

Prepared for:

Truckee Meadows Fire & Rescue

2021

REMSA Emergency Communications Services Proposal



6/1/2021

Executive Summary

REMSA and Truckee Meadows Fire and Rescue (TMFR) both operate high-quality emergency response services to the citizens of Washoe County, NV. REMSA operates a high-performance, high-quality, technologically advanced Emergency Communications Center (ECC) which processes over 80,000 Emergency Medical Services (EMS) 911 calls per year. TMFR is seeking alternative options to their current dispatch provider for Fire and EMS call-processing and dispatching.

Since REMSA and TMFR respond to 100% of the EMS calls for service in the TMFR response district together, REMSA's ECC is a natural fit to accommodate the needs of TMFR. REMSA can provide a high-quality and high-value services with a significant cost savings over their current provider.

REMSA will also be able to provide enhanced services and features, such as Automatic Vehicle Location (AVL), advanced device-based caller location accuracy, enhanced video scene hazard and medical assessment, and medically trained Emergency Medical Dispatchers (EMD) call-takers. REMSA will be able to meet the call-taking and dispatch needs of TMFR within the timeline desired (between October 1st and December 31st 2021).

On behalf of REMSA, I am happy to provide this proposal for emergency call-taking and dispatching services to Truckee Meadows Fire and Rescue.

-Aaron Abbott, REMSA Executive Director of EMS Operations



Background

Truckee Meadows Fire and Rescue (TMFR) is exploring possible changes to their provider of dispatch services and has approached REMSA about the possibility of providing dispatch services for Fire and EMS incidents in their District.

Preliminary discussions and evaluations have revealed synergy between the agencies and a willingness to collaborate and further investigate the concept. REMSA currently processes all of the emergency medical incidents in Washoe County, within the REMSA franchise area. This includes medical aids for the TMFR district. TMFR runs 100% of their medical aid calls with REMSA as the ambulance transport agency. Logically, REMSA's Emergency Communications Center (ECC) already touches 100% of the medical incidents within the TMFR district (~10k/yr). TMFR responds to an additional 2K Fire related incidents per year. REMSA and TMFR have received initial direction from the TMFR Fire Board to continue the exploration of an agreement for REMSA to provide dispatch services to TMFR.

TMFR's dispatch agreement with the Washoe County Sheriff's Office (WCSO) expires June 30, 2021. TMFR has been provided notice of an increase in costs from ~800k to ~1.3M for FY 21-22. REMSA can provide emergency communications services to TMFR at a significant cost savings. Functionally, REMSA has been recognized as a logical potential provider of dispatch services to TMFR. REMSA and TMFR respond to 100% of emergency medical calls in the TMFR district together. Additionally, REMSA's ECC is the only accredited EMD center in Washoe County and REMSA has an up-to-date and technologically advanced dispatch center.

REMSA's ECC has the required space and capacity to accommodate the additional proposed Fire dispatch operations. To accommodate additional staffing and Fire call-taking and dispatching duties, REMSA will add two additional dispatch workstations equipped with the necessary Computer Aided Dispatch (CAD) software, radio and telephonic equipment.

Other service agreements and operational response efficiencies between the two agencies could be made possible and may provide additional benefits between the partners, once dispatch services are integrated. Billing services, and electronic patient care reporting are examples of services that are integrated into the dispatch

CAD, and could be enhanced through a dispatch services agreement, as well as more coordinated responses and resource sharing.

A presentation was provided to the TMFR Board of Directors on April 6th, to present information regarding the current state of dispatch for TMFR provided by WCSO. During that presentation, it was communicated that REMSA was a possible agency that could be contracted to provide dispatch services to TMFR. After hearing the presentation, the Fire Board directed TMFR to continue to pursue alternate dispatch options, which includes continued exploration for a services agreement with REMSA.

REMSA Communications

REMSA's Emergency Communications Center (ECC) has been a trusted provider of medical dispatch services for emergency 911 call-taking, dispatching, mass casualty incident management and medical helicopter aviation communications since



1986. REMSA is the only Accredited Center of Excellence (ACE) in Washoe County through the International Academies of Emergency Dispatch (IAED), the industry “gold standard” for emergency call-taking which requires through third-party evaluation of call-taking procedures and quality assurance and improvement.

