



# GRAND COUNTY COUNCIL SPECIAL MEETING

Grand County Council Chambers  
125 East Center Street, Moab, Utah

## AGENDA

**Tuesday, August 30, 2016**

**9:00 a.m.**

- Call to Order**
- Presentations**
  - A. Presentation of Assessment and Recommendations for Grand County Emergency Medical Services (Aaron Reinert, Partner Safe Tech Solutions)
- Adjourn**

*Closed Session(s) if necessary*

At the Grand County Council meetings/hearings any citizen, property owner, or public official may be heard on any agenda subject. The number of persons heard and the time allowed each may be limited at the sole discretion of the Chair. On matters set for public hearings there is a three-minute time limit per person to allow maximum public participation. All persons, upon being recognized by the Chair, shall advance to the podium, state their full name and address, whom they represent, and their subject matter. No person shall interrupt legislative proceedings.

**NOTICE OF SPECIAL ACCOMMODATION DURING PUBLIC MEETINGS.** In compliance with the Americans with Disabilities Act, individuals with special needs requests wishing to attend County Council meetings are encouraged to contact the County two (2) business days in advance of these events. Specific accommodations necessary to allow participation of disabled persons will be provided to the maximum extent possible. T.D.D. (Telecommunication Device for the Deaf) calls can be answered at: (435) 259-1346. Individuals with speech and/or hearing impairments may also call the Relay Utah by dialing 711. Spanish Relay Utah: 1 (888) 346-3162

Requests for inclusion on an agenda and supporting documentation must be received by 5:00 PM on the Wednesday prior to a regular Council Meeting and forty-eight (48) hours prior to any Special Council Meeting. Information relative to these meetings/hearings may be obtained at the Grand County Council's Office, 125 East Center Street, Moab, Utah; (435) 259-1346.

It is hereby the policy of Grand County that elected and appointed representatives, staff and members of Grand County Council may participate in meetings through electronic means. Any form of telecommunication may be used, as long as it allows for real time interaction in the way of discussions, questions and answers, and voting.

A Council agenda packet is available at the local Library, 257. East Center Street, Moab, Utah, (435) 259-1111 at least 24 hours in advance of the meeting.

**AGENDA SUMMARY**  
**GRAND COUNTY COUNCIL MEETING**  
**AUGUST 30, 2016**

Agenda Item: A

<b>TITLE:</b>	Presentation of Assessment and Recommendations for Grand County Emergency Medical Services
<b>FISCAL IMPACT:</b>	None
<b>PRESENTER(S):</b>	Aarron Reinert, Partner Safe Tech Solutions

**Prepared By:**

Andy Smith  
Director  
Grand County EMS

**FOR OFFICE USE ONLY:**

**Attorney Review:**

N/A

**RECOMMENDATION:**

None needed

**BACKGROUND:**

During the 2015 budget meetings the EMS department expressed the need to have a full department assessment done by an outside agency. The Department leadership is concerned about the long term sustainability and viability of the department. Bids were solicited according to the county purchasing policy. And Safe Tech Solutions was chosen to perform the assessment. Today Safe Tech will be presenting their preliminary findings and discussing changes that need to be made.

**ATTACHMENT(S):**

1. RFP
2. Safe Tech Response to RFP



GRAND COUNTY REQUEST FOR PROPOSALS (RFP) FOR  
Emergency Medical Services Department Assessment

February 22, 2016

Proposals are due by 5:00 p.m. on Monday, March 28, 2016

SEND TWO (2) COPIES OF THE PROPOSAL TO:

Clerk/Auditor's Office  
Diana Carroll, Clerk/Auditor  
125 E. Center Street  
Moab, UT 84532  
Phone: 435-259-1322  
Fax: 435-259-2959  
Email: [dcarroll@grandcountyutah.net](mailto:dcarroll@grandcountyutah.net)

SEND INQUIRIES Grand County EMS  
Andy Smith, EMS Director 125 E. Center Street Moab, UT 84532  
Phone: 435-259-1301 Email: [asmith@grandcountyutah.net](mailto:asmith@grandcountyutah.net)

IMPORTANT NOTICE TO ALL RESPONDENTS: Grand County reserves the right to: disqualify incomplete proposals, waive minor defects as it deems applicable in the written proposals, request additional information from any respondent, change or modify the scope of the project at any time without penalty, negotiate terms with one or more of the respondents, reject any or all proposals without penalty, and take any steps necessary to act in the County's best interest. The County also reserves the unilateral right to order, in writing, changes in the work within the scope of the contract and changes in the time of performance of the contract that do not alter the scope of the contract work. Proposals will not be considered for award if received by Grand County after the official closing date and time

# **Grand County Emergency Medical Services**

## **Department Assessment Request for Proposal**

### **PURPOSE**

Grand County Emergency Medical Services is requesting competitive negotiable proposals for professional EMS assessment service. This assessment will review the current level of EMS services being offered as well as address future needs.

### **BACKGROUND**

Grand County EMS is a third service ALS provider in the southeastern part of Utah. Grand County's primary response area encompasses over 3,600 square miles of some of the most scenic and remote areas of Utah. GCEMS currently operates with a full time director, assistant director, operations supervisor, and 30 paid call staff. The citizen base population for the county is about 9,500 with over half residing within the city of Moab. Grand County EMS also serves the needs of a very large visitor population of around 2.5 million per year. Moab and its surrounding area is known for its recreational opportunities. It is also known as a mecca for high adrenaline sports such as base jumping, rock climbing, canyoneering, white water rafting and others.

Grand County Emergency Medical Services leadership is concerned for the sustainability of the service. With a 20% increase in calls over the last five year and a 53% increase in the last decade, the service has developing issues with the demand visitors to our area place on the system. GCEMS responds to over a 1,000 calls annually, of which 40% are for visitors to the County. GCEMS has been self-funded relying on patient transports for the funds to run this essential service. Over the last few years increasing costs and lower income have caused the service to consider other options for funding. This along with ever increasing requirements for certification, the second longest call duration in the state, very seasonal populations, and the cost of living in the area, has contributed to difficulty in recruitment and retention of staff for GCEMS.

Grand County EMS has also had a revolving door of leadership over the last 15 years, with most department directors staying less than 2 years. Long term growth and development have been stunted due to the extreme demands placed on the department and its leadership.

