

Solano County EMS

Prepared and Updated by:

EMS Administrator: Ted Selby

Pre-Hospital Care Coordinator Mike Modrich, RN

Project Manager: Ernie O'Connor

Administrative Secretary: Jan Homer

Design and Layout: Jan Homer Receil Desear

ANNUAL REPORT

FY 2010-11

County of Solano Emergency Medical Services Agency Health and Social Services Department Public Health Division



TABLE OF CONTENTS

I. INTRODUCTIONS

- A. Executive Summary
- B. Solano Emergency Medical Services Cooperative (SEMSC)
- C. Emergency Medical Services (EMS) Agency

II. MAJOR ACCOMPLISHMENTS

- A. ST Elevation Myocardial Infarction (STEMI) Program
- B. Trauma Center Program
- C. EMS Week
- D. Emergency Medical Response Summit

III. EMS SYSTEM PARTICIPANTS

- A. Advisory Committees
- B. Emergency Ambulance Providers (Ground)
- C. Emergency Ambulance Providers (Air)
- D. First Responders (ALS & BLS)

IV. SOLANO COUNTY SYSTEM PERFORMANCE

- A. Overview
- B. Medic Ambulance
- C. Rio Vista
- D. Suisun City
- E. Unincorporated Areas
- F. Vacaville
- G. Public Private Partnership Cities
 - 1. Valleio
 - 2. Fairfield
 - 3. Dixon
 - 4. Benicia



I. INTRODUCTION

A. EXECUTIVE SUMMARY

This Annual Report covers the reporting period of July 1, 2010 through June 30, 2011.

This reporting period has seen changes for the Solano County Emergency Medical Services Agency as well as the service providers in Solano County.

- NorthBay Medical Center and Kaiser Permanente have both submitted applications requesting designation as Level III Trauma Centers.
- NorthBay Medical Center has also submitted an application to become a designated STEMI center, providing advanced cardiac care to patients in Solano County.
- With the advent of the two Level III Trauma Centers in Solano County, as well as the STEMI center, the Public Health Emergency Services Bureau has added a position for a Trauma/STEMI Coordinator. This is a full time supervisory position required to effectively oversee this program.
- Medic Ambulance opened the first year of their current franchise agreement by initiating the electronic Patient Care Report (ePCR) system in all of their field ambulances. Their system upgrade also incorporates a navigation system that directs the responding ambulance to their precise location. Both the ePCR system as well as the navigation system allows Medic crews to respond to any emergency by the most direct route.
- The Advanced Life Support (ALS) Non-Transport Agreements entered into with City Fire Departments have been revised and approved; and should be executed during the coming fiscal year.
- Dr. Steve Whiteley has assumed responsibility as the EMS Medical Director until a permanent replacement can be appointed.
- EMS Staff update: A member of the EMS Staff, responsible for all EMT and Paramedic Certifications and Accreditations, was temporarily reassigned to another office from January 10 – June 30, 2011.

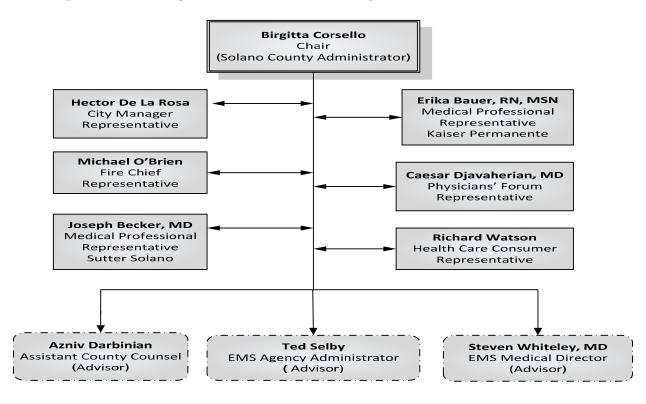


B. <u>SOLANO EMERGENCY MEDICAL SERVICES COOPERATIVE</u> (SEMSC)

As noted in the SEMSC Bylaws "The SEMSC serves as the Emergency Medical Services Agency for Solano County and is a joint powers agency capable of providing, or arranging for all fully-integrated, consumer-oriented pre-hospital and parahospital services in Solano County." The mission of the Solano Emergency Medical Services Cooperative (SEMSC) is to deliver effective prehospital care at a reasonable cost to the people of Solano County by coordinating and maximizing resources. The core values of this system include:

- RAPID RESPONSE intended to minimize the time from the actual emergency event to the arrival of appropriate emergency resources.
- <u>ACCOUNTABILITY</u> in order to ensure that the EMS system is performing according to required standards, all aspects of prehospital care delivery is measured, validated, and reported to the SEMSC Board and is available to the public.
- <u>COMPETENCY</u> providers of prehospital care must be held accountable to provide the highest standards of medical care.

The SEMSC Board of Directors is made up of seven (7) members as specified in the bylaws. Current membership is shown below.

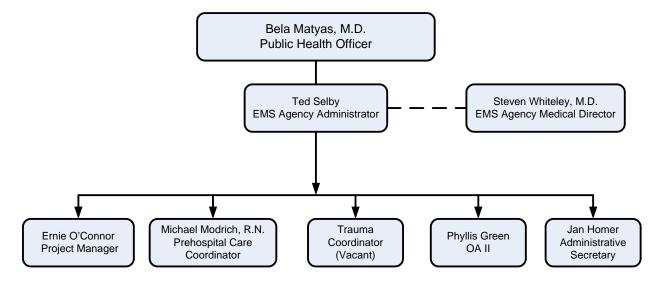




C. <u>EMERGENCY MEDICAL SERVICES (EMS) AGENCY</u>

Emergency Medical Services (EMS) is unique in that it requires the coordination of entities which are otherwise completely independent from each other. It is the role and responsibility of the Solano EMS Agency, as the LEMSA for Solano County, to achieve this coordination through planning, policies and procedures, promulgation of standards, and the monitoring of operational and medical performance. Ultimately, an effective EMS system requires the cooperation of Public Safety Dispatch, fire service, ambulance providers (ground and air), hospital personnel, physicians, nurses, and administrators.

The Solano County EMS Agency Staff employs a small group of professionals who plan the coordination of the elements required to seamlessly respond to individual and community emergencies. We do this by working with acute care hospitals, fire departments, ambulance providers, law enforcement, State Agencies, and others in public health to plan, manage, and evaluate the essential components of emergency response.





II. MAJOR ACCOMPLISHMENTS

A. STEMI CENTER APPLICATIONS

NorthBay Medical Center has submitted their application to become a designated STEMI receiving center in Solano County. When this application and approval process is complete, Solano County will have its first STEMI receiving center. Although we currently have agreements with five out-of-county hospitals that receive STEMI patients from Solano EMS units, NorthBay Medical Center will be able to provide cardiac care closer to home.

B. TRAUMA CENTER DESIGNATION APPLICATIONS

Solano County Emergency Medical Services' Trauma Plan was approved by the State Emergency Medical Services Authority (EMSA) in June 2010. This is the first "approved" trauma plan for Solano County and puts us in the position of more fully addressing trauma requirements for this county. To that end, both NorthBay Medical Center and Kaiser Permanente have submitted applications to become designated Level III Trauma Centers. This enhancement to emergency service for Solano County means that many patients who suffer a traumatic event will be able to remain closer to their families in Solano County for their care.

C. **EMS WEEK.** EMS Week is a national event that honors emergency personnel nationwide. Solano County has a strong cadre of emergency personnel who provide emergency first response, transport, and care to residents and visitors. The Solano County Board of Supervisors recognized EMS week with a Resolution that declared May 15 - 22, 2011 as Solano County Emergency Medical Services Week. EMS Week events took place on May 19 and 20, with seminars and events held at the NorthBay Conference Center. Over eighty participants took part in the seminars and over seventy five people took advantage of the Public CPR and First Aid classes offered by Medic Ambulance. Classes ran the spectrum from Geriatric Trauma, Gun Shot Wounds, Burns, Organ Donation/Procurement, and Current EMS Initiatives. One of the highlights of the symposium was the "Trauma Jeopardy" hosted by Perry Hookey of Medic Ambulance. Continuing Education hours were awarded to EMTs, Paramedics, and Nurses who attended the seminars. NorthBay Health Care donated the meeting space for this two-day event.



Cordelia Fire Department provided crucial meeting space for the EMS Week planning meetings that were required to ensure this event ran smoothly, while Medic Ambulance was a co-sponsor of this event and their personnel played a key role in developing the EMS Week program as well as the EMS Week dinner, which was held at Zio Fraedo's in Vallejo. Mr. Travis Grace, a 27-year Paramedic with Medic Ambulance, was awarded this year's Frank Springer Award recognizing his outstanding contributions to the EMS Community and the citizens of Solano County.

EMS Week for 2012 is tentatively scheduled for May 13 – 19 and we are looking forward to another outstanding event.

EMERGENCY MEDICAL RESPONSE SUMMIT: The second annual Emergency Medical Response Summit was held on June 2, 2011 at the Hampton Inn and Suites in Vacaville. This proved a very good location for this event because of its central location and ease of access to the freeway. Additionally, the staff and conference facilities worked out very well for this event. Over 120 EMS professionals, nurses, and doctors took part in this event with most planning on attending this annual event next year.

Continuing Education (CE) Units were offered for participants, and various speakers provided extremely interesting information on mass casualty planning, patient tracking and management, trauma systems, emergency planning for at-risk populations, and trauma for all ages – pediatric through geriatric!!

Next year's summit is scheduled for October 2012.



III. EMS SYSTEM PARTICIPANTS

A. ADVISORY COMMITTEES

1. Physicians' Forum

The mission of the EMS Physicians' Forum is to review and evaluate the safety, adequacy, appropriateness, and effectiveness of the emergency medical care provided to citizens of Solano County. This committee meets monthly to review and evaluate patient care; and to develop, review, and approve policies and protocols affecting patient care. Membership includes emergency physician/nurse representatives from the area hospitals, pre-hospital representatives from the fire departments, as well as EMS Agency staff.

2. STEMI Committee

The STEMI committee is charged with monitoring the care of Solano County EMS patients with STEMI and to identify opportunities for improvement in STEMI care in a forum that is disclosure-protected according to Evidence Code Section 1157.7. Membership includes emergency physicians from the Physician's Forum committee, cardiologists, interventionalists, and others involved in STEMI care; medical directors or representatives from the STEMI Receiving Centers; EMS providers, PCC/CQI representatives, and hospital administrators.

3. <u>Pre-hospital Care Committee (PCC) and Continuous Quality Improvement (CQI)</u>

The PCC Committee meeting was combined with the CQI meeting in 2006 in order to better monitor pre-hospital care provided in Solano County as well as the necessary reviews, studies, and audits required to ensure that the CQI process was working effectively. This committee meets quarterly and membership includes emergency physicians and nurses and pre-hospital care providers from each of the County's first responder agencies and ambulance providers (ground and air).

4. Pre-hospital Trauma Advisory Committee (Pre-TAC)

The pre-hospital Trauma Advisory Committee (Pre-TAC) meets quarterly and is responsible for reviewing select trauma cases occurring in Solano County to determine if care provided was appropriate and that destination decisions were appropriate to the injury incurred.



B. <u>EMERGENCY AMBULANCE PROVIDERS (GROUND)</u>

- Medic Ambulance, Inc. holds the Exclusive Ambulance Agreement for all Advanced Life Support (ALS) transport in Solano County, except for the City of Vacaville and Zone "C" wherein the Vacaville Fire Department is charged with providing 9-1-1 response. Medic also provides ambulance service for portions of Sacramento County including the City of Isleton, River Delta Fire Protection Districts, and Gordon Valley Fire Protection Districts.
 - Medic Ambulance received a 3-year <u>reaccreditation</u> from the Commission on the Accreditation of Ambulance Services (CAAS) and received a perfect score in the off-site and on-site review of all aspects of their operation. This is truly an outstanding accomplishment by any measure; congratulations to Medic Ambulance staff and personnel.
- 2. Vacaville Fire Department As specified in the State EMS Authority approved EMS Plan, Vacaville Fire Department provides 9-1-1 response to the City of Vacaville and "Zone C." The Vacaville Fire Department has been providing emergency ALS First Response and transport since the mid 1970's. The City is recognized as a "201 entity" under the State of California Health & Safety Code 2.5, Section 1797.201.

C. NON-EMERGENCY AMBULANCE TRANSPORT PROVIDERS

The Solano Emergency Medical Services Cooperative (SEMSC) Board of Directors implemented Resolution 10-02 requiring any and all operators and providers of ambulance service to persons and facilities in Solano County to be authorized by the Solano County EMS Agency.

To date, the following ambulance companies are authorized to provide Basic Life Support (BLS) or Critical Care Transport (CCT) services **ONLY**:

- American Medical Response (AMR),
- Bay Medic
- Falcon CCT
- NorCal Ambulance
- Piner
- Protransport 1
- VeriHealth

This list does change periodically.



D. <u>EMERGENCY AMBULANCE PROVIDERS (AIR)</u>

Solano County has the benefit of being served by three air ambulance providers: CALSTAR (California Shock/Trauma Air Rescue) with a base station in Solano County at the Nut Tree Airport as well as Buchanan Field, and Sacramento; REACH Air Medical Services with bases in Concord, Napa, and Santa Rosa; and the California Highway Patrol (CHP), which has a helicopter capable of transporting injured persons, stationed at the Napa Airport.

E. <u>FIRST RESPONDERS (ALS & BLS)</u>

The residents of Solano County are served by fire departments in each locale. Fire departments in the cities of Benicia, Dixon, Fairfield, and Vallejo are part of the Public Private Partnership (PPP) and each provides the ALS first responder support to area residents. The City of Rio Vista and Cordelia Fire Protection District provide first responder Advanced Life Support (ALS) service but are not part of the Public Private Partnership. Suisun City provides only basic life support (BLS) for its residents.

There are several Fire Protection Districts throughout the County providing emergency medical response service where most firefighter/EMTs are volunteers.



IV. SOLANO COUNTY

A. OVERVIEW

Solano County was formed in 1850 and covers 909.4 square miles.
 This includes 84.2 square miles of water area and 675.4 square miles of rural land area. Solano County is bordered by Contra Costa, Napa, Sacramento, Sonoma, and Yolo Counties. Solano County is located approximately 45 miles northeast of San Francisco and 45 miles southwest of Sacramento.

Solano County's population ranking is 21 out of 58 counties state-wide; with a population (accurate as of January 2010) of 427,837.

Fairfield is the County Seat. On a side note, both Benicia and Vallejo had the honor of serving as the State Capital in the early 1850's.



2. The structure of Solano County's EMS System remains a "high performance model." Medic Ambulance Service, Inc. was awarded the exclusive ambulance contract in May 2010 and provides Advanced Life Support (ALS) service for all of Solano County with the exception of the City of Vacaville and Zone C. Medic Ambulance has a response time of 12 minutes in the four Public Private Partnership (PPP) Cities of Benicia, Dixon, Fairfield, and Vallejo and a nine minute response time in Rio Vista and Suisun. Rural calls are allowed a 15 minute response time and remote calls have a 90 minute response time.



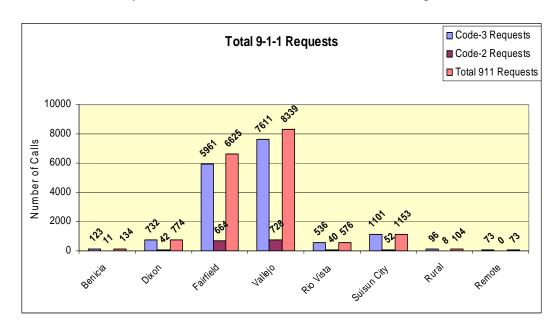
- 3. The PPP Agreement between Medic Ambulance and the Cities of Benicia, Dixon, Fairfield, and Vallejo allow the fire departments in these cities to operate under a high performance contract with the Solano Emergency Medical Services Cooperative (SEMSC) substantially similar to the contract with Medic Ambulance. This agreement allows Medic Ambulance Crews an additional three minutes to arrive on scene as the Fire Departments provide "first response" service (within seven minutes) to their communities.
- 4. Compliance figures for Medic Ambulance Service remained exceptional during this reporting period. Figures presented do not include the months of January, February, and March 2011 due to Information Technology system problems. Based on the data received the six months prior to the outage and the three months following the outage, it appears that Medic maintained their consistent high standards.

Benicia Fire Department and Dixon Fire Department continue to maintain outstanding response times. Fairfield Fire Department and Vallejo Fire Department have suffered through closure of several fire stations, which has impacted their response time. This could put them in a tenuous position vis a vis the Public Private Partnership agreement. Both Departments are working diligently to bring their systems back into the compliance requirements of the Public Private Partnership.

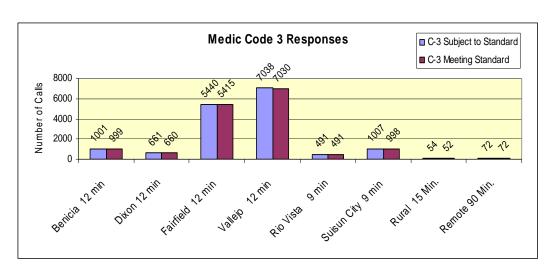


B. **MEDIC AMBULANCE**

Total 9-1-1 responses by Medic Ambulance are shown below for each city in Solano County and include the Rural and Remote categories.



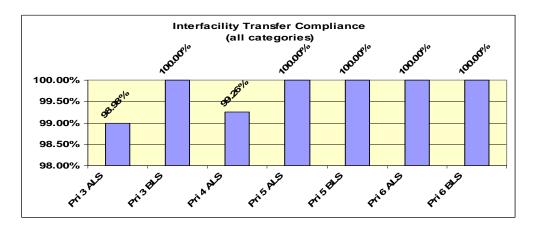
Medic's Code 3 responses are shown by city, with the appropriate response time noted for each city

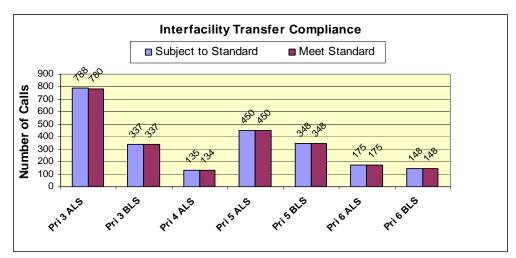


12 of 23



Medic Ambulance also provides interfacility transfer support for all levels of service. Please remember that total figures represent nine months of reporting. Overall response time percentage for all categories is an exceptional 99.62%. Categories three through six have varied response time requirements. Category three transfers are priority transfers and have a 60 minute response time for ALS calls while the BLS calls have a 120 minute response time. Category four ALS calls are urgent and have a 30 minute response time. Categories five and six are pre-scheduled and have a one to four hour response time and an "over four hour" response time respectively.





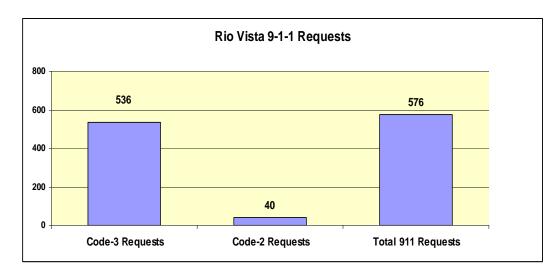




C. RIO VISTA

Located on the Solano County side of the Sacramento River, Rio Vista is the most isolated of the communities in Solano County. The estimated population in Rio Vista effective January 2010 was 8,324 and is expected to triple in population within the next 15 years. Medic Ambulance provides a dedicated unit to the City of Rio Vista due to its isolated location.

Ambulance response times in Rio Vista are outstanding, with an average compliance rate of 99.4% for this reporting period. This is based on a 9-minute response time since Rio Vista is not part of the Public Private Partnership.



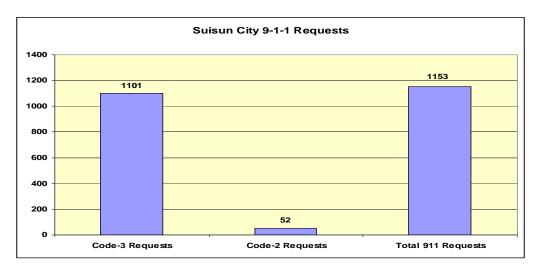




D. SUISUN CITY

Suisun City was incorporated as a city in 1868 and is the fourth most populous city in Solano County. The city population of 28,962 (January 2010) is situated on 4.2 square miles – which makes it the most densely populated city in Solano County. As a comparison, Benicia, with an estimated population of 28,086 is situated on 14 square miles. Growth estimates for Suisun City put it at approximately four percent per year.

Suisun City is one of two cities in Solano County (not including Vacaville) that is not part of the Public Private Partnership. Additionally, Suisun City Fire Department provides only Basic Life Support (BLS) service as they do not have Paramedic (ALS) service. Medic Ambulance provides Advanced Life Support (ALS) coverage with an average response time compliance rate of 99.1%. This is an example of excellent utilization of the System Status Management Plan.

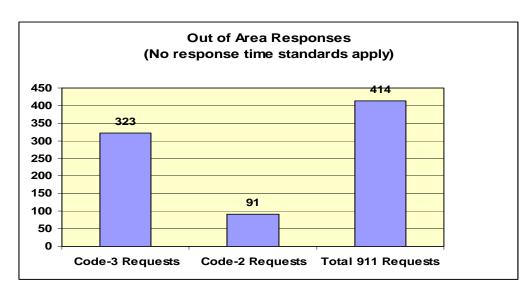




E. UNINCORPORATED SOLANO

Solano County has an unincorporated area of approximately 675 square miles – these are rural and remote areas and are supported by various volunteer fire departments as well as Medic Ambulance, and other responders on an as-required basis. These unincorporated areas do not include the area designated as "Zone C" that is supported by the Vacaville Fire Department. Medic responded to a total of 414 calls in the unincorporated areas of Solano County.

The chart below indicates the number of Code 3 and Code 2 responses in the unincorporated areas.





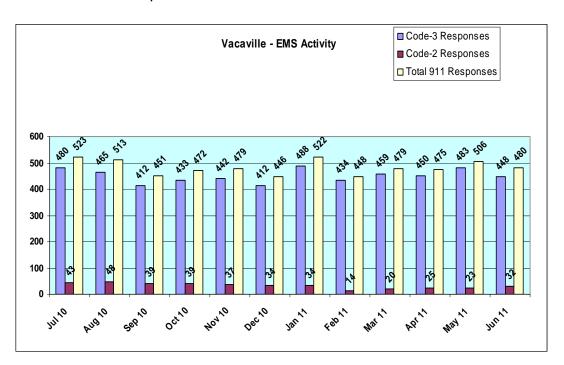


F. VACAVILLE

The City of Vacaville was incorporated in 1892 and comprises just under 27 square miles. Current estimated population (effective January 2010) of Vacaville is 97,305, making Vacaville the third most populous city in Solano County. Located along the I-80 corridor between Dixon and Fairfield, Vacaville hosts a large number of daily commuters which adds to the challenge of supporting the residents of Vacaville and the surrounding area.

Vacaville Fire Department has provided uninterrupted service to the City of Vacaville and surrounding area since 1976. The City is recognized as a "201 entity" under Government Code 1797.201.

Vacaville Fire responded to a total of 5,794 calls during this reporting period, including 5,406 "Code 3" calls and 388 "Code 2" calls. Response times in the City of Vacaville are measured at seven minutes for urban calls within the city limits and 15 minutes for rural calls. It should be noted that **all** calls outside the city limits, regardless of distance, are considered "rural" and measured at the 15 minute standard. This designation is based on historical precedent.



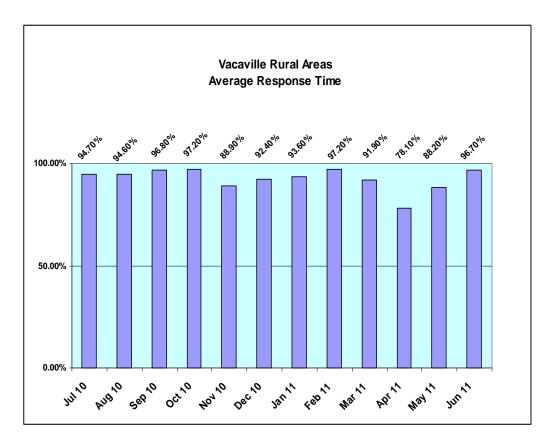




The average response time for urban calls was three minutes and 45 seconds for the year and the response time percent for calls within seven minutes was 92.8%.

As noted on the previous page, rural response times are measured at 15 minutes for the standard. However, Vacaville does not differentiate between "rural" and "remote" calls – everything outside the city limits is considered a rural call.

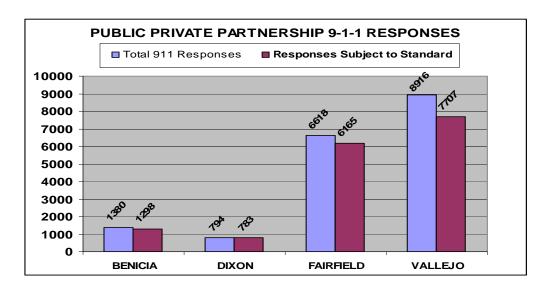
The average response time percentage for rural calls for the year was 92.53%.



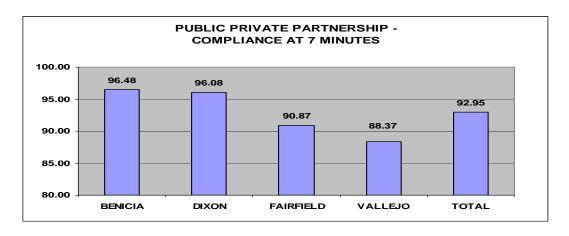


G. PUBLIC PRIVATE PARTNERSHIP

The Public Private Partnership (PPP) Fire Departments figures are presented here, with city specific details to follow. These include "Code 3" and "Code 2" calls.



"Code 3" responses are indicated below. Response time for these calls is required to be seven minutes or less. The Cities of Fairfield and Vallejo had some major challenges this reporting period due to the economic situation. Fire stations in both cities have been closed, with other stations picking up the workload. This has created a situation with numerous "late responses" due to distances to be travelled. Medic Ambulance has been able to provide the necessary medical response to ensure that the citizens of Fairfield and Vallejo receive the necessary emergency medical service.



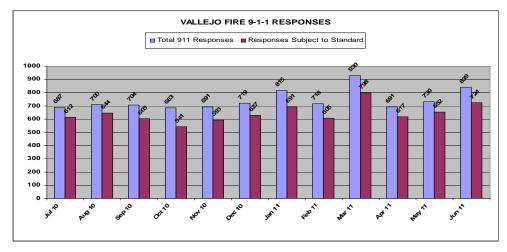


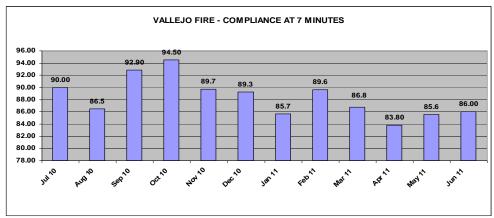


1. Vallejo

Vallejo, with an estimated population of 121,435 (January 2010) is the most populous city in Solano County. Vallejo and its surrounding community cover over 53.58 square miles, which includes 23.64 square miles of waterways. Vallejo held the honor of being one of California's early state capitals in the 1850's.

Vallejo Fire Department provides ALS first response to the residents of Vallejo. Recovery from the financial disaster which has beset the city is ongoing. Vallejo Fire Department has been forced to reduce services, which impacts their response times. Medic Ambulance Service, providing ALS transport service for Vallejo, has been able to step in and provide coverage as needed. Total 9-1-1 calls for Vallejo Fire in this reporting period was 8,916, with a compliance rate of 88.37% at seven minutes.





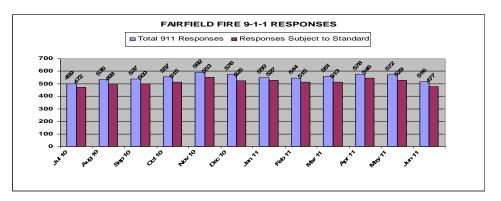


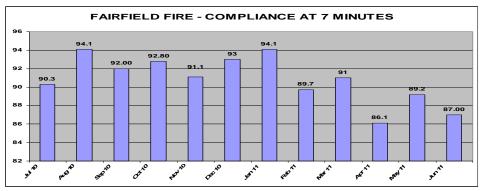


2. Fairfield

Fairfield is the second most populous city in Solano County with an estimated population as of January 2010 of 105,955. As the County Seat for Solano County, Fairfield is a thriving community in the heart of Solano County with an estimated annual growth of two percent.

Fairfield Fire Department provides ALS First Response for the city and surrounding areas. They responded to a total of 6, 618 "9-1-1" calls during this reporting period, with a 90.87% compliance rate at seven minutes. Medic Ambulance provides ambulance transport, with an average response time compliance rate of 99.5% at 12 minutes.





Although their overall compliance rate met the Public Private Partnership (PPP) compliance criteria, the last several months of this reporting period saw their compliance rate drop below the 90% mark. Fairfield faces some challenges in adjusting their response procedures to meet the overall 90% criteria on a regular basis but they are responding to this challenge.

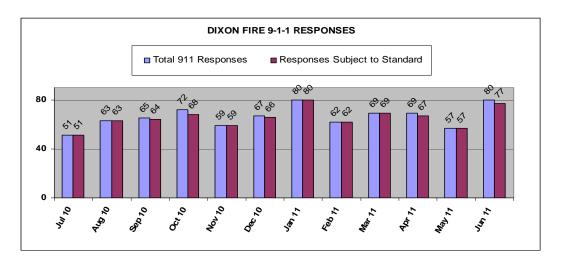




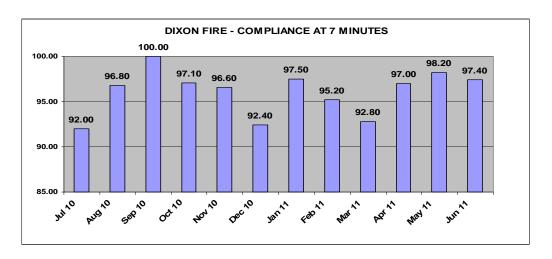
3. Dixon

The City of Dixon lies in the northern portion of Solano County and is in a predominantly rural area. The city covers 6.7 square miles and the estimated population was 17,605 in January 2010. Dixon anticipates a three percent per year growth rate, having slowed down from previous years at seven percent.

Dixon Fire Department provides the ALS First Response for Dixon and the areas surrounding. They responded to a total of 794 "9-1-1" calls during this reporting period.



Their average compliance percentage (at seven minutes) for the reporting period was 96.8%. Medic Ambulance provides ambulance transport, with an average response time of 99.5% at 12 minutes.





4. Benicia

With an estimated population of 28,086 in January 2010, Benicia is the fifth most populous city in Solano County. Benicia Fire Department provides ALS First Response for the citizens of Benicia as well as those persons visiting the area, with Medic Ambulance, Inc. as the transporting ambulance provider. Response time percentage for Benicia Fire Department for the Jul 2010 – Jun 2011 reporting period was calculated at 96.5% at seven minutes or less. Medic Ambulance's response time percentage was equally impressive at 99.8% at 12 minutes.