The REMSA ECC is technologically advanced, up-to-date and utilizes tools not available at any other dispatch center in the region. Automatic Vehicle Location (AVL) for real-time response vehicle locations; First Watch bio and incident surveillance; Mobile Area Routing and Vehicle Location Information System (MARVLIS) software that provides real-time predictive analysis for probable locations of life threatening emergencies, based on historical call data; Carbyne (coming soon), a next generation 911 solution that allows for advanced, real-time

caller location accuracy, video medical assessments of patients by clinical dispatchers and scene hazards/incident details, and silent chat functionality provide real-time situational awareness unparalleled in the region.

Additionally, REMSA's ECC is the only dispatch center in the region with medically trained Communications Specialists (Emergency Medical Technicians) for emergency 911 call processing. REMSA's ECC is also one of only two ACE dispatch centers in the nation that employs Registered Nurses (RNs) that performs secondary medical triage and health care navigation for low-acuity callers who may not require an ambulance or emergency response.

REMSA maintains a back-up ECC in an undisclosed location that serves as a site for continuity of operations in the event REMSA's primary dispatch site is compromised. This continuity site is tested and drilled for functionality regularly as required by REMSA's Franchise agreement. Additionally, REMSA maintains a Mobile Operations Center (MOC) that can be used as a mobile dispatch center, although with decreased functionality, in the event of a catastrophic failure of communications.

Assessment

Personnel

Additional personnel will be required to ensure staffing levels are appropriate to manage the additional call-taking and radio control operations for fire related emergencies. A minimum of six additional personnel working 12 hour shift is



recommended and will provide for two personnel on each day and one at night (may vary depending on actual incident volume), 24-hours per day, 7-days per week. Total cost per Communications Specialist (CS) with pay and benefits is ~\$85k annually. Additionally, REMSA recommends one half-time Quality Assurance Specialist (QAS) for Fire call-taking review and staff training for quality improvement.

A 10% administrative fee will be assessed and included into the cost to provide services.

Annual increase in personnel costs is anticipated at 2%/yr.

Budget:

$$\$85,000 \times 6 \text{ (CS)} = \$510,000$$

$$\$85,000 \times 0.5 \text{ (QAS)} = \$42,500$$

$$+ 10\% \text{ Admin. Fee} = \$55,250$$

$$\text{Total} = \$607,750$$

Call –taking and Dispatch Procedures

REMSA will use the IAED EFD protocols and Fire ProQA software to accommodate caller interrogation. Call-handling procedures will accommodate the additional call-taking discipline into the REMSA dispatch center. All Communications Specialist (CS) personnel will be trained and proficient in both EMD and EFD caller interrogation and Fire and EMS dispatching. No matter which call-taker picks up the telephone, they will be able to properly process the calls. This expands the ability to manage multiple Fire and/or EMS incidents at one time.

Once the incident reaches the dispatch queue, the Dispatcher/System Status Manager (SSM) will assign the appropriate first due Ambulance and Fire Apparatus, and assign a control channel. If the call is an EMS incident, the control channel will be a crossed patched from an 800MHz talk group (EX: REMSA 1 or REMSA 2) to a REMSA Med Channel (EX: MED10). If the incident is a Fire incident, the Dispatcher will assign the appropriate first due fire apparatus and ambulance (if required) to the incident and assign the apparatus to the appropriate fire command channel. A dedicated Radio Control Operator (RCO) will be assigned to the incident for further dedicated radio communications with the Incident Commander.

Budget:

REMSA Charges = \$0

Fire Dispatch Training

Personnel will be hired within 3 weeks of plan execution and will be placed immediately into training. EMD and EFD certification is expected to take one week per discipline, plus an additional week of company orientation.

