implementation of the awarded GIS solution.

We have put together this FAQ and a training document to assist staff and employees in the handling of Wireless 911 calls. In addition, with the help of other PSAPs that are answering Phase I & II calls, we have developed Policies and Procedures to guide dispatchers in answering and processing these calls. Our phone equipment is able to accept the new wireless formats and once we have selected our GIS system, we will coordinate with our CAD vendor to make any modifications or format updates that might be required to import the wireless ANI/ALI data into the CAD Event mask. We are researching options for an interim map solution that can be accessed at each workstation to plot a latitude/longitude coordinate (if provided) in the event a caller cannot provide or confirm their location.

We have also been in discussion with our CAD vendor regarding any adverse effect on our system. The only issue that may arise will be in regard to the ANI data spill from the CPE. SBC assures us that the format will not create any problem with the interface that allows an operator to insert E9-1-1 data in the incident form, all fields are identical to the existing format, with new elements added to the end of the record. A worst case scenario would be when we start receiving the new ANI/ALI 04 format, we could lose the function of importing the data until our CAD vendor updates the 9-1-1 interface with the new format and data fields.. YCCESA is taking a lead role for the Sacramento Region and will begin testing Phase I and Phase II wireless E9-1-1 calls on October 20th with Verizon Wireless



C. STAFFING -

15. DO YOU INTEND TO INCREASE STAFF ABOVE THE POSITIONS ALREADY AVAILABLE?
16. WILL YOU INCREASE THE DISPATCHERS PAY DUE TO INCREASE IN WORK LOAD?
17. STAFFING, EVEN WITH ENOUGH STAFING WILL THERE BE ENOUGH CONSOLES FOR THE INCREASED CALL VOLUME
18. WHAT PROVISSIONS FOR EXTRA STAFFING TO HANDLE THE INCREASE IN CALL VOLUME?
19. DO WE NEED TO EXPAND THE NUMBER OF WORK STATIONS?
20. MORE FULLTIME PHONE POSITIONS NEEDED!
21. I DON'T MIND IF THE INCOMING CALL VOLUME INCREASES (IT'LL BE A PAIN, BUT WHAT CAN YA DO?).....HOWEVER I'M CONCERNED W/THE WAY ANY AGENCY OF OUR SIZE CONTINUES TO OPERATE W/RADIO DISPATCHERS BEING REQUIRED TO PROCESS INCOMING PHONE CALLS. NO MATTER HOW TALENTED THE DISPATCHER IS, THIS WILL CONTINEU TO DETRACT FROM WHAT THEIR PRIMARY FOCUS SHOULD BE (THAT OF TAKING CARE OF RADIO BUSINESS).
22. CHP DISPATCHERS RECEIVED A RAISE DUE TO INCREASE IN CALLS FROM CELL PHONE ACTIVITY. ARE WE GOING TO GET A RAISE, AS WE ARE GOING TO BE FIELDING ALL THE CALLS AND TRANSFERING THEM TO THE CORRECT AGENCIES?
23. WILL NEED MORE STAFF AND MORE CONSOLES FOR THE EXTRA STAFF!
24. THE AGENCY IS SUPPOSED TO BE WORKING ON DECREASING OVERTIME. THE AGENCY NEEDS MORE STAFF!
25. THE STUDY SITES THAT CELL 911 CALLS TAKE TWICE AS LONG TO PROCESS AS WIRED 911 CALLS (116 VS 61 SECONDS), THIS IN THE COMBINATION W/ W. SAC PD'S COMPLETELY CHAOTIC RADIO TRAFFIC (AND WDL, YSO AND FIRE, TOO WHEN BUSY) SHOULD TAKE RADIO DISPATCHER OUT OF THE CALL-TAKING LOOP.

In regards to Phase I and Phase II wireless, with only one wireless carrier (Verizon) to rollout, we have calculated a low risk potential for any extensive call volume increase. We are cognizant that as we rollout additional wireless carriers that this situation could change, but are committed to monitoring the situation closely and making any necessary adjustments. Furthermore, we are working to provide a digital mapping system to assist in locating cell sites and caller locations. Furthermore, as was recommended by our Staffing Study completed in December 2003, we continue to work on hiring, training and utilizing additional telecommunicators.

