2016

Washoe County EMS Oversight Program

Annual Report FY 15-16

Washoe County Health District
Division of Epidemiology and Public Health Preparedness
EMS Oversight Program

This Page Intentionally Left Blank

Acknowledgements

The EMS Oversight Program would like to thank the following for contributing to the FY15-16 Annual Report:

- Washoe County GIS Technological Services/Regional Services for creating all the maps contained within this document.

- The partner agencies for providing their highlights and accomplishments.

Table of Contents

Introduction

The Emergency Medical Services (EMS) Oversight Program Annual Report contains a summary of the Washoe County regional EMS system from July 1, 2015 through June 30, 2016 (FY 15-16). Within the report there are seven sections highlighting the EMS system within Washoe County, to include EMS response agencies and their jurisdictional boundaries, regional performance data, and regional EMS accomplishments and goals for fiscal year 16-17.

Section 1: About the Washoe County EMS Oversight Program

An assessment of the Washoe County EMS system was conducted in 2012 by a public safety consulting firm, TriData; this study resulted in 36 recommendations to the region for the improvement of EMS services, including the establishment of a Regional EMS Oversight Program (Program). On August 26, 2014 an Interlocal Agreement (ILA) for Emergency Medical Services Oversight was fully executed between the City of Reno (Reno), City of Sparks (Sparks), Washoe County Board of Commissioners (Washoe), Washoe County Health District, and Truckee Meadows Board of Fire Commissioners (Fire). The ILA created the Program, the purpose of which is to provide oversight of all emergency medical services provided by Reno, Sparks, Washoe, Fire, and Regional Emergency Medical Services Authority (REMSA). The Program is staffed with 2.5 full-time employees; a full-time Program Manager, a full-time Program Coordinator, and a part-time Program Statistician. Additionally, the establishment of the ILA and the Program created specific duties and expectations of the signatories. A summary of the eight duties of the Program, and seven duties of the signatory partners, as designated per the ILA, are provided below.

The Program is tasked with the following:

1. Monitoring the response and performance of each agency providing EMS in the region
2. Coordinate and integrate medical direction
3. Recommending regional standards and protocols
4. Measure performance, system characteristics, data and outcomes for EMS to result in recommendations
5. Collaboration with partners on analyses of EMS response data and formulation of recommendations for modifications or changes of the regional Emergency Medical Response Map
6. Identification on sub-regions to be analyzed and evaluated for recommendations regarding EMS response
7. Provide an annual report on the state of EMS to contain measured performance of each agency and compliance with performances measures established by the Program for each agency

8. Create and maintain a five-year strategic plan to ensure continued improvement in EMS to include standardized equipment, procedures, technology training and capital investments

The signatory partners are tasked with the following:

1. Provide information, records and data on EMS dispatch and response for review, study and evaluation by the EMS Program
2. Participate in working groups for coordination, review, evaluation and continued improvement of EMS
3. Participate in the establishment and utilization of computer-aided-dispatch (CAD)-to-CAD interface[1]
4. Work cooperatively with the EMS Program to provide input on the five-year strategic plan and ensure two-way communication and coordination of EMS system as future technologies, equipment, systems and protocols evolve
5. Participate in the EMS Advisory board
6. Strive to implement recommendations of the EMS Program or submit recommendations to their respective governing bodies for consideration and possible action
7. Submitting recommendations regarding the EMS system to the EMS Program for implementation or consideration and possible action by the District Board of Health

The ILA also created an Emergency Medical Services Advisory Board (EMSAB), comprised of the following members:

a. City Manager, Reno
b. City Manager, Sparks
c. County Manager, Washoe County
d. District Health Officer
e. Emergency Room Physician (DBOH Appointment[2])
f. Hospital Continuous Quality Improvement (CQI) Representative (DBOH Appointment[2])

The EMSAB was established to provide a concurrent review of topics within the EMS system. The purpose of the EMSAB is to review reports, evaluations and recommendations of the Program, discuss issues related to regional emergency medical services and make recommendations to the respective jurisdictional Boards.

[1] CAD-to-CAD is a two-way interface with allows for call-related information to be transferred between all agencies involved with an incident to have access to live updates and incident status information

[2] DBOH is the Washoe County District Board of Health; the governing board which oversees health-related issues within Washoe County

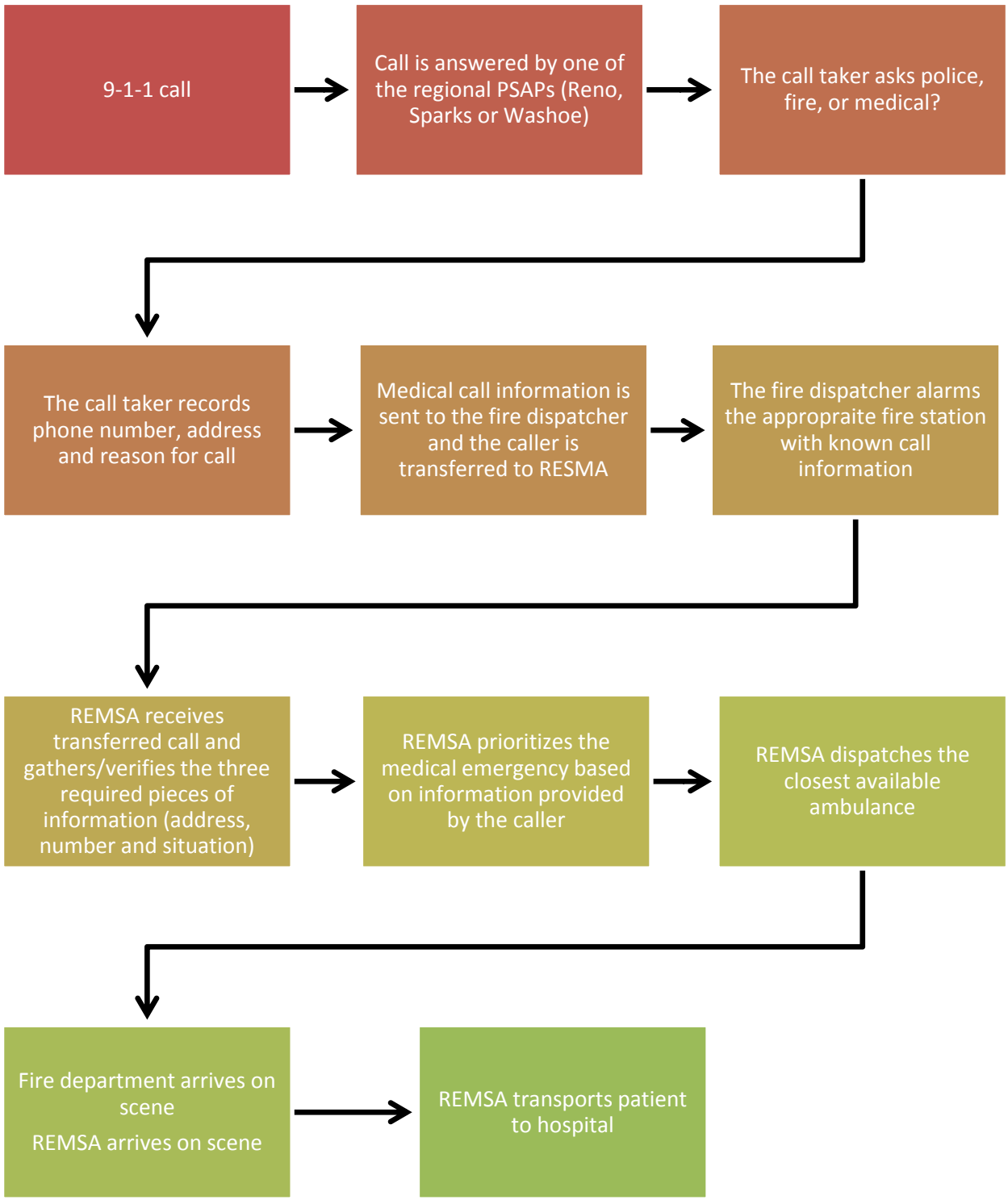
Section 2: How Washoe County's 9-1-1 and EMS systems are designed