Communications Specialist (CS) training may take up to six months, however, existing REMSA CS staff are medically trained as EMTs or Paramedics and seasoned with area geography and response plans. Existing staff members will be

trained first with new dispatch personnel backfilling into the staffing schedule. Emergency Fire Dispatch (EFD) call-taking training and certification from the International Academies of Emergency Dispatch (IAED) would be required of all current and new Communications Specialists in the REMSA dispatch center. Accreditation for EFD would be sought after to ensure call-taking proficiency at the highest level. Radio Control Operations and call handling procedures will ensure Fire incidents are appropriately managed with a dedicated Radio Control Operator (RCO) during working fire incidents. Additionally, response planning and apparatus assignments would be determined by TMFR. An assigned Fire Officer liaison to dispatch is recommended to ensure proper maintenance of response plans and apparatus assignments.

Budget:

~~\$30/hr X 32hrs X 30FTEs= \$28,800~~ Cost waived by REMSA

Workstations



Two additional workstations will be added to the REMSA ECC to accommodate the additional workload and tasks associated with the addition of TMFR. These workstations will be ergonomic, sit-stand consoles of similar type and style to the current consoles in REMSA's

dispatch center and equipped with wireless headsets and call lights. Chairs appropriate for 24-hour usage will also be added to ensure appropriate ergonomic seating can be achieved for all body types of personnel.

Budget:

\$1,300 X 2 (Chairs) = \$2,600

\$15,000 X 2 (workstations) = \$30,000

~~Total = \$32,600~~ Cost Waived by REMSA

CAD Software

REMSA currently uses the TriTEch Inform Computer Aided Dispatch (CAD) system. CAD software licensing, agency integrations for Fire Records Management Systems (RMS), station alerting/paging, response plans integration, Mobile CAD licensing and integration and the Fire First Due incident management system can all be integrated into the REMSA CAD. The CAD is up-to-date with the current software version and currently integrates automatic vehicle location (AVL), Mobile Area Routing and Vehicle Location Information System (MARVLIS), call-taking software (ProQA), PulsePoint and others. The addition of providing services to TMFR would require an additional CAD agency and two additional CAD licenses.

Budget:

~~\$20,000 X 2 (CAD licenses) = \$40,000~~ Cost Waived by REMSA

Separate agency CAD integration (one time) = ~\$40,000

\$1,000 X 37 Mobile CAD Licenses = \$37,000

+ 20% annual maintenance and support = \$8,000

Total = \$85,000 (First Year)

Total = \$8,000 per year after first year

Call-taking Software - Fire ProQA

REMSA will obtain licensing for use of the Emergency Fire Dispatch (EFD) protocols from the International Academy of Emergency Dispatch (IAED). "The Fire Priority Dispatch System (FPDS®) equips emergency dispatchers to handle a

wide range of cataclysmic events, from structure and brush fires to backcountry distress and sinking vehicles. The solution makes it possible to consistently send the right people and equipment to the scene—with the right information—and provide lifesaving support when necessary” (IAED, 2020). Training, ongoing software support, Quality Assurance (QA) costs and accreditation fees are included in the budget costs below.

Budget:

Fire ProQA = \$149,020 (year one)

License Renewal, Service & Support = \$8,625 (annual ongoing)

Telephonic Equipment

REMSA currently uses the Intrado Power 911 Voice over Internet Protocol (VOIP) telephone system. This telephone system allows for Enhanced 911 Automatic Number Indicator (ANI) and Automatic Location Indicator (ALI) information population for landline 911 telephone numbers and Phase two cellular GPS location. Two additional telephonic consoles will be required for the TMFR dispatch services.

Budget:

\$1,500 X 2 Intrado Power 911 telephonic system = \$3,000/month (\$36,000 annually)

Total = \$36,000 annual

Radios

REMSA’s dispatch center operates on their UHF Med frequencies and operates two talk groups on the 800MHz Public Safety Radio System, crossed patched to REMSA’s UHF Medical frequencies. TMFR operates on both the 800MHz system and VHF frequencies for expanding wildland fire incidents. Technical advice reveals a relatively low level of complexity and moderate cost would be required to fully integrate the 800MHz and VHF system operations into REMSA’s dispatch center. Technical personnel from the Washoe County Technology Services have advised REMSA to purchase the Harris Symphony Consoles with one of three options to establish data connections. Option one is to build a long-

haul and a short-haul microwave system (most expensive). Option two is to establish a fiber connection along with a microwave connection (moderate expense). Option three is to lease data lines (least expensive option). The recommendation is to establish leased data lines for a quicker, more cost effective implementation. If future redundancies are desires, those can be established later. If delays in implementation occur, they will likely occur in the availability and shipping of the equipment.