Issues with the processing time of a wireless call will hold true to the extent that the caller's voice will be heard immediately, but it will take from 10 to 15 seconds before the ANI/ALI record is displayed when answering a wireless emergency call. The longer the call has been ringing before being answered, the shorter this delay will seem. This will serve as a "key" to call takers that they may be answering a wireless 911 call and they should ask if the caller is using a cell phone.

The experience of other PSAPs indicates training and training materials along with call handling policies and procedure will help mitigate questions about misroutes, callback numbers, ghost calls, "butt" calls, etc. We all need to remember that using rule-of-thumb estimates we are talking about a potential 1 to 5 more calls in a peak hour. As our experiences grow receiving W911 calls, we will refine our policies and procedures to handle the various types of scenarios that can occur when dealing with a wireless call/caller. We have prepared new policies and procedures specific to wireless calls. As we all learn we will improve and further develop our best practices to incorporate these new lessons into our policies for receiving and processing wireless calls.



D. TRAINING

26. WHAT TYPE OF TRAINING DOES THE AGENCY PLAN ON PROVIDING?
27. WHAT TRAINING WILL BE PROVIDED FOR CALL-TAKERS AND DISPATCHERS ON THE LAT/LONG INFORMATION?
28. TRAINING, STAFFING, EQUIPMENT CAPABILITIES ARE ALL QUESTIONS THAT SHOULD BE ADDRESSED BEFORE IMPLEMENTATION.
29. HOW MANY HOURS DO YOU INTEND TO DEVOTE TO TRAIN EACH EMPLOYEE?
30. CAN YOU PROVIDE TRAINING OFF THE DISPATCH FLOOR?
31. I'M SURE WE WILL UPDATE OUR IOP'S TO DEAL W/ABONDON CELL 911 CALLS AND HOW MUCH EFFORT WE SHOULD BE PUTTING INTO TRACKING DOWN THE OWNER OF THE CELL PHONE (DO WE SEND A COP TO THEIR HOUSE TO FIND THEM, DO A ½ MILE RADIUS SEARCH OF WHERE THE CELL CALL ORGINATED FROM ??? DO WE KEEP TRYING TO CALL THEM BACK ALL NITE.....)
32. IF YCCESA IS GOING TO START HANDLING CELL 911, THEN THE AGENCY NEEDS TO BE AWARE THAT THE TIME IT TAKES TO OBTAIN LOCATION AND INFORMATION WILL INCREASE. THE PREFORMANCE STANDARDS THAT WERE ADOPTED ONLY ALLOWS A CERTAIN AMOUNT OF TIME FOR ENTRY ON 911 (ANI/ALI) CALLS, DUE TO THE ADDITION OF CELL 911 CALLS, THE PERFORMANCE STANDARDS NEED TO BE REVISED.
33. ABONDONDED CELL CALLS - HOW MANY WE HANDLE? WILL ABANDONED CALLS STILL SHOW GPS COORDINATES?
34. ABANDONED CELL CALLS - IF WE HAD A 911A AND HAD A GPS POSTION WOULD WE SEND A UNIT TO THEIR LOCATION? IF IN THE COUNTY WOULD WE SEND CHP OR YSO?
35. WHAT DOES THIS MEAN TO USE IN REGARDS TO MORE STEPS NI GETTING HELP TO THE USER?
36. WILL THIS TELL US WHERE THE CALLER IS? OR WILL IT JUST TELL US WHAT TOWER THEY ARE CLOSE TO?
37. WHAT RESOURCES FOR LAT/LONG ACCESS?
38. ARE WE GOING TO GET SAC COUNTY TRAFFIC?