## **SCOPE OF SERVICES**

The successful vendor shall provide the following:

1. Review the organizational structure and make-up of Grand County Emergency Medical Services, how it relates to the County government along with its authority and purpose. Make recommendations for future changes as needs are evaluated and documented.
2. Analysis of level, allocation and utilization of personnel and positions.
3. Assessment of policies, procedures, operational practices and training programs to assure and improve personnel safety, competency, and retention practices.
4. Review current department culture and make recommendations for improvement.
5. Review and provide recommendations for staff recruitment and retention.
6. Review of governing Federal, State and Local laws for compliance, and make recommendations for any local ordinances that should be put into place.
7. Assess cost effectiveness of current operations and identify areas where cost savings, cost avoidance and/or improved productivity and service can be accomplished, to include options for sustainable funding of the service, and a review of potential revenue streams.
8. Analysis of citizen access to emergency services and system reliability along with recommendation for improvements.
9. Assessment of relationship and coordination with key stake holders (Law Enforcement, Citizens, Hospitals, National Parks, etc..).
10. Evaluation of present public education programs and public relations efforts, providing recommendations for future options.
11. Analysis of physical facilities, apparatus and equipment in regards to serviceability and recommendations for future needs.
12. Provide a timeline for the assessment process as well as an overall expected time to deliver the final report.
13. Present final report, findings, and recommendations to the Grand County EMS leadership team, as well as to the Grand County Council.

If applicable please include any additional items in your RFP that you feel need to be covered.

## **SUBMISSION OF PROPOSAL**

**TIMELINE:** To be considered, 2 (two) sealed copies of the proposal marked "Emergency Medical Services Assessment" shall be submitted to the County Clerk/Auditor, at 125 E. Center Street, Moab, UT 84532, no later than 5:00 p.m. on Monday, March 28<sup>th</sup>, 2016.

PROPOSAL OPENINGS: Proposals shall be opened by a representative from the Clerk Auditor's office and a witness in private on or after March 29<sup>th</sup>, 2016. The amount of each proposal, the number of respondents, and any other relevant information shall not be public until after the negotiation process has concluded.

INSTRUCTIONS FOR RESPONDING TO RFP: It is incumbent upon each respondent to carefully examine these specification, terms and conditions contained in this RFP. Any clarification or additional information shall be made in writing to the appropriate person called out on the cover page. When appropriate the County will respond through written means. If it becomes necessary to revise or amend any part of this RFP, notice will be given to all respondents who are registered when receiving this package. To register please send an email to [asmith@grandcountyutah.net](mailto:asmith@grandcountyutah.net) with contact information sufficient to forward any amendments. Respondent must acknowledge receipt of the amendment in their proposal. Each respondent should ensure that they have received all amendments to this RFP before submitting their proposal; please check the Grand county website at [www.grancontyutah.net](http://www.grancontyutah.net) for any amendments.

PROPOSAL: Two (2) copies of the information enumerated below are to be returned in response to this RFP. The proposals shall be sealed and marked "Emergency Medical Services Assessment". Information that shall be submitted includes:

1. Company resume including contact information.
2. Main contact person for proposal purposes and for business needs.
3. Reference information for the 4 pas and/or current clients of similar size and scope. This includes their name, telephone number and email of a contact person from that entity.
4. Business license and certification required to perform work.
5. Any unique suggestions or requirements.
6. FORM 1: Public Records Law
7. FORM 2: Cost Breakdowns- The Respondent must provide a proposal of the work to be completed and include the cost of the service.

## **SELECTION PROCESS**

SELECTION SCHEDULE: Each proposal will be reviewed by a selection committee that may include but is not limited to elected officials, County staff members, and invitees of the County. The committee will evaluate the written proposals and rank each proposal on the considerations noted in RFP. The committee may request the top Respondents to attend an interview and provide additional information to the committee.

The selection committee will endeavor to negotiate a contract with the successful firm. In the event that a mutually agreeable contract cannot be negotiated with the first firm, it is

anticipated that negotiations will begin with the next highest rated firm and so on until a mutually agreeable contract can be negotiated. The selection committee will forward a recommendation and draft contract to the County Council for awarding of the contract.

**PROPOSAL EVALUATION CRITERIA:** The selection of the successful Respondent will be based upon the following criteria:

1. Expertise in the field of EMS assessments.
  - a. Knowledge of the state and federal laws and regulations.
  - b. Knowledge of the healthcare industry.
  - c. Knowledge of rural healthcare services.
2. Customer relations
  - a. Previous client feedback on responsiveness and timeliness of firm.
  - b. How previous clients perceive the overall usefulness of report.
3. Compliance with and information provided in the RFP
4. Cost of service
5. Other areas as deemed appropriate by GCEMS

**REQUIREMENTS/STANDARDS GOVERNING RFP**

SCOPE: The following terms and conditions, including “Requirements/Standards Governing RFP” shall govern the submission of proposals. Any conflict with the terms and conditions contained in “Requirements/Standards Governing RFP” and any other part of the proposal shall be controlled by the stricter term or condition. The County reserves the right to reject any proposals, which takes exception to the terms or conditions in “Requirements/Standards Governing RFP” or any other part of this document.

COMPLETING PROPOSALS: Proposals must be submitted with the required forms herein and all forms must be completed in accordance with the instructions. Any and all corrections and/or erasures must be initialed and dated by the respondent. Each proposal must be manually signed in ink by an authorized respondent and all required information must be provided. Each respondent may submit only one (1) proposal. The contents of the proposal submitted by the successful respondent will become part of any contract awarded as a result of this request.

**CONFIDENTIALITY OF PROPOSAL INFORMATION:** Each proposal must be securely sealed to provide confidentiality of the proposal information prior to the proposal opening. The submitted proposal envelope must be prominently marked in the lower left hand corner “REQUEST FOR PROPOSAL and PROJECT TITLE” along with the proposal submission date and time. Failure to mark proposal envelopes as required is cause for proposal rejection as the County may not consider proposal improperly marked that are inadvertently opened as routine correspondence prior to the time and date set for the proposal submission.

All proposals become public information after the proposal opening and are available for inspection by the general public in accordance with the Government Records Management Act.