Washoe County has a two-tiered response system to emergency medical calls. A 9-1-1 call is routed through the Public Safety Answering Point (PSAP), to determine if a caller is requesting police, medical or fire response; and if medical is requested or needed, the caller is forwarded to REMSA for Emergency Medical Dispatch (EMD).

The two-tiered system is designed so that a fire agency is dispatched first to a medical EMS incident in their jurisdiction, since fire stations are located within neighborhoods throughout the region. While fire is being dispatched, the call taker is questioned by REMSA to determine the call priority, and the subsequent dispatching of an ambulance. The performance of the EMS System within Washoe County is dependent on all parties working together.

Figure 1 illustrates how a 9-1-1 call is transferred through the EMS system. Starting from the initial call coming into the PSAP, to the call taker questioning, dispatch of fire, transferring the 9-1-1 call to REMSA, REMSA dispatching an ambulance, EMS (Fire and REMSA) responders arriving on scene, and REMSA transporting the patient to a hospital.

Figure 1: 9-1-1 Call Routing in Washoe County



Section 3: Washoe County EMS Partner Agencies

The EMS system within Washoe County is comprised of multiple partner agencies. These agencies work together daily to ensure the needs of the community are met. These EMS partner agencies include:

- City of Reno[3]
- City of Reno Fire Department
- City of Reno Public Safety Dispatch (Reno ECOMM)
- City of Sparks[3]
- City of Sparks Fire Department
- City of Sparks Public Safety Answering Point
- Gerlach Volunteer Fire Department
- North Lake Tahoe Fire Protection District
- Pyramid Lake Fire and Rescue
- Reno-Tahoe Airport Authority Fire Department
- REMSA
- Truckee Meadows Fire Protection District[3]
- Washoe County[3]
- Washoe County Health District[3]
- Washoe County Sheriff's Office

Jurisdictional Response and Station Maps

Emergency Medical Services in Washoe County are provided by the following career fire agencies: Reno Fire Department, Sparks Fire Department, Truckee Meadows Fire Protection District, North Lake Tahoe Fire Protection District and Pyramid Lake Fire and Rescue. The City of Reno and City of Sparks Fire Departments' jurisdictions encompass the city limits of their respective cities (Figure 2), while Truckee Meadows Fire Protection District's jurisdiction encompasses the more rural areas of unincorporated Washoe County (Figure 3) up to the Rural Fire Boundary (Figure 4). The southwest corner of Washoe County falls under the jurisdiction of North Lake Tahoe Fire Protection District (NLTFPD). NLTFPD provides fire and ambulance coverage and transport for the residents of Incline Village, Crystal Bay and surrounding communities. Pyramid Lake Fire and Rescue's jurisdiction includes the Pyramid Lake Tribal Land reservation boundaries.

[3] signatory of the ILA

Washoe County citizens also are served by the following volunteer fire agencies: EMS coverage north of the Rural Fire Boundary is covered by Gerlach Volunteer Ambulance and Fire Department, their jurisdiction includes the towns of Gerlach, Empire, and surrounding rural region. The Red Rock Volunteer Fire Department serves a rural area north of Reno supplemented by Truckee Meadows Fire Protection District.

The private ambulance company, REMSA, is responsible for the transport of patients within their designated Franchise response area. REMSA's response area extends from the southern border of Washoe County, north to the border of the Pyramid Lake Paiute tribal lands, east to Wadsworth and west to the border of California (Figure 3).

Figure 2: Jurisdictional Boundaries and Fire Station Locations for Reno Fire Department, Sparks Fire Department and Truckee Meadows Fire Protection District

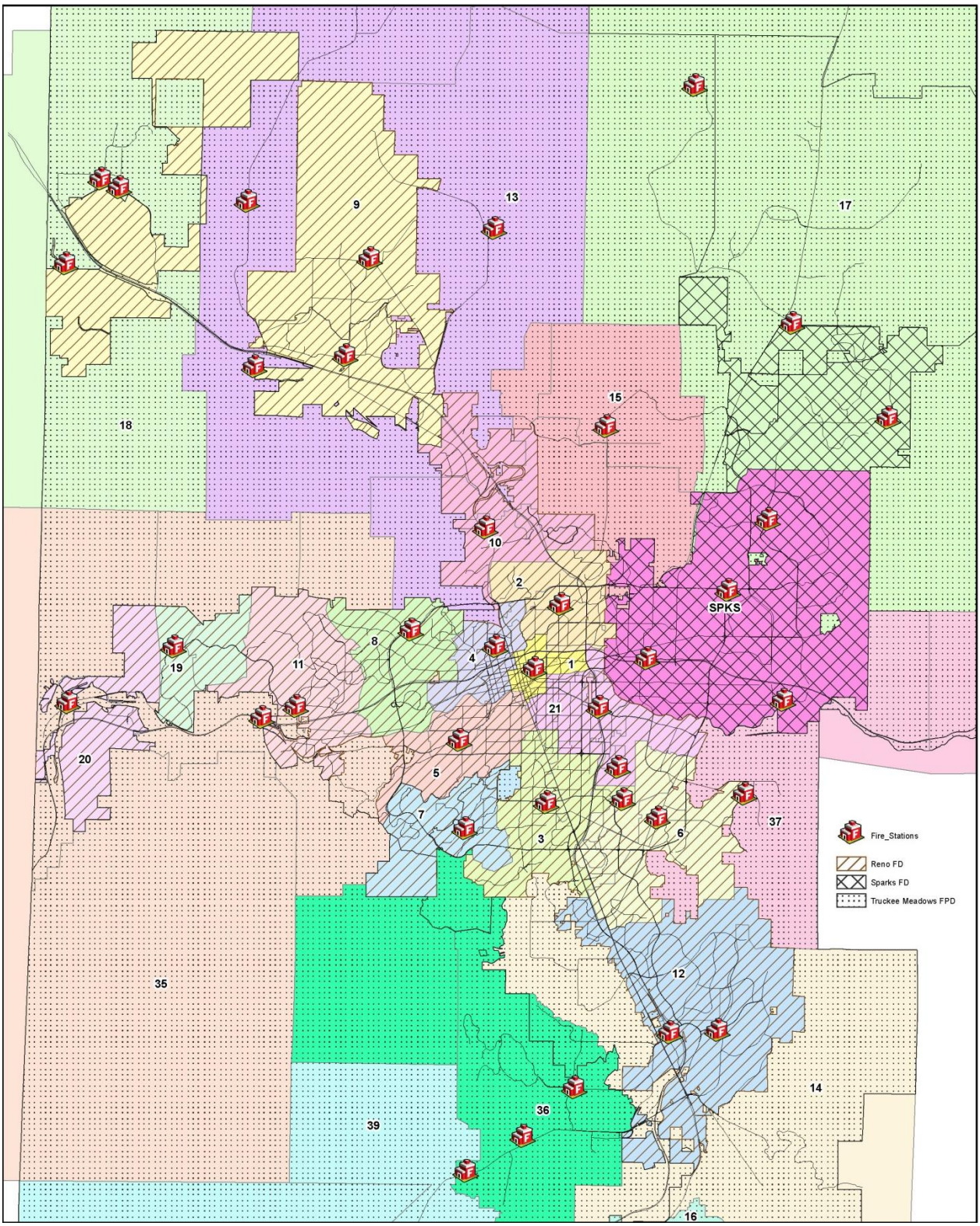
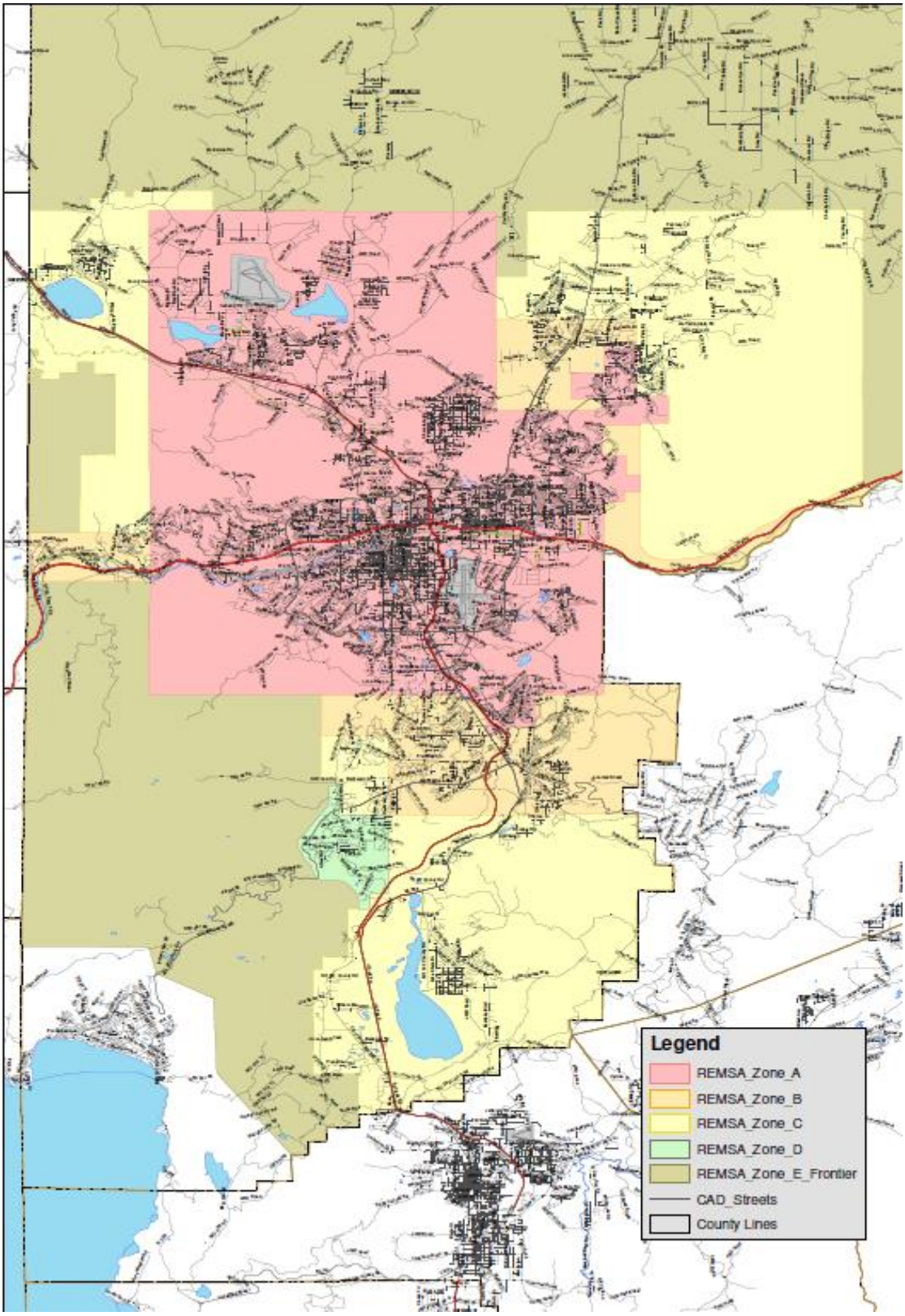


Figure 3: REMSA Franchise Response Map through June 30, 2016



Section 4: Regional EMS Performance Analyses

EMS related calls are reported by three fire agencies in Washoe County: City of Sparks, City of Reno, and the Truckee Meadows Fire Protection District (unincorporated Washoe County), all of which are signatories of the Interlocal Agreement, as well as REMSA. The reported EMS related fire calls are matched to REMSA calls for service to allow for an evaluation of system performance on EMS incident response, from the initial 9-1-1 call through each agency arriving on scene. The purpose of matching fire call data with REMSA call data is to better understand how the EMS system is functioning in our region and determine if implemented protocols are impacting response times and patient outcomes. Additionally it allows the region to review if there are opportunities for improvement.

The analyses presented in this section are representative of the EMS calls for service during July 1, 2015-June 30, 2016. The calls utilized in these analyses are those which matched between fire partners and REMSA.

Table 1 Total number of Fire calls which matched to REMSA calls by REMSA priority. The number used in each analysis is dependent on the time stamp validity for time stamps used in each table.

Priority	#	%
1	21,498	47.5%
2	17,149	37.9%
3	5,954	13.2%
9	693	1.5%
Total	**45,294**	**100.0%**

Table 2 The proportion of calls when PSAP received notification of an EMS call prior to REMSA. SFD was able to provide PSAP data starting October 26, 2015. Calls which occurred prior to October 26 from SFD do not have PSAP data.

Agency	#	%
REMSA First	5,237	12.4%
PSAP First	36,880	87.6%
Total Matched N =45,294, Used N = 42,117		

Table 3 The median time intervals from the initial call (IC) to responding agency's dispatch and arrival on scene.

The initial call (IC) time was calculated using either REMSA call pick up time or PSAP Created Time, depending on which was first. Those calls excluded from the analysis were missing PSAP Created Time or did not have an arrival on scene time stamp for either a fire partner or REMSA.

REMSA Priority	Median Time from Initial Call (IC) to Dispatch and Arrival On Scene		
	IC to REMSA Dispatch	IC to Fire Arrival	IC to REMSA Arrival
1	0:01:12	0:06:46	0:06:56
2	0:01:16	0:07:05	0:07:27
3	0:01:14	0:07:00	0:09:04
9	0:01:17	0:07:15	0:10:03
All	0:01:14	0:06:55	0:07:19
Total matched N = 45,294, Used N = 30,481			

The median time from the initial call to REMSA dispatch (clock start) is 01:14 minutes, to Fire arrival is 06:55 minutes, and REMSA arrives 07:19 minutes after the initial call.

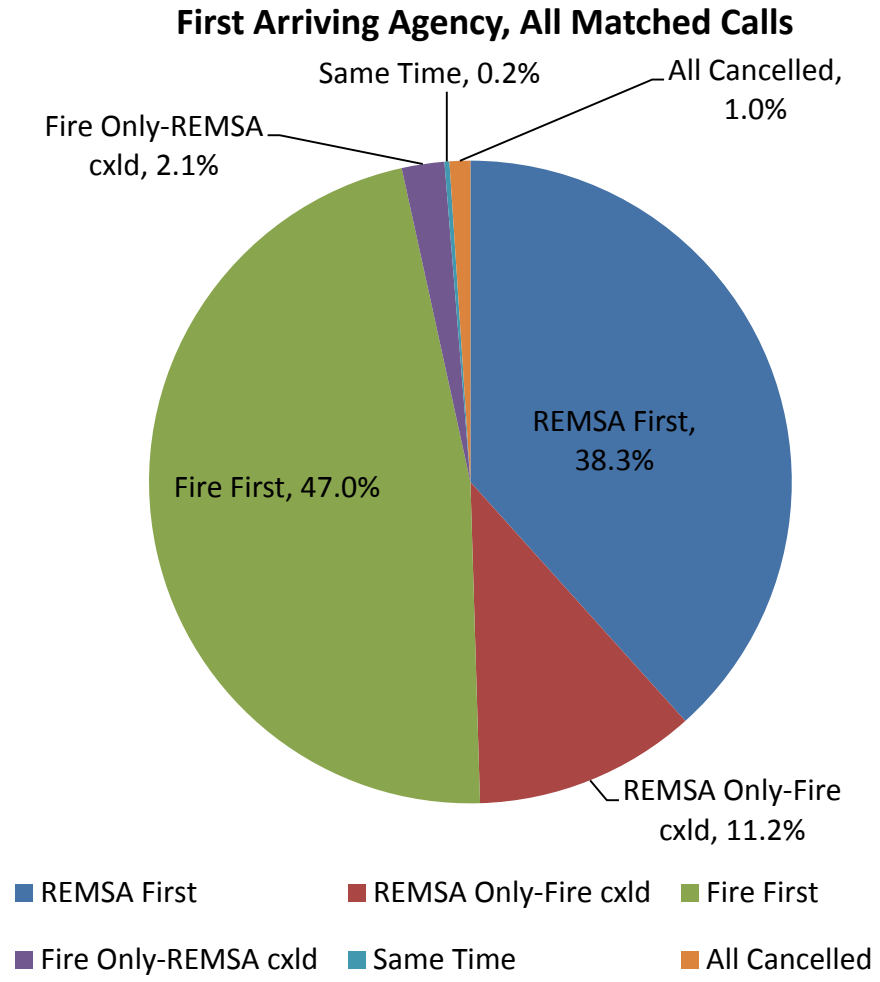
Table 4 The median travel time (time from when fire agency goes en route to fire agency arrival on scene). Median, Mean (average), and 90th percentile.

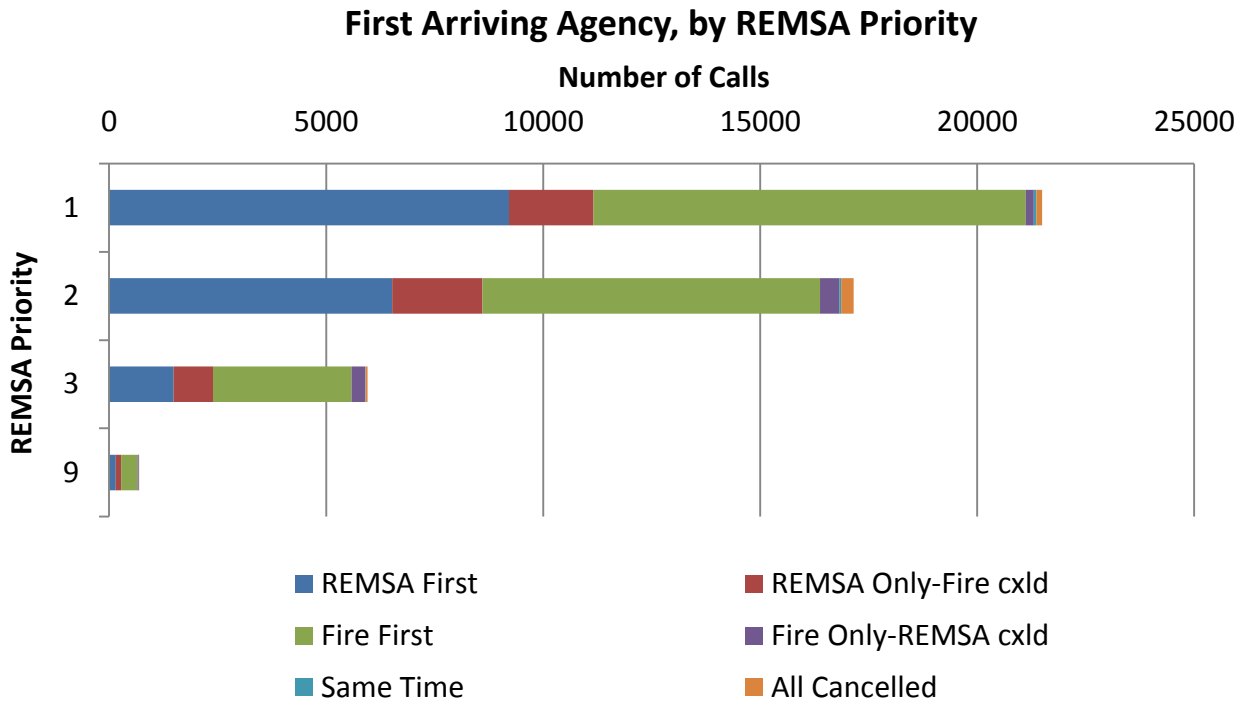
Fire Travel Time: En route to Arrival		
Median	**Mean**	**90th Percentile**
0:03:57	0:04:27	0:07:22
Used N= 38,980		

Of the 38,980 fire calls with an en route and arrival time stamp, the median travel time was 03:57 minutes, the mean or average travel time was 04:27 minutes and the 90th percentile, meaning 90% of the calls, were 07:22 minutes or less.

Table 5 Regional information that indicates the first responding unit on scene, by priority.

First on Scene	Priority REMSA									
	1		2		3		9		Total	
	#	%	#	%	#	%	#	%	#	%
REMSA First	9,211	42.8%	6,518	38.0%	1,485	24.9%	152	21.9%	17,366	38.3%
REMSA Only-Fire cxld	1,951	9.1%	2,083	12.1%	906	15.2%	125	18.0%	5,065	11.2%
Fire First	9,959	46.3%	7,780	45.4%	3,195	53.7%	374	54.0%	21,308	47.0%
Fire Only-REMSA cxld	185	0.9%	443	2.6%	313	5.3%	29	4.2%	970	2.1%
Same Time	57	0.3%	40	0.2%	12	0.2%	4	0.6%	113	0.2%
All Cancelled	135	0.6%	285	1.7%	43	0.7%	9	1.3%	472	1.0%
Total	21,498	100.0%	17,149	100.0%	5,954	100.0%	693	100.0%	45,294	100.0%




First Arriving Agency, by REMSA Priority
Number of Calls
0
5000
10000
15000
20000
25000
REMSA Priority
1
2
3
9
REMSA First
REMSA Only-Fire cxld
Fire First
Fire Only-REMSA cxld
Same Time
All Cancelled

Section 5: EMS Oversight Program Accomplishments FY 15-16

Regional Omega Protocol

An Omega call is a type of 9-1-1 call which when evaluated through the Emergency Medical Dispatch (EMD) process, is deemed as low-acuity non-emergent and an ambulance response is not the most appropriate level of care. In 2011, the International Academy of Emergency Dispatch (IAED) approved 200 Omega EMD determinant codes, these are calls with a chief complaint such as a spider bite, headache, hiccups, cannot sleep, splinter, or nosebleed without any other life-threatening symptoms present. About 150 of the 9-1-1 calls in this region are categorized as Omega each month. The region recognized this was not best-practice or an appropriate utilization of EMS resources. In June of 2015 the region's EMS agencies met to discuss the response protocol for Omega calls. After additional research, including discussions with other jurisdictions that adopted alternative responses for Omega calls, and multiple revisions to draft policy, the region's Omega protocol was accepted by the EMS Advisory Board on April 7, 2016 and approved by the District Board of Health on April 28, 2016 with an implementation date of July 1, 2016.

The protocol approves 52 Omega EMD determinant codes to be transferred from the 9-1-1 system to the Nurse Health Line (NHL) for further assessment and evaluation to determine the appropriate level of care for the patient. This increases the availability of the region's EMS resources allowing them to respond to higher acuity calls and reduces the burden on emergency rooms, while still providing assessment and recommendations to the patient.

Revised REMSA Franchise Response Map

The REMSA Franchise response map delineates the time expectations for REMSA to respond to 9-1-1 calls in the Franchise service area. The process of reviewing and revising the REMSA map began in February 2015, with regional meetings starting April 2015. EMS staff utilized a contractor to assist the region in the development of a sound methodology and process for developing a new REMSA Franchise response map. The methodology adopted by the region was based on population density models with an overlay of call volume data for a 12 month period of time. After incorporating quantitative data elements and evaluating several map revisions, the regional EMS partner agencies met consensus on the newly developed REMSA response map (Figure 4). The new map was approved by the EMS Advisory Board January, 2016, followed by approval from the District Board of Health February, 2016 effective July 1, 2016.

Figure 4: REMSA Franchise Response Map Effective July 1, 2016

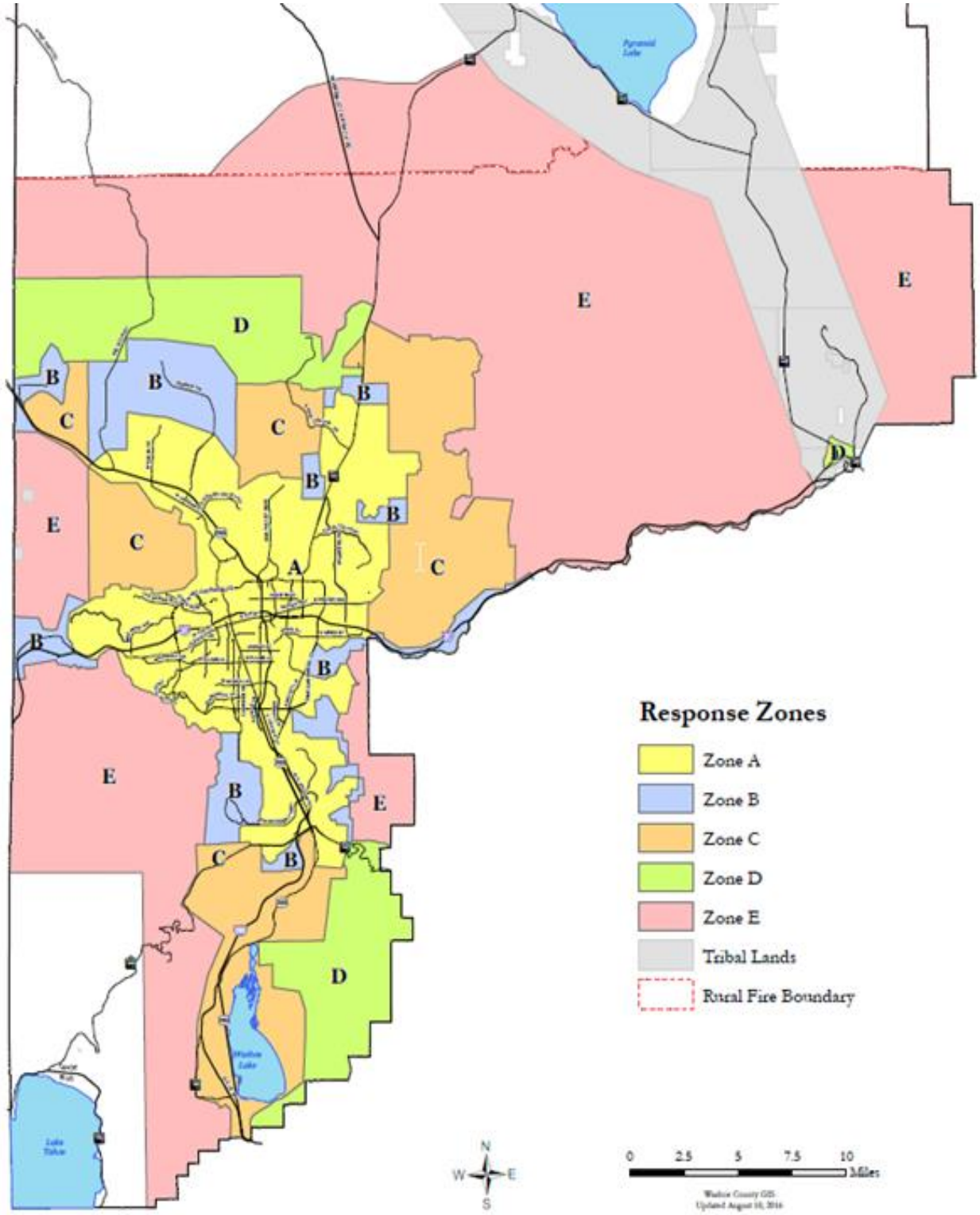
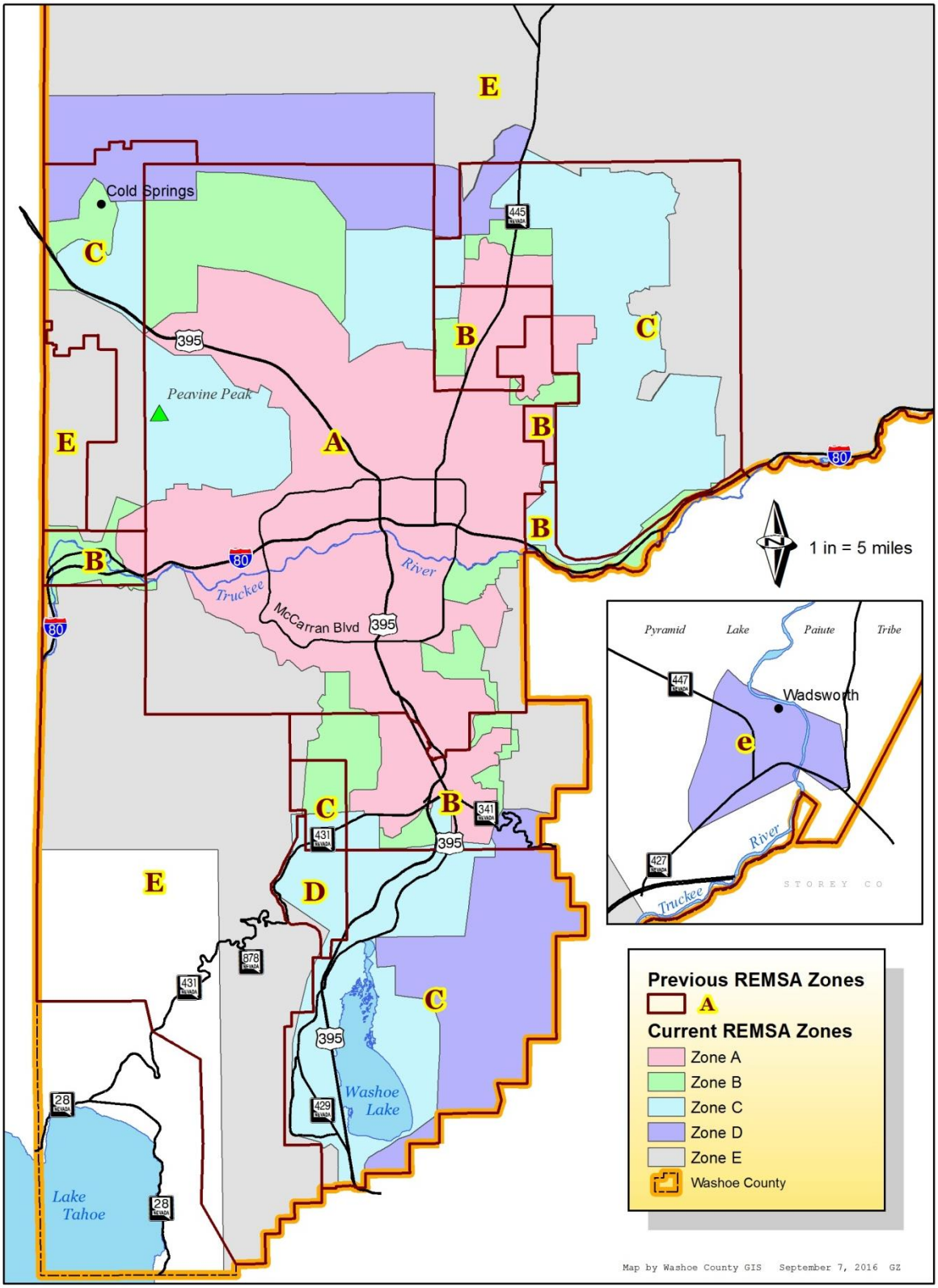


Figure 5: Map of REMSA's Previous and Current Franchise Response Zones



HeartSafe Community Designation

In 1991 the American Heart Association brought forth the concept of "Chain of Survival", the intention of which was to increase the survival rate of persons who are victims of sudden cardiac arrest. Nevada Project Heartbeat developed a HeartSafe Community Program to recognize the collaborative efforts of organizations and agencies to enhance and improve their pre-hospital system's response to cardiac events.

The Washoe County EMS Oversight Program has been working with several partner agencies, since November 2015, to develop a HeartSafe program and apply for Washoe County to be a HeartSafe Community. Agencies involved include Renown, Reno-Tahoe Airport Authority Fire Department, Reno Fire Department, Sparks Fire Department, Truckee Meadows Fire Protection District, Washoe County Sherriff's Office, REMSA, American Red Cross, Reno Police Department, and North Lake Tahoe Fire Protection District. Although Incline Village had previously been recognized as a HeartSafe Community, the partners thought it was prudent to submit an application on behalf of the County.

The process of developing a HeartSafe Program involved assessing the number of and access to automated external defibrillators (AED) and the number of residents who are trained and certified in CPR. The HeartSafe Program works to improve all aspects of the 9-1-1 system, so that pre-hospital care for a sudden cardiac arrest, including the initiation of CPR and defibrillation by bystanders, can begin prior to the arrival of EMS providers.

Multi-Casualty Incident Plan (MCIP) Update

The MCIP was first created in 1986 in response to the Galaxy Airlines crash in Reno. The MCIP is designed to provide the community with the District Board of Heath's polices and guidelines for response to an MCI. Since its inception, the MCIP has gone through seven revision cycles to enhance the plan; the most recent occurred during fiscal year 2015-2016. For several months EMS staff worked with regional agencies to update plan elements. The larger revisions included:

- The development of a section on EMS Coverage for Mass Gatherings as mitigation planning
- The addition of American Burn Association information as an appendix (general location of burn beds and burn bed criteria)
- The creation of a Family Service Center (FSC) Annex
- The development of a pre-built communications plan (ICS 205)
- The enhancement of the section on mental health and stress management
- The creation of an executive level training on the MCIP

The District Board of Health heard a presentation on the revisions and approved the updates on April 28, 2016 with an effective date of July 1, 2016.

MCIP Executive Training

As part of the MCIP revision process, regional agencies identified a gap in regional training on the MCIP: most executive level personnel are familiar with the MCIP, but could benefit from a brief training that covers the operational details of the plan. Program staff began development of the MCIP executive level training to be offered during Fiscal Year 16-17. This training is intended to be offered on an annual basis.

Nevada Statewide Medical Surge Plan

The Nevada Statewide Medical Surge plan was first written in 2008 and is an all-hazards response plan that applies to all planned and unexpected events that may necessitate a surge of hospital and other healthcare resources within Nevada. During Fiscal Year 2015-2016 stakeholders deemed it necessary to update the plan content as well as add regional/multi-county response annexes. The West region plans include three annexes: medical surge, MCIs and healthcare evacuation.

The West region annexes were developed with the intention of having additional organization when a response requires multiple counties and jurisdictions. The framework of the annexes was based off Washoe County plans, but the content was modified for regional response and coordination. The annex development culminated with a tabletop exercise to test capabilities, strengths and possible improvements.

Section 6: Partner Agency EMS Highlights & Accomplishments FY 15-16

Partner agencies provided their EMS related highlights for FY 15-16, which include accomplishments such as increased capacity in terms of scope of work, increased staffing levels, newly hired personnel, updates to protocol and equipment upgrades. These are instrumental in assuring the best level of care is provided to the citizens and visitors of Washoe County.

City of Reno Fire Department Highlights for FY 15-16

The Reno Fire Department responds to about 36,000 calls annually. Of those calls about 75% are EMS.

In January 2016 Reno Fire Department hired EMS Chief Dennis Nolan to handle the EMS Division, and was able to establish a standing EMS committee with a Department EMS training center located at Station 11.

On January 8, 2016 Reno Fire Department began delivering ALS service for the first time in the 128 year history of the Department.

The Reno Fire Department hired 32 new recruits spread over two recruit academies. The first academy started on January 4, 2016 and the second academy started April 18, 2016. All recruit graduates are now line firefighters working for the Reno Fire Department.

The Department participated in the National Reading Month in March, reading to over 1,500 school children in the classroom.

The Reno Fire Department continued its participation with local charitable organizations including Muscular Dystrophy Association (the Fill-the-Boot program), Northern Nevada Children's Cancer Foundation with the charitable fundraising dinner we call Natalia's night and Mom's on the Run, a local charitable organization that supports families and individuals impacted by breast cancer.

The Department raised money for Breast Cancer awareness during October through the sale of pink RFD duty shirts. The shirts were approved uniform shirts to be worn on-duty during October.

At Christmas the Department again delivered the Sam Saibini Food Basket program which provides food, free of charge, to underprivileged families in the region and also held the Children's Christmas Party for homeless children in Reno.

In early 2016, the Reno Fire Department began delivering EMS service utilizing a Medical Response Unit (MRU) which provides an additional resource for the Department and allows for flexible staffing.

The Department put two new fire engines in service during March 2016, with a third scheduled to go into service.

The Department chaplain continued to deliver trauma intervention, resources and spiritual care to employees and the public.

Along with the region, the Reno Fire Department completed the application to become a HeartSafe Community.

City of Sparks Fire Department Highlights for FY 15-16

REMSA Response Map: the entire City of Sparks is now within the 8-minute response zone after the Response Map revisions.

Implemented the Omega Response Protocols: In conjunction with regional partners, developed the Omega response protocols allowing Ambulance and Fire Resources to discontinue response to low acuity priority 3 medical complaints.

Developed a Refusal of Medical Assistance (RMA): Developed, delivered required training, and implemented a Refusal of Medical Assistance procedure. This provides for better resource management and proper patient refusal in minor vehicle accidents and falls resulting in lift assists.

Completed Protocol Update: Updated protocols to reflect the recent changes in American Heart Association guidelines, scope of practice changes that came with the transition to Advanced EMT and other changes per medical direction.

Acquired and Renewed POD Endorsement for Numerous Personnel: The majority of SFD personnel attended vaccination administration training in conjunction with the Washoe County Health District. This cooperative effort allows SFD personnel to gain an additional endorsement on their EMS license that permits them to assist the County in delivering needed vaccines during public health emergencies. SFD personnel, in addition to other first responders, exponentially expand the resource availability to the Health District during a time of need.

Implemented the NEV CORD Radio Frequency: Programed department radios to include the NEV CORD frequency to be used to communicate with Air Ambulance resources.

Participated in NAC 45OB Workshops and Hearings

Completed Comprehensive Study on the Need for Paramedic First-Tier Resources Within the City of Sparks

Truckee Meadows Fire Protection District Highlights for FY 15-16

Acquired Chest Compression Devices: Thanks to Commissioner Hartung, a chest compression device was purchased with County funds and placed on the engine in Spanish Springs to enhance cardiac arrest survival rates in that District. The District subsequently budgeted for additional units to be placed on all 11 TMFPD engines in FY 16/17.

Staffed Gerlach and developed EMS transport procedures: Due to the resignation of several volunteers in Gerlach, TMFPD assumed operations of that area on an interim basis until a long-term plan could be developed and implemented. With approximately 2 weeks' notice, TMFPD was able to equip and staff a rescue and ambulance to service the region and provide ALS ambulance transport. The service was successfully transferred to new County staff on 7/1/16.

Approved Division Chief of EMS for FY 16/17 Budget: With a growing demand for EMS services and program support needs, the District created and funded a new Division Chief of EMS & Training, approved May 2016. The District will recruit for the position in mid FY 16/17.

Acquired fiber optic intubation scopes: To enhance success rates during critical, advanced airway placements, the District acquired fiber-optic video laryngoscopes. These tools allow for Paramedics to more easily visualize the placement of advanced airways, leading to better patient outcomes when successful.

Acquired intubation manikins for all stations: To further enhance advanced airway placement success rates, every TMFPD station was provided with an advanced airway training manikin. This allows crews to practice these critical skills on a daily basis.

Trained numerous personnel in vaccination administration: The majority of TMFPD personnel attended vaccination administration training in conjunction with the Washoe County Health District. This cooperative effort allows TMFPD personnel to gain an additional endorsement on their EMS license that allows them to assist the County in delivering needed vaccines during public health emergencies. TMFPD personnel, in addition to other first responders, exponentially expand the resource availability to the Health District during a time of need.

65 Certified Paramedics now on staff: Over the course of the last several years, TMFPD has continued to hire ALS personnel while existing ALS personnel have promoted to higher rank positions. During March 2016 TMFPD hired six additional firefighter paramedics, bringing the total to over 65 certified Paramedics on staff in various ranks which helps the District in all levels of its ALS EMS service.

Developed a mutual aid agreement with REMSA for TMFPD's ambulance: REMSA and TMFPD have developed a mutual aid agreement that will utilize the TMFPD ambulance stationed in Washoe Valley during MCI's and/or when REMSA needs assistance in providing transport in the South Valley's.

REMSA's Agency Highlights for FY 15-16

Hours Added: Analysis of demand and implementation of the new response zone map led to the addition of 240 Advanced Life Support unit hours per week. These additional hours have been added to the system to increase the number of shift lines and staff available to the system throughout the week.

Inter-facility System Growth: Growing demand and a dedication to utilizing appropriate resources based on patient condition led to REMSA adding 144 Intermediate Life Support unit hours. This increase ensured BLS and ILS transfers can be completed by an ILS transport staff, increasing the availability of ALS units in the 911 system.

New Dedicated Posts: Two dedicated posts have been added to outlying areas in an effort to provide services to growing and expanding population centers in the region. A 16-hour dedicated post at Wedge Parkway and a 16-hour dedicated post in Spanish Springs were implemented to better serve the expanding geographical population base of the Truckee Meadows

Community Health: Began transitioning CHP programs from grant-based to sustainable models with new Healthcare Partners and strategic relationships.

Omega Protocols: Implemented Omega Protocols with approval from all three jurisdictions as well as the EMS Advisory Board and the District Board of Health. This agreement is part of REMSA's Community Health initiatives to get the right care to the right patients.

Communication Staff: Communication staff added to support the increase of requests specific to handling Inter-facility transfers and to help ensure efficiency of the ILS transport systems.

Communication Center Accreditation: Successful reaccreditation of the REMSA Communication Center by the International Academy of Emergency Dispatch Center of Excellence. This is REMSA's 15th year being an accredited Center of Excellence.

Mutual Aid: Initiated a new Mutual Aid Review Policy to ensure agreements are reviewed more frequently. A Mutual Aid Agreement with Truckee Meadows Fire Protection District was also completed and signed on June 28, 2016. Additionally, work began on establishing agreements with Reno Fire Department and Pyramid Volunteer Fire and Rescue.

National Visitors: Hosted multiple tours of key external decision makers; Dean Heller, Reid's staff, State Legislators, and representatives from the Center for Medicare Innovation.

New Technology: Implemented Mobile Data Terminals in ambulances and supervisor vehicles for improved routing, information sharing and digital communications. This new technology allows crews access to more information about calls and increased communications with the Communications Center.

Mission Life Line Silver Award: Awarded the Silver Mission Life Line Recognition in 2016 for successfully managing and caring for STEMI patients in collaboration with all local hospitals based on national criteria, see below.

Core Measures	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Overall
Percentage of pts with non-traumatic chest pain ≥35 treated and transported who received a pre-hospital 12 lead:	95%	95%	95%	92%	94.7%
Percentage of STEMI pts treated/transported to PCI facility with first medical contact to device ≤90 minutes:	100%	90%	80%	95.7%	92.2%

Gerlach Volunteer Fire Department Highlights for FY 15-16

Gerlach Fire and EMS: The small department remained active in FFY-2016, thanks to assistance from the Truckee Meadows Fire Protection District (TMFPD). Due to a variety of factors, the department was in transition. The first half of the year the station was staffed by volunteers and the second half of the year the station was staffed by TMFPD.

However, it emerged stronger and more sustainable as a Combination Fire Department with two full-time employees and two Intermittent Employees to form the nucleus of the revitalized Department.

Volunteers are being recruited, and regular service calls are being conducted by the two ambulances stationed at the Gerlach Department. The coverage area remains almost 5,000 square miles and the department averages about 50 calls per year, with call spikes during the annual Burning Man festival.

Calls for service: During FFY-2016 the Gerlach Volunteer Fire Department or TMFPD, responded to 71 calls for service within the Gerlach response area, of which 48% (34) were EMS.

Section 7: Goals for Next Fiscal Year

The following goals are areas which the EMS Oversight Program has been working towards for a several months, however, they are expected to be in effect within the next fiscal year. The Five-year Strategic Plan is a duty assigned by the ILA and was developed over much of FY 15-16 in collaboration with partner EMS agencies. The Program will also be working with EMS partner agencies and regional hospitals to develop best practice methodology to evaluate patient outcome data for future data reports.

Five-Year Strategic Plan

The Washoe County EMS Five-Year Strategic Plan began in August 2015 to guide the future direction of the Washoe County EMS System. The strategic plan began with a collaborative assessment to examine strengths, weaknesses, opportunities and threats facing the EMS System from national, regional and local influences. The information obtained through the analysis helped formulate goals to optimize the structure, processes, and outcomes of the EMS Five-Year Strategic Plan, focusing on: 1) maintaining or improving clinical care and patient satisfaction; and 2) improving operational efficiency and collaboration across the region.

The strategic plan provides Washoe County's EMS System's mission, vision, values, goals and objectives to be accomplished by 2021. The following six goals are outlined in the plan and are as follows:

> **Goal 1:** Enhance utilization of EMS resources by matching the appropriate services, as defined by the call for service, through alternative protocols, service options and transportation options by October 7, 2021.
>
> **Goal 2:** Improve pre-hospital EMS performance by reducing system response times through the use of technology and the development of regional response policies by December 31, 2022.
>
> **Goal 3:** Improve communications between EMS partners through enhanced usage of technology and the development of regional guidelines by June 30, 2021.
>
> **Goal 4:** Improve continuity of care through regional processes that ensure patient information transfers from the scene to the hospital by December 31, 2018.
>
> **Goal 5:** Design an enhanced EMS response system through effective regional protocols and quality assurance by December 31, 2018.
>
> **Goal 6:** Continue collaborative models with regional EMS agencies, health organizations and public safety stakeholders.

Patient Outcome Data

As identified in the Program's FY 14-15 Annual Report, focusing on the relationship between the two-tiered response system is an isolated review of the EMS system performance and patient outcome data should be included for evaluating performance of prehospital care. Promoting a high-quality level of patient care is a priority of all EMS partner agencies. Currently our region's EMS providers are not formally informed of patient outcomes after the responders are cleared from the scene or complete the patient transport to the emergency room.

While all 9-1-1 calls are deemed important, there are a few select conditions which national guidelines recommend a rapid response time from emergency responders; these include the following types of calls:

> **Cardiac arrest:** An electrical malfunction of the heart, resulting in an ineffective heartbeat, or complete lack of heart beat. Often occurs without an early onset of warning symptoms. When the heart's electrical pulse is disrupted, the blood flow to the rest of the body stops, this causes the victim to become unconscious, resulting in death within minutes.
>
> **ST-elevation myocardial infarction (STEMI):** Specific type of heart attack in which the blood flow to a portion of the heart is blocked. The heart is a muscle and if an artery providing oxygen-rich blood is blocked for prolonged periods of time that section of the heart will begin to die. Heart attack symptoms may occur suddenly, however many heart attacks occur slowly over a period of days or even weeks.
>
> **Stroke:** Occurs when a blood vessel carrying blood to the brain is blocked or ruptures, resulting in lack of blood to that area of the brain which in turn causes brain tissue and cells to die. Strokes impact people differently depending on which area of the brain the blockage or rupture occurred and the extent of tissue death.

Obtaining patient outcomes from regional hospitals allows EMS providers, including dispatchers, to effectively evaluate dispatch pre-arrival instructions as well as patient care provided on scene and en route to the hospital. This will help to ensure an accurate patient assessment is occurring and the prehospital treatment is appropriate. Measuring patient outcomes is instrumental to evaluate the effectiveness of prehospital protocol and procedures. The Program's goal is to work with the EMS partner agencies and hospitals to further identify patient conditions to analyze and ensure the appropriate data are gathered to effectively assess pre-hospital patient care.