We believe this to be one of the most critical areas to focus our attention and have addressed this by providing the attached Wireless Enhanced 9-1-1 Program Policies and Procedures. We are distributing this FAQ sheet to all employees along with a document containing general information about wireless 9-1-1 calls and how they are delivered to the PSAP. This is a learning process for everyone, but research and the experience of other PSAP's answering W9-1-1 calls shows that the majority of wireless calls will be handled just like landline or wireline E9-1-1 calls. The policies and procedures include information on how to handle abandoned calls, silent calls, calls where noise is heard but there is no voice contact, calls with an unknown location, calls received from airborne aircraft, misrouted calls, how to transfer W9-1-1 calls, etc.

Training will be delivered through the aforementioned paper documentation and supervisors, the Communications and I.T. managers will be available to provide additional one-on-one training with staff to help ensure everyone understands what Phase I & II Wireless refers to; that you understand the policies and procedures for answering and processing wireless 911 calls; that you can interpret the new ANI/ALI format and the information contained in the various format fields, etc.

On October 20th when we begin testing and ultimately receiving calls from the sites in West Sacramento, we will have several representatives from SBC available in the dispatch center as well as representatives from Verizon, who will be able to answer questions for those of us working and we will have responsibility to share and pass the information along to other coworkers who might have the same question.



F. TECHNOLOGY – PREMISE EQUIPMENT

39. WHAT IS THE IMPACT? DO YOU INTEND TO INCREASE TRUNKED LINES?
40. HAS THE AGENCY PETITIONED CPUC FOR ADDITIONAL TRUNKED LINES?
41. WHAT IS A "CPE"?
42. WITH THE WORKLOAD INCREASE, YCCESA NEEDS AN AUTOMATED PHONE SYSTEM FOR ANSWERING NON EMERGENCY LINES.
43. DOES OUR PHONE SYSTEM HAVE ENOUGH INCOMING LINES TO SUPPORT THE INCREASE IN CALL VOLUMES?
44. WILL THERE BE AN AUTOMATED ANSWERING SYSTEM IN PLACE FOR NONEMERGENCY CALLS?
45. A VOICE MESSAGE NEEDS TO BE PLACED ON ALL INCOMING PHONE LINES THAT PICK UP AFTER A FEW RINGS AND PLAYS A CANNED MESSAGE FOR THE CALLER UNTIL A CALLTAKER IS ABLE TO ANSWER THE LINE.
46. WHAT ARE THE UPGRADES THAT THIS AGENCY PLANS ON IMPLEMENTING?

The Customer Premise Equipment (CPE) is the telephone system supplied by SBC/Plant and delivers the ANI/ALI data to each dispatch position. This equipment is ready to receive WE9-1-1 calls and display the enhanced ANI/ALI data stream, to include latitude/longitude information. Our SBC tech will be here on October 18th to enable and test the new ANI/ALI format. The State has worked with the wireless providers and jointly developed a new Wireless ALI referred to as "W-ALI" format. This new format combines the wire line and wireless data attributes into a common record. The Phase II W-ALI format adds the caller's X,Y coordinates (latitude, longitude), with uncertainty (in meters) and confidence (in percent) to the existing ALI format. The GIS software will help dispatchers because the latitude, longitude, uncertainty and confidence information delivered in Phase II will appear in a digital map display located at the dispatcher's workstation.

YCCESA has coordinated with SBC to setup the W-ALI format for cutover on October 20, 2004. At this time no additional trunks or dedicated telephone lines are anticipated. If the wireless call volume is so great as to exceed the capacity of our current seven (7) trunks, the State would pay the cost to add and maintain additional 911 trunk lines.

The training materials, and the policies and procedures distributed to staff include illustrations and explanations to aid dispatchers in interpreting the new W-ALI display. Additional training from supervisors, one-on-one will be provided to insure call takers and dispatchers understand the data fields and how to interpret the information those fields contain; understand that there will be a delay in the delivery of wireless ANI/ALI data and that they should use that time to question the caller for their location and what they are reporting; how to re-bid/re-transmit for the latitude/longitude coordinates, etc. YCCESA has developed training materials and wireless policies and procedures and will distribute that information on October 15th.so that employees have the chance to study and prepare themselves for the new format and how to process WE9-1-1 calls.