Budget:

$\$101,754 \times 3$ (radio consoles) = \$305,261

Leased Line Data Circuits = \$9,000

WCRCs Labor = \$65.00/hr X 40 hrs = \$2,600

Total = \$316,861(year one)

Reoccurring Data Lease Cost = \$18,000 (annual)

REMSA Charges = \$0

Additional CAD Integrations

REMSA will facilitate any additional CAD data integrations as requested by TMFR. Current integrations identified by TMFR include: Fire Records Management Systems (RMS), Electronic Patient Care Reports (EPCR), First Due pre-planning and incident management software.

Budget:

Estimated vendor cost approx. \$100,000 (year one)

REMSA Charges = \$0

Maps

REMSA's current maps will need to be upgrade to accommodate the parcel details, hydrant locations, structure types, and other information need for fire response. REMSA will integrate the Washoe County GIS maps to ensure appropriate information is available for fire response. Preliminary discussion with Washoe County GIS reveal the ability to integrate Washoe County map layers and aerial

imagery into the REMSA CAD system. Further discussions will be needed to determine cost and timeline.

Budget:

Unknown at this time

REMSA Charges = \$0

Station Paging/alerts

TMFR currently operates a Zetron station paging for 11 TMFR paid stations. CAD paging to 6 volunteer stations and 2 Washoe County Fire Suppression station (19 total). Technical staff has advised to move the Zetron server to either the REMSA campus server room or the Truckee Meadows operations building. The server can then be connected to the REMSA CAD by way of a listener for station paging/alert functions.

Budget:

Unknown at this time

REMSA Charges = \$0

Proposed REMSA Charges

Item	Description	Initial Cost	Ongoing Cost
Personnel	6 FTEs	\$607,750	+ 2% year over year \$657,848 (yr. five)
CAD Software and Mobile Licensing	Addition of agency and 37 Mobile	\$85,000	\$8,000
Fire ProQA Call-Taking	Licensing and Certification	\$149,020	\$8,625
911 Telephone Equipment	2 Additional Workstations	\$36,000	\$36,000
Total Year One		\$877,770	
Total Ongoing			\$710,473 (yr. 5)

Score Card

Function	Objective	Timeline	Budget
1. Staffing	1.1 Hire six CS FTEs	1.1 3 weeks	\$607,750
2. Training	2.1 Fire Incident Mgt. Training	2.1 3 weeks to 6 months	\$0
3. Space	3.1 Two sit-stand workstations	3.1 3 weeks	\$0
4. CAD	4.1 Add additional CAD agency license 4.2 Add Mobile Cad for 37 vehicles	4.1 8 weeks 4.2 8 weeks	\$85,000
5. Call-taking	5.1 Obtain 10 EFD licenses 5.2 Staff training and certification	5.2 6 weeks 5.2 Varies	\$140,020
6. CAD Software Integrations	6.1 Integrate Fire RMS 6.2 Integrate EPCR 6.3 Integrate First Due	6.1 3 months 6.2 3 months 6.3 3 months	\$ Unknown – depending on vendors
7. Telephonic Equipment	7.1 Install two additional Intrado telephone consoles/equipment	7.1 3 weeks	\$36,000
8. Maps	8.1 Integrate County GIS Maps	8.1 Unknown at this time	\$ Unknown
9. Station Paging/Alerts	9.1 Transfer Alerting to REMSA CAD	9.13 weeks	\$ Unknown
10. Radios	10.1 Integrate 800MHz and VHF radio systems into REMSA's dispatch center	10.1 Dependent on equipment availability	\$317,000