**REQUEST FOR INFORMATION:** Any request for clarification or additional information deemed necessary by any respondent to present a proper proposal shall be submitted in writing to Grand County Emergency Medical Services, 125 E. Center Street Moab, UT 84532. To be considered, any such request must be received in time to allow for the County sufficient time to prepare and disseminate a written response. When appropriate valid requests received in accordance with the foregoing will be responded to in writing from the County in the form of an addendum addressed to all prospective respondents.

**ADDENDUM:** All changes in connection with this request for proposals will be issued by the County’s in the form of a written addendum. Signed acknowledgment of receipt of each addendum should be submitted with the proposals response.

**TAX EXEMPT:** Grand County is exempt from federal and state taxes. DO NOT include taxes in the proposal.

**CONDITIONAL PROPOSALS:** Conditional proposals are subject to rejection in whole, or in part, at the sole discretion of Grand County.

**LATE PROPOSALS AND MODIFICATIONS OR WITHDRAWALS:** Proposals received after the date and time indicated on the cover sheet shall not be considered and shall be returned (unopened if sealed) if the respondent is identified on the proposal envelope. Proposals may be withdrawn or modified in writing prior to the proposal submission deadline. Proposals that are resubmitted or modified must be sealed and submitted to the County prior to the proposal submission deadline. After proposal opening no changes in proposal prices or other provisions of proposals prejudicial to the interest of the County or fair competition shall be permitted.

**PROPOSALS BINDING:** All proposals submitted shall be binding upon the respondent if accepted by Grand County within ninety (90) calendar days of the proposal submission date. Negligence upon the part of the respondent in preparing the proposal confers no right of withdrawal after the time fixed for the submission of proposals.

**NEGOTIATION:** The County reserves the right to negotiate any and all elements of this proposal.

**TIME LIMIT TO EXECUTE CONTRACT:** The respondent must successfully execute a contract within the specified time after the County's notification to enter into contract. If the respondent fails to execute a contract within the required time, award to that respondent may be withdrawn and award made to the next highest rated respondent.

**CODES AND REGULATIONS:** All deliverables and work within the scope of this request shall be completed by the respondent in conformance with all applicable codes and regulations.

**SAFETY:** All practices and goods furnished as a result of this request shall comply with the federal Occupational Safety and Health Act, as well as any pertinent federal, state and/or local safety or environment codes.

**NON-LIABILITY:** The respondent shall not be liable for delay or failure to deliver services when such delay or failure is the result of fire, flood, strike, act of God, act of government, act of an alien enemy or by any other circumstances which, in Grand County's opinion, is beyond the control of the respondent. Under such circumstances, however, Grand County may cancel the contract if such action is deemed to be in the best interest of the County.

**ASSIGNMENT OF CONTRACTUAL RIGHTS:** Successful respondent shall not assign, transfer, convey or otherwise dispose of any contractual rights derived from this quotation request or its right, title or interest in or to the same, or any part thereof, without the previous written consent of Grand County.

**INVOICE:** Invoices shall be prepared and submitted in duplicate to Grand County Clerk Auditor's Office, 125 E. Center Street Moab, UT 84532.

**COLLUSIVE PROPOSALS:** The respondent certifies, by submission of a proposal, that their proposal is made without any previous understanding, agreement or connection with any person, firm or corporation making a proposal for the same products or services with prior knowledge of competitive prices, and is in all respects fair, without outside control, collusion, fraud or otherwise illegal action. Any evidence of collusion among respondents and prospective respondents acting to illegally restrain freedom of competition by agreement to offer a fixed price, or otherwise, will render the proposals of such respondent void.

**CONFLICT OF INTEREST:** The award hereunder is subject to provisions of Utah State Statutes and Grand County ordinances and policies. All respondents must disclose with their proposal the name of any officer, director, or agent who is also an employee of Grand County, Utah. Further, all respondents must disclose the name of any Grand County employee who owns, directly or indirectly, any interest in the respondent's firm or any of its branches.

No person involved in making the award decisions may have personal investments in any business entity that will create a substantial conflict between their private interests and their public duties. Any person involved in making procurement decisions is guilty of a felony if the person asks, receives, or offers to receive any emolument, gratuity, contribution, loan, or reward, or any promise thereof, either for the person's own use or the use of benefit of any other person or organization from any person or organization interested in selling to the County.

**DISCLAIMER OF LIABILITY:** Grand County or any of its agencies will not hold harmless or indemnify any respondent for any liability whatsoever.

**HOLD HARMLESS:** The respondent agrees to protect, defend, indemnify, and hold the Grand County, and its officers, council members, commissions, employees and agents free and harmless from and against any and all losses, penalties, damages, settlements, costs, charges, professional fees or other expenses or liabilities of every kind and character resulting from the error, omission, or negligent act of the respondent, its agents, employees or representatives, in the performance of the respondent duties under any agreement resulting from award of this proposal. The respondent further shall agree to investigate, handle, respond to, provide defenses for and defend any such claims, etc., even if such claim is groundless, false or fraudulent.

**ANTI-DISCRIMINATION CLAUSE:** No respondent on this proposal request shall in any way, directly or indirectly, discriminate against any person because of age, race, color, handicap, sex, national origin, or religious creed.

**ACCURACY OF PROPOSAL:** Each proposal is publicly opened and is made part of the public record of Grand County's, Clerk Auditor's Office. Therefore, it is necessary that any and all information presented is accurate and will be that by which the respondent will complete the contract. If there is a discrepancy between the unit price and extended total, the unit price will prevail. If there is a discrepancy between the estimated quantities of work in a contract and actual quantities, the estimated quantities shall prevail.

**PUBLIC RECORD:** Grand County is governed by the Governmental Record Management Act (except from exemptions allowed by state law). Information or data pertinent to the respondent's proposal and of a confidential nature must be bound and placed in a separate sealed envelope and included with each copy of the respondent's proposal. Grand County requests that a minimum amount of confidential material be used by the respondent in preparing responses to the proposal. Materials consisting merely of general descriptive information will not be considered confidential under any circumstances.

**SUBSTITUTIONS:** No substitutions will be accepted for goods proposed after award, without the prior approval of Grand County. Any substitutions allowed will be supplied at no more than the contract proposal prices.

**DISCOUNTS:** Any and all discounts must be incorporated as a reduction in the proposal price and not shown separately. The price as shown on the proposal shall be the price used in determining award or awards.

**INCURRED EXPENSES:** This proposal does not commit Grand County to make an award, nor shall the County be responsible for any cost or expenses which may be incurred by any respondent in preparing and submitting any offer, or expenses incurred by any respondent prior to the execution of a purchase order or contract agreement.

**SILENCE OF SPECIFICATIONS:** The apparent silence of these specifications or any supplemental specifications as to details or the omission from same of any detailed description concerning any point shall be regarded as meaning that only the best commercial practices are to prevail and that only materials of first quality and correct type, size and design are to be used. All workmanship shall be first quality. All interpretations of specifications shall be made upon the basis of this statement. All specifications shall seek to promote overall economy and best use for the purpose intended and encourage competition in satisfying the County's needs.

**LOCAL VENDORS.** Where practical and reasonable, and within the scope of this article, Utah products and local vendors shall be given preference. Specifically, County Departments are encouraged to determine whether or not local merchants can meet prices quoted by out-of-county vendors. The purchasing agent is not required to purchase goods at the lowest price if there is an offsetting or added expense for travel, shipping, or other inconvenience associated with as out-of-County purchase.

**NO WAIVER OF FUTURE RIGHTS:** No provision in this document or in the respondent's proposal shall be construed, expressly or by implication, as a waiver by Grand County of any existent or future right and/or remedy available by law in the event of any claim or default or breach of contract.

**BOND AMOUNTS.** Upon the award of all construction contracts, the following bonds or security shall be delivered to the County: (a) A performance bond in an amount equal to 100% of the contract price; or (b) A payment bond in an amount equal to 100% of the contract price to serve as protection of all persons or companies supplying labor and/or material to the contractor or its subcontractors for the performance of the contract.

**RFP DISCLAIMER.** Grand County reserves the right to disqualify incomplete proposals, waive minor defects, as it deems applicable, in the written proposals, to request additional

information from any respondent, change or modify the scope of the project at any time, without any penalty, negotiate terms with one or more of the respondents, reject any or all proposals, without a penalty, and take any steps necessary to act in the County's best interest. The County also reserves the unilateral right to order, in writing, changes in the work within the scope of the contract and changes in the time of performance of the contract that do not alter the scope of the contract work.

**SUSPENSION & TERMINATION.** Through written notification the County may order an immediate suspension of work with or without cause. The contract may be terminated in accordance to the provision contained in the contract.

FORM 1

Public Records Law

THIS FORM MUST BE COMPLETED AND RETURNED WITH YOUR PROPOSAL

Upon selection of the award, submittals become “public records” and shall be subject to public disclosure consistent with the Governmental Records Management Act. Those who submit must invoke the exemptions to disclosure provided by law in the response to the solicitation, and must identify the data or other materials to be protected, and must state the reasons why such exclusion from public disclosure is necessary.

If you submit information exempt from public disclosure, you must identify with specificity which page(s)/paragraph(s) of your proposal package is (are) exempt from the Governmental Records Management Act and identify the specific exemption section that applies to each. The protected information must be submitted to the County in a separate envelope marked accordingly. By submitting an offer in response to this solicitation, you specifically agree to defend and indemnify Grand County, County Council, and its officers, employees and agents, and hold them harmless from any claim or liability and defend any action brought against them for their refusal to disclose copyrighted material, trade secrets or other proprietary information to any person making a request therefore.

Company Name: \_\_\_\_\_

Authorized representative (printed): \_\_\_\_\_

Authorized representative (signature): \_\_\_\_\_

Date: \_\_\_\_\_

FORM 2

Proposal Breakdowns

THIS FORM MUST BE COMPLETED AND RETURNED WITH YOUR PROPOSAL

I, \_\_\_\_\_ (Printed Name)

on behalf of \_\_\_\_\_ (Print Company Name), provide Grand County with this proposal and agree to comply with Requirements/Standards Governing RFP.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Emergency Medical Services Department Assessment.

1. All services described in this RFP \$ \_\_\_\_\_

2. Additional Services \$ \_\_\_\_\_

Subtotal A (Not to Exceed Amount) \$ \_\_\_\_\_

Main total (Not to Exceed Amount) \$ \_\_\_\_\_

Project Proposal

*For*



Assessment of Emergency Medical Services  
In Grand County, Utah

by



*Contact:*

Aarron Reinert, Partner  
SafeTech Solutions, LLP  
[\(651\) 248-4239](tel:6512484239)

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## Introduction

Grand County EMS provides Basic and Advanced Life Support, interfacility transport and rescue services to some 9,225 residents of Grand County as well the northern part of San Juan County, Utah. Just over half of the county population lives in the city of Moab, with much smaller populations in the towns of Castle Valley and Thompson, 17 and 35 miles from Moab, respectively. An additional 2,134 residents are forecasted to live in Grand County by 2030, a 22 percent increase over the 2010 estimated population.

Grand County EMS, along with the National Park Service and Grand County Search and Rescue, responds to medical emergencies in two national parks, a state park, and a variety of backcountry recreational areas, on 6,000 miles of roads and trails, and along a 70-mile stretch of Interstate 70, the main artery between Grand Junction, Colorado, and all points west. More than three million vehicles cross the I-70 Utah/Colorado border annually. The provision of EMS extends not only to residents, but also to some two million visitors and tourists each year.

Grand County EMS responded to 960 calls in 2013, and is on target to reach 1,000 calls this year. Of these, 60 percent were for county residents, forty percent for visitors, increasing Grand County EMS' call volume by as much as 400 calls per year. Tourists account for the fact that Grand County EMS maintains the third highest call volume per capita in the state of Utah, with 101.8 calls per 1,000 residents, compared to 40.3 to 114.6 calls per 1,000 people in urban areas of the state.

Grand County's rural and remote terrain also account for higher-than-average patient contact times. Getting to scenes in rural areas is frequently a challenge, requiring off-road driving and/or EMTs to hike several miles on foot to reach a patient. Transport times from the scene to Moab Regional Hospital, a Level 4 Trauma Center, average 62 minutes. [Average transport time in the state is 20 minutes.] Higher levels of care in Provo or Salt Lake require EMTs to drive between 112 and 240 miles one way.

With an annual budget of only \$700,000, Grand County EMS relies heavily on volunteers to stay afloat. Currently, it retains a roster of 25 volunteer EMTs and paramedics, led by 2.5 paid administrative staff. Six certified EMRs respond as volunteers within 10 miles of Castle Valley.

Ambulance crews are made up of three EMTs per rig, with at least one member certified as an AEMT or higher. These crews must remain within five minutes of an ambulance station during shift hours. In addition, Grand County EMS staffs a quick response vehicle 24/7, with a captain who responds directly to the scene of any life-threatening emergency or multi-casualty incident and recruits back-up crews.

Grand County EMS maintains a fleet of six ambulances, including two that are considered "off-road" ambulances, with the ability to navigate unpaved backcountry trails. EMRs in Castle Valley use an older, non-transport ambulance to take supplies to the scene and provide shelter for patients until a transport ambulance arrives.

Grand County EMS uses a staffing schedule that allows for multiple, simultaneous call-outs. A recent call report showed that approximately 25 percent of calls were covered by second-, third- and fourth-out ambulances. All six ambulances are out on calls simultaneously approximately three times per year.

**Grand County EMS administrators are concerned about their ability to sustain a reliable EMS service into the future.** This concern stems primarily from the recognition that Grand County EMS cannot continue to operate without volunteer labor subsidizing its operation.

Grand County is not alone. Most volunteer-based EMS systems across the country face similar challenges. Compared to the early days of EMS, recruiting and keeping volunteers is no longer simple or easy. Socioeconomic conditions limit rural people's time and availability to volunteer. Current volunteers are aging and are not being replaced by enough younger people. Young people do not view volunteering in the same way as their parents or grandparents did. Attitudes about community commitment and volunteering are changing (especially in young people).

Demands on EMS services has increased in terms of public expectations, changing demographics, expenses, transport distances, and disaster preparedness. More is being expected of rural EMS as healthcare consolidates and trauma, cardiac and stroke care becomes regionalized in specialty care centers (meaning longer transports and more transfers). The cost of running an ambulance service is increasing faster than funding avenues. The need to find new sources of rural EMS funding continues to be a challenge.

Expectations for rural ambulance service clinical expertise, quality, reporting and performance are increasing. Likewise, leading and managing rural ambulance services has become more complicated and time-consuming. The old, uncomplicated, well-staffed volunteer ambulance service is quickly becoming a thing of the past.

In Grand County, the problem of recruiting and keeping volunteer EMTs is exacerbated by the unique physical challenges of the job, as well as the high demand for EMS caused by tourism. As is clear from call volume statistics, tourists place a burden on Grand County EMS that extends well beyond that which would normally exist in a community of fewer than 10,000 residents. In addition, rural terrain and long transport times further strain Grand County EMS' ability to meet the needs of its growing population.

**For all of these reasons, Grand County EMS administrators are seeking a comprehensive assessment of Grand County EMS to provide county leaders with a better understanding of the strengths and weaknesses of the EMS system. An assessment also would give county leaders information and insights to plan for and implement improvements that would result in a sustainable EMS system for the future.**

SafeTech Solutions has a deep and well-respected track record of conducting rural EMS assessments on behalf of governments and other organizations. This track record includes successful assessments of rural EMS services and systems in seven states over the last 10

years. It also includes working with more than 1,200 EMS leaders and managers, many of whom work for rural EMS agencies, in SafeTech Solutions' EMS Leadership Academy, which has been provided specialized EMS leadership education throughout the United States since 2009.

In addition to having an impressive track record in rural EMS assessment and education, SafeTech Solutions stands out because of its unique six-step assessment methodology that involves the entire community in creating a sustainable EMS system that matches local wants and needs.

SafeTech Solutions builds its assessments on a deep understanding of how change is made in rural EMS systems and communities. This understanding was built over years of experience and observation and is based on the following principles:

- Rural EMS is not small urban EMS;
- Most rural EMS developed locally and organically without a mandate, without significant funding and with large subsidies provided by donated labor;
- The full cost of providing EMS (including the value of donated labor) must be ascertained for long-term sustainability planning;
- Leaders and planners must understand and work with how the local community views EMS (i.e, Is EMS seen as an essential public service?);
- In many rural communities, it is unclear who is ultimately responsible for providing and funding EMS;
- A rural community's history of providing EMS must be honored;
- Change must be facilitated from within – not imposed from without;
- Developing local EMS leaders is one of the most powerful ways to facilitate change from within; and
- Local stakeholders must participate in developing solutions.

SafeTech Solutions provides more than simple EMS assessments and reports. We firmly believe that assessment is only the first step toward creating sustainable rural EMS systems. Assessment and reporting do not equal change in EMS. Change relies on listening deeply to local challenges; creating trust with local people; understanding the unique socioeconomic, geographic demographic needs of the local community; and helping local communities identify and take steps toward addressing challenges of workforce shortages and financial needs in a way that honors and respects local traditions and history.

## **I. Assessment Proposal**

SafeTech Solutions will conduct the assessment in Grand County using a unique, carefully developed six-step process that it has found to be effective in numerous rural settings. Effective assessments lead to positive action and change. The entire assessment process takes about three months.

### **Step 1. Initial Contact**

SafeTech Solutions will begin its assessment by talking via conference call with Grand County EMS leaders to set up and discuss the assessment process. The goals of this step are to:

- Discuss the assessment process;
- Develop trust between the consulting team and Grand County EMS;
- Identify challenges, needs and unique characteristics of Grand County EMS;
- Create a mutually agreed-upon work plan and timeline; and
- Identify key stakeholders.

### **Step 2. Data Collection**

Step Two begins with a request for a variety of written materials, information and documents to obtain objective data about Grand County EMS. A complete list of the requested materials can be found below

At the same time, SafeTech Solutions begins its own data collection process, obtaining a variety of written materials to assist in the assessment, such as state and local regulations, laws and ordinances. SafeTech Solutions conducts in-depth research into census data, demographics, local socioeconomics, industry, geography, highways, neighboring service areas, local medical and healthcare services and facilities, unique impact factors such as parks, mining, prisons, tourism and special events, and service location vis-a-vis stroke, cardiac and trauma centers (some of this information will be gleaned from the state Department of Health EMS and Preparedness in Utah Biennial Report.). Additional data mining may be done using the state EMS data system (POLARIS).

### **Step 3. Site Visit**

A team or one or two SafeTech Solutions' consultants will visit the county to collect subjective data. The site visit will include a tour of the community and EMS facilities, and in-depth interviews with key stakeholders, including but not limited to EMS agency members, agency leadership, public safety, PSAP, fire departments, medical director, local and regional medical and healthcare representatives, elected officials, customers/patients and community stakeholders such as the school superintendent, local businesspeople, and public health officials. The goal of the site visit is to ascertain Grand County EMS' particular local traditions, history, politics and other mitigating factors that will impact the design and implementation of the EMS system going forward.

### **Step 4. Analysis**

Armed with subjective and objective data collected in the previous steps, the SafeTech Solutions team analyzes the data and considers Grand County EMS' strengths and

weaknesses, sustainability, and need for change. SafeTech Solutions will assess the current capabilities, strengths, weaknesses, coverage gaps, and workforce shortfalls. The assessment will include data analysis using common quality and performance improvement benchmarks, indicators, and scoring formats. Based upon all of this input, SafeTech Solutions will begin to form recommendations for change and improvements that best fit the medical, economic, political, geographic, and demographic environment of Grand County.

#### **Step 5. Presentation of Recommendations**

SafeTech Solutions will return to Grand County to host an in-depth conversation with key EMS and county leaders and stakeholders to discuss findings and recommendations. The goal of this step is to work collaboratively with stakeholders to formulate a road map for change that can be effectively implemented by Grand County EMS.

#### **Step 6. Written Report**

Step Six consists of the development of SafeTech Solutions' final assessment in a written report. The report includes all of SafeTech Solutions' findings and recommendations, including a road map for change.

#### Assessment Components

SafeTech Solutions' assessment will address the following components and relevant sub-components within the current EMS delivery system:

**Organizational structure and system design**, to include: local authority structure, ordinances and integration with and support from other local healthcare and emergency response entities; human resources, including EMS leadership and administration and management practices; and local workforce, including the level of volunteerism and the potential for sustainment.

**System reliability**, to include: total demand for service upon the system by type, including historical demand and projected trends; a measurement of system response times; and the system's ability or inability to respond to current and future requests for service and the causative factors.

**Fiscal structure and stability** in accordance with standard business practice benchmarks, to include: current system finances; billing practices; and funding sources within the service area, including third-party payor mix within the service area and the relative need for subsidy. SafeTech Solutions will assist the local community in understanding the value in dollars of donated labor (volunteers), the full and total cost of providing EMS in the area, and the gap between current financial resources and what will be needed for long term sustainability.

**The delivery and quality of clinical care** and the use of quality improvement processes, to include: the current level of care authorized and provided based on the scopes of

practice established within the Utah EMS system; medical direction including the level of involvement and expertise of the local Medical Director; and education and training status. Because objective EMS clinical measures are limited within in Utah, SafeTech Solutions also will gather subjective measures from customers and healthcare providers served by the EMS system.

**Public education and outreach** to include: support and perception of the local community, including public access to the emergency response system; communication systems to include the EMS agency's ability to communicate with hospitals, local and state emergency management, air medical ambulances, emergency response agencies and the support and involvement of the local dispatch entity or public safety answering point (PSAP); integration and involvement with other components and activities of the comprehensive, statewide, emergency medical system, such as the trauma plan and program, or the cardiac or stroke patient programs, and the level of emergency preparedness of the system and its ability to respond to a disaster or public health emergency. SafeTech Solutions believes that community support is a prime indicator of people's willingness to support local EMS in terms of donated labor and funding going forward.

**Organizational Culture and Employee engagement** to include a study of the level to which employees in the organization are willing to do more than what is required and how these connections support or do not support the organizational path forward.

#### Records and Documentation

SafeTech will request the following records and documentation as part of the assessment process.

#### **Organizational documents**

- Organizational formation documents, including charters, bylaws
- Organizational chart
- Strategic plan
- Mutual aid agreements
- Service area map
- Staff meeting agendas (6 months)
- Board meeting minutes (6 months)
- Budget and financial summary (3 years)
- Documents demonstrating financial reserves (including record of debt)
- Billing and collections records

#### **Workforce documents**

- Staff/member roster and job descriptions for director, manager, supervisor, quality coordinator, training coordinator and field providers
- Medical Director job description and contract
- SOPs
- Employee handbook and policy manual

Policies related to defining what it means to be an active member in the organization  
Continuing education and training processes and records, as well as other documents  
pertaining to field provider skill and competence  
Field provider training documents  
Staff scheduling documents  
Employee injury data

**Call history and reliability**

Internal records of call and response history (3 years)  
PSAP data (if available)  
Response times, including reliability, chute time, scene time and total call time  
Quality documents demonstrating performance measures and compliance  
Quality manual - program and processes

**Vehicle documents**

Policies pertaining to vehicle inspection and equipment maintenance  
Vehicle maintenance practices  
Vehicle accident records

**Community perception**

Local media reports

Assessment Schedule

SafeTech Solutions, once contracted, estimates that it would take three months to complete its assessment. The schedule and deliverables will be mutually agreed upon by SafeTech Solutions, Grand County EMS and the Grand County Council.

## II. About SafeTech Solutions

SafeTech Solutions is a ten-year-old international consulting firm that provides:

- EMS system assessment, design and development
- Rural EMS expertise
- Facilitated planning
- Policy development
- EMS leadership development and training
- Quality system development
- Financial assessment and consulting

SafeTech Solutions' partners and consultants understand firsthand the challenges of EMS systems and especially rural EMS systems. They have served as supervisors, managers, educators, directors, executive directors and consultants, and they have helped to develop EMS nationally by serving on a variety of high-level federal projects and committees.

SafeTech Solutions has extensive experience studying rural EMS and has developed a unique and successful approach to helping organizations, communities and regions manage change.

Since 2004, SafeTech Solutions has continuously conducted rural EMS assessments across the United States, with much of its work located in rural parts of the Great Plains and Intermountain States. In each of these rural settings, SafeTech Solutions has provided the local community with a thorough and accurate understanding of its current EMS system, including but not limited to system design and delivery, response time reliability, fiscal structure and stability, clinical care and quality, staffing and public education and outreach.

SafeTech Solutions is always studying how to effectively become change agents in rural communities steeped in tradition, highly resistant to change, and rooted in local political issues and conflicts. What really makes SafeTech Solutions different is that at its core, we believe that to effectively work with rural communities, consultants must first build strong and trusted relationships with key stakeholders. These relationships begin with listening and flower into respect and trust that then enables SafeTech Solutions to make recommendations for change that are heard and embraced.

For example, SafeTech Solutions conducted an assessment of EMS in Carbon County, Wyoming, and provided guidance for the creation of a successful Joint Powers Authority to provide EMS in the county in which the ambulance services shared resources and collaborated under a single organizational structure called South Central Utah EMS.

In Pembina County, North Dakota, SafeTech Solutions conducted an assessment of four ambulance services and a Critical Access Hospital. The result was that we dramatically improved collaborations among the services, while a countywide EMS council increased efficiencies.

In Luce County, Michigan, a remote area of the Upper Peninsula, SafeTech Solutions assisted the ambulance service in moving from a club-like structure to a business model and from being a volunteer service to a sustainable combination volunteer-paid department.

In International Falls, Minnesota, SafeTech Solutions' assessment work led to the transition of an EMS service from predominantly volunteer Basic Life Support to a combination Advanced Life Support department.

SafeTech Solutions conducted an assessment of EMS in Bridgeport, Nebraska, where a confusing organizational structure within the city fire department was inhibiting the ability of the organization to address important operational and sustainability issues.

SafeTech Solutions evaluated the cooperation between four ambulance services and four first responder agencies in Cass County, North Dakota, assessing the value of sharing resources through a local county EMS association.

SafeTech Solutions' assessment and recommendations for Plattsmouth, Nebraska, led to significant changes in the leadership and structure of EMS in a growing community that has resulted in increasing response reliability and higher levels of clinical care.

Comprehensive assessment of EMS in Jones County, South Dakota, the least populated county in the state resulting in the ambulance service obtaining more community support and visibility, led to being off a hardship exemption, and to the creation of a community working group made of key stakeholders who are creating plans for long-term sustainable EMS.

In North Dakota, SafeTech Solutions conducted a statewide assessment of 134 ambulance services. This project, which was one of the most comprehensive assessments of rural EMS services conducted in the United States to date, examined the challenges of providing remote and rural EMS in rural areas where there is declining volunteerism and funding challenges. As part of the project, SafeTech Solutions provided recommendations for creating sustainable EMS systems across the state.

SafeTech Solutions continues to work with managers and leaders from rural EMS services from across the country through our EMS Leadership Academy providing support, guidance, and analysis of issues facing these rural ambulance services.

SafeTech Solutions' client list includes:

- North Dakota Department of Health Division of EMS and Trauma
- Connecticut Office of Rural Health
- South Dakota Office of Rural Health
- Wyoming Governor's Office
- Wisconsin Office of Rural Health
- Nebraska Department of Health and Human Services EMS and Trauma Program
- Pembina County EMS Council

- Michigan Center for Rural Health
- Minnesota Office of Rural Health
- California LEMSAs (county EMS authorities)
- Los Angeles County Department of Health Services Emergency Medical Services Agency
- Rural Health Solutions
- Montana Department of Public Health and Human Services Office of EMS and Trauma Systems
- Wyoming Department of Health Bureau of Emergency Medical Services and Preparedness

In addition to working with SafeTech Solutions, project team members bring the following additional experience and abilities to the Grand County EMS Assessment Project:

- Nationally recognized data analysis expertise
- Extensive national research and publication in EMS, workforce, rural EMS development
- Broad experience in international EMS study and development
- In-depth background in compliance, licensing and complaint investigation
- Leadership on national associations, boards and committees including the National EMS Advisory Council, American Ambulance Association, National Registry of EMTs, and International Roundtable on Community Paramedicine
- Current leadership and management for rural EMS operations
- Recognized and current expertise in emergency medicine clinical care and education
- Successful turnaround of failing EMS organizations
- Extensive research in EMS workforce planning and co-authorship of national *EMS Workforce Agenda for the Future*
- Deployment plan designs for EMS systems of all sizes
- EMS strategic planning
- Organizational and community facilitation and conflict resolution
- EMS system performance improvement
- Response time analysis and improvement
- Financial improvement analysis and best practice strategies for improvement
- Billing and collections process improvement
- Industry/association/Board of Directors experience
- Educational and development programs experience

Some of SafeTech Solutions' accomplishments include:

- Assessing the quality, effectiveness and sustainability of EMS agencies and systems for organizations, cities, counties and states;
- Conducting EMS leadership education, training and mentoring throughout the nation;

- Performing statewide EMS payment rate rebasing projects;
- Assisting rural EMS agencies in consolidating services and creating unique and sustainable funding mechanisms;
- Assisting in the deployment, direction and planning of EMS resources during disasters;
- Conducting workshops for rural EMS medical directors;
- Assisting state EMS offices in addressing rural EMS challenges;
- Conducting workshops in rural volunteer recruitment and retention;
- Contributing to the development of state EMS systems, trauma systems, quality management plans, public health plans, and disaster and mass casualty plans and the reassessment of these plans; and
- Facilitating strategic EMS visioning and planning for agencies, counties and states.

The Grand County EMS assessment team will be led by Aarron Reinert, NREMT-P, BA, and John Becknell, EMT-P, PhD.

**Aarron Reinert, NRP, MA**, is nationally known as a master teacher and expert in EMS leadership, management, system design, and applied best practices in rural and small-town EMS systems. Having worked in EMS for more than 20 years, Aarron is the executive director of a critical care ALS ambulance service in a rural region of Minnesota and understands the unique challenges facing small-town ambulance and first-response services. Using such tools as the Balanced Scorecard, Aarron helps ambulance services build organizations that recognize the necessary balance between finance, customer service, employee/volunteer satisfaction and community awareness. Aarron's recognized understanding of current EMS issues led to his appointment as chairperson of the National EMS Advisory Council by the U.S. Secretary of Transportation. Aarron continues to be in demand as an EMS management consultant and lecturer.

**John Becknell, PhD**, is an accomplished project leader, facilitator and researcher. John is a community and organizational psychologist and has been involved in EMS for 33 years. He has worked as an EMT, paramedic, educator and manager and consultant. He is the founding publisher of *Best Practices in Emergency Services* and the former editor-in-chief of *The Journal of Emergency Medical Services (JEMS)*. He has served on numerous national projects and provided the conceptual design for the *National EMS Workforce Agenda for the Future* (2009). John has been involved in EMS system development in North America, the Middle East and Central America. He is the author of several books and has been published in numerous journals and trade magazines on emergency services administration, management and workforce. John holds a doctorate in psychology with an emphasis on social and community psychology.

STS prohibits discrimination in employment, projects, educational programs, and activities on the basis of race, national origin, color, creed, religion, sex, age, disability, veteran status, sexual orientation, gender identity, or associational preference. STS also affirms its commitment to providing equal opportunities for all in its projects and work. For additional information, contact John Becknell or Aarron Reinert.

### **III. Budget**

The total cost for this project is \$30,000. These costs include:

- Project development and planning
- Development of a work plan
- Gathering of quantitative data
- Identifying and contacting key informants
- Site visits to Grand County EMS and surrounding area
- Meetings and interviews with key informants
- Analysis of data findings
- Development of report
- In-person presentation of findings
- All travel expenses for consultants

**Total cost of project**

**\$30,000**

Upon acceptance of this proposal, Safetech Solutions will request that Grand County EMS sign an agreement stipulating start and completion dates, fees, and payment schedule.

## Appendix A

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# SafeTechSolutions

## Final Report

### ASSESSMENT OF GRAND COUNTY, UTAH EMERGENCY MEDICAL SERVICES

September 2016



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## Executive Summary

SafeTech Solutions spent two months in 2016 studying the emergency medical services (EMS) system in Grand County, Utah. This study focused on the long-term sustainability and reliability of Grand County EMS. The study included a site visit, approximately 20 interviews with key stakeholders, extensive research about Grand County and its EMS system, and scrutiny of financial and operational data for Grand County EMS.

Based on its findings, SafeTech Solutions offers the following key recommendations:

1. Grand County EMS should build on past successes and continue to make changes that ensure the provision of high quality EMS in Grand County.
2. Grand County EMS should build a business plan for sustainable EMS in Grand County that defines the right model for EMS, includes appropriate resource deployment, and accounts for the full cost of EMS.
3. Grand County EMS should identify possible and appropriate funding resources.
4. Grand County EMS should identify the best and most appropriate “home” for Grand County EMS.

These recommendations are based on the following key observations:

1. EMS is a vital and essential element of healthcare and quality of life in Grand County and essential to Grand County being a world-class tourist destination.
2. Grand County EMS has made proactive and significant progress in recent years.
3. Advanced Life Support is appropriate for Grand County.
4. Financial performance and efficiency in Grand County are difficult to track and lead.
5. Grand County EMS is not sustainable as operating today.
6. EMS is not prioritized in Grand County.
7. Relationships between Grand County EMS and colleagues at public safety, hospital and park services are strained.
8. The opportunity to participate in backcountry EMS is an important reason that many employees want to be part of Grand County EMS.
9. Grand County’s EMS leadership is burdened by having to work in both administration and on the ambulance.

10. Finding and keeping an engaged workforce that is willing to provide all aspects of EMS (not just backcountry) will be a major challenge going forward.

SafeTech Solutions suggests a gradual implementation process that includes the following steps:

1. Engage the community in planning for a sustainable future.
2. Gradually transition to a more sustainable EMS model, while continuing to use current resources and stop-gap solutions that maintain current levels and quality of care.
3. Seek local medical direction to help solidify the value of EMS in the community.
4. Strengthen the relationship between Grand County EMS and local medical staff to ensure that Grand County EMS is the first choice for interfacility transfers.
5. Strengthen Grand County EMS' workforce value proposition to improve recruitment and retention of EMS personnel.
6. Deploy backcountry resources in a manner that capitalizes on a willing and engaged workforce but does not impede daily 911 and transfer operations, or negatively impact leadership and management.
7. Continue to move toward a full-time, paid staffing model, while respecting and honoring volunteers and volunteerism in the organization.

## I. Introduction & Assessment Methodology

Like many rural counties in America, Grand County, Utah, faces growing challenges in meeting its out-of-hospital emergency medical care needs. The awareness of these challenges and the desire to overcome them led Grand County EMS to seek an assessment of EMS in Grand County. SafeTech Solutions, LLP, was contracted to conduct the assessment.

SafeTech Solutions is an EMS consulting firm with extensive expertise evaluating EMS organizations and assisting in the development of rural ambulance services and systems.

The goals of the Grand County EMS assessment project were to:

- Assess current EMS operations in Grand County and obtain an outside perspective regarding how Grand County EMS compares to similar EMS agencies around the nation and nationally accepted EMS best practices;
- Provide guidance to the leadership team on how to lead change and lead an agency of both paid and volunteer staff;
- Evaluate Grand County EMS' position within the county government and offer suggestions about how EMS should best be positioned and provided in Grand County;
- Provide insight on how to best fund EMS in Grand County;
- Evaluate the current state, reliability and long-term sustainability of EMS in the county, including the current structure and operations of Grand County EMS;
- Validate system components that are working well; and
- Make recommendations for change and improvement, as needed.

The assessment focused on local needs, current operations, system design and available supporting resources with an eye on sustainability. The scope of the assessment was limited; it was not an audit of operations, finances or clinical performance. Air medical service was not part of the assessment.

### **Methodology**

SafeTech Solutions' assessment team used a process of inquiry and investigation that capitalizes on the firm's extensive understanding of rural EMS systems. Its principals gathered quantitative and qualitative data through research, site visits and interviews. SafeTech Solutions' consultants visited Grand County to review documents and data, conduct interviews and assess operations. In addition to evaluating the ambulance organization (organizational structure, leadership and operations), SafeTech Solutions paid special attention to the social, economic, demographic, cultural and political issues in Grand County, carefully analyzing data and making recommendations based on industry best practices, as well as what is practical and doable in Grand County.

This report summarizes the findings, key observations and recommendations for EMS in Grand County.

## II. Overview of Grand County

Grand County is a 3,694-square-mile, rural county in southeastern Utah. The Green River runs along its western border, and it abuts the State of Colorado to the east. The formation of Grand County dates back to 1890, when the area was permanently occupied by Mormon settlers. Moab, its county seat, was incorporated in 1902, but was not recognized by the State of Utah until 1937.

Grand County is part of the Colorado Plateau, an expansive geological province that encompasses much of the state of Utah as well as parts of Colorado, New Mexico and Arizona. The Colorado Plateau is made mostly of sandstone