We have no plans for adding a 'Automated Call Distribution' (ACD) system to distribute phone calls among the eight workstations; nor are there plans to implement a 911 phone queue or messaging system to advise callers to "stay on the line.". Implementing such systems would require justification through substantial call volume across the 24 hour window, documented over a sustained period of time (several months). It would also require the support of our Board of Directors and member agencies. We will continue to address the issue of workload by following the recommendations outlined in our Staffing Study, which are to add 12 full time employees and increase our minimum staffing levels from 5 to 6 and even 7 during peak hours (1000 – 2200, Monday – Friday). We will be monitoring the call volume data to determine the impact to workload as we progress through the implementation of wireless call answering with the various service providers which may take several months to fully implement.



G. MAPPING TECHNOLOGY – GEOGRAPHICAL INFORMATION SYSTEM (GIS)

47. WHAT is a "GIS"?
48. IS THE AGENCY GOING TO MAKE SURE WE HAVE ACCESS TO A MAPPING SYSTEM THAT WOULD MEET OUR NEEDS? EXAMPLE MAP QUEST, OR ARE WE GOING TO JUST MAKE DUE WITH WHAT WE HAVE NOW?
49. WHAT TYPE OF SYSTEM UPGRADES ARE REQUIRED WHEN WE ENTER INTO THIS?
50. HOW IS YCCESA STAFF GOING TO ACCESS LAT/LONG COORDINATES? (DEFINING THE LAT/LONG COORDINATES TRAINING, ACCESS TO THE INFO)
51. CHP HAS MILE MARKERS IN THEIR CAD SYSTEM. YCCESA NEEDS ACCESS TO MILE MARKER LOCATIONS.
52. THAT UPGRADE SHOULD INCLUDE LAT/LONG LOCATION CAPABILITY.....MAYBE JUST NEED A WHOLE NEW CAD SYSTEM.....
53. MAPPING/GIS SOFTWARE SHOULD BE INTEGRATED W/CAD, AND UPDATED TO PROVIDE ALL STREETS IN OUR JURISDICTION.
54. WILL LAT/LONG AUTO LOCATE WITH CROSS ROADS?
55. ARE WE GETTING A LAT/LONG LOCATER MAP?
56. ARE WE GOING TO NOW HAVE ACCESS TO THE INTERNET? (MAP QUEST) FORM THE RMS SYSTEM?
57. THOMAS BROTHERS CORP. DOESN'T MAKE A THOMAS BROTHERS MAP FOR YOLO COUNTY!
58. WHEN WILL WE GET INTERNET ACCESS TO THE WORKSTATIONS?

We are taking a phased approach to implement a GIS system at YCCESA. Our goal is to provide every dispatch position with a digital map display to assist in plotting Phase I data (locating the cell tower or "centroid" within the cell sector) or Phase II data (caller X,Y coordinates).

A GIS (Geographical Information System) combines layers of information in a database. Since we have been using MSAG data, the GIS will help in combining the location data with graphic data so that a dispatcher can locate a wireless call. The key to the GIS system is collecting and maintaining valid data (e.g., street center lines, major structures, rivers, lakes, fire hydrants, elevations, ESN boundaries, X,Y coordinates, street directions, address ranges, buildings, mile markers, aerial photos, etc.). Having this data is important for wireless E9-1-1 since many wireless 9-1-1 calls will not originate from a street address and therefore cannot be located by street address. To do this the PSAP has to receive the X,Y (latitude/longitude) coordinates and the GIS system must have the capability to reverse geocode to an address.

As a first step we are working with SACOG (Sacramento Area Council of Government) to acquire and update center line data and because we know that it will take time to fully develop the map data and the many layers of information the map can contain, we are investigating an interim mapping solution to be utilized only for receipt of Phase I and II wireless call plotting. This interim solution, because it will be short term, may consist only of a basic map software program installed at each workstation that dispatch could manually enter the latitude/longitude information into and obtain a visual plot on the map similar to what MapQuest and other on-line mapping services provide. At this time we are also considering the possibility of incorporating the GIS with the current CAD system. Internet access is available on the laptop at OP8, and until an interim solution is available at all workstations, accessing MapQuest or another web based mapping program from this position will be authorized if a call is received that provides latitude/longitude information and the caller is unable to advise or confirm their location with the dispatcher. We do not envision providing internet access at all the workstations.



YCCESA will be awarding a contract in the immediate future to a vendor to provide the map product. The implementation of a basic center line map could occur in a very short period of time but the full database with accurate address information, landmarks, and other layers could take up to six months to complete. As the mapping system is implemented, training will be provided by the vendor to us on using it to our full advantage. Formal map training will most likely occur in a classroom environment but we will not have specific training information until a vendor is selected and the scope of the project is determined.



H. WIRELESS CELLULAR TECHNOLOGY/PROVIDERS

59. WHAT ABOUT THE CELLULAR PHONE SIGNALS IN YOLO COUNTY? (QUALITY OF CELLULAR PHONE SIGNALS IN YOLO CO., MOST CARRIERS ARE SELLING DIGITAL PHONES. DIGITAL COVERAGE IN YOLO CO IN NOT VERY DEVELOPED AT THIS TIME).
60. NOT ALL CELL PHONES HAVE THE GPS CAPABILITY, AND THEY DO HAVE IT, THE USER HAS TO ACTIVATE THE SYSTEM.
61. REGARDING LAT/LONG IS IT TRUE IT CAN TAKE UP TO 5 MIN TO GET THE INFO?
62. NEXTEL IS VERY ACTIVE IN THIS AREA. OUR IMPLEMENTATION SHOULD NOT PROCEED NEXTEL FIXING THEIR ISSUES.
63. NOT ALL PHONES HAVE GPS CHIPS!

Currently there are eight wireless providers that the State is working with to deliver emergency 9-1-1 calls to YCCESA. Verizon Wireless will be the first to deliver Phase I and II emergency wireless 9-1-1 calls. The other seven providers are:

- *AT& T Wireless*
- *Cingular/T-Mobile*
- *Metro PCS*
- *Mountain Cellular*
- *Sprint PCS*
- *SureWest*
- *Nextel*

Currently there are 15 cell sites/towers throughout Yolo County. Each tower has three (3) faces or sectors. Each sector has a geographical area, shaped like a triangle, over which it receives and transmits the wireless signals. If a sectors coverage area includes any part of a state or federal jurisdiction roadway, the calls from that sector will continue to route to the CHP dispatch center. Of the 45 cell sectors in Yolo County, only seven (7) will potentially route 911 calls to YCCESA. Verizon Wireless has four (4) cell sectors in Yolo County that do not cover state or federal roadways, and all four are in West Sacramento.

One site is located at 1120 Shore Avenue and the sector routing to YCCESA predominately covers the Port and the basin. The second site is at Marshall & Armstead in the Southport development and covers mostly new and undeveloped residential property. All three cell sectors will route to YCCESA. At this time we don't anticipate these four sectors to generate a significant number of calls, however as stated previously, we will be monitoring the call activity, including misrouted and unintentional or "butt" calls.

The wireless carriers are allowed by the FCC to choose which of two location technologies they will use to deliver Phase II wireless E9-1-1 services. The two technologies are:

- *Network based, and*
- *Handset based*

In most jurisdictions where wireless 9-1-1 implementation has occurred or is in progress both network based and handset based technologies are being deployed. One of the technical challenges with network based solutions is that in rural areas, cell towers often are placed in a straight line and spaced widely apart along roadways. This can make it difficult to provide a good wireless location to the PSAP and is something we need to be aware of. However, we re-emphasize, if the cell site sector



coverage touches a state or federal highway, the CHP will continue to receive the wireless 911 call.

Handset based location data is generally more accurate than network based location data. However it does not work unless the subscriber has a GPS (Global Positioning System) enabled handset. This will require us to begin a public education campaign to alert the public about handset technology and 9-1-1. As we move forward with the wireless call answering, we will engage the media and public to educate them on the wireless 911 implementation program in our area and the challenges created by the mixed technologies.

You should also be aware that the FCC specifies two different accuracy standards for the wireless providers – one for handset solutions and one for GPS solutions. 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, you must keep in mind that the wireless providers must meet these criteria across their total subscriber base (number of calls made) and not necessarily across a particular PSAP jurisdictional boundary.

One of the technical challenges for both network based and handset based solutions is the time it takes for location data to be calculated and delivered to the PSAP (estimated at between 10 and 15 seconds). In the context of an emergency call, any type of wait is a concern, but currently Phase I data will be relayed prior to location information to prevent delays in notification.

No other Phase I & II testing dates have been established with a wireless provider other than Verizon. We will notify staff as further testing and additional wireless providers work to deploy in the Sacramento region.



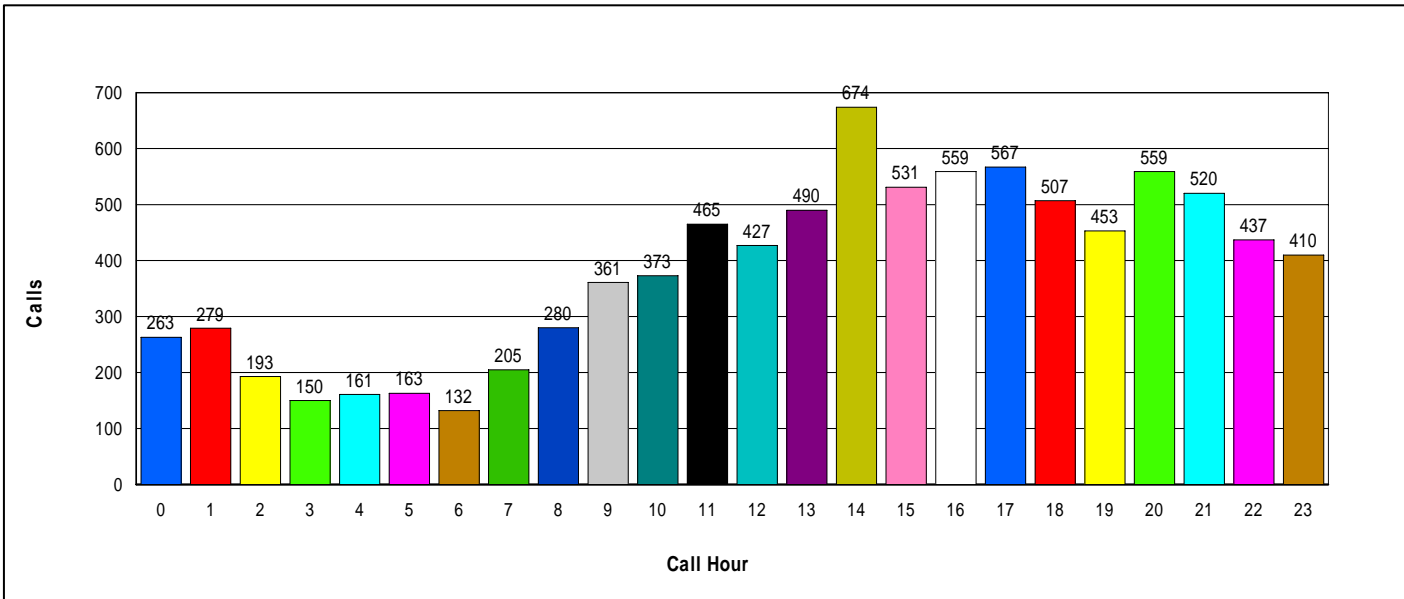
Exhibit A

YCCESA

9-1-1 CALLS PER HOUR

Year to Date (YTD)

June 12, 2004 - October 14, 2004 (119 Days)



- YTD 9-1-1 calls (119 days) = **9,159**
- YTD Average number of 9-1-1 calls per day (119 days) = **76.96**
- YTD Average number of 911 calls per hour (24 hours) = **3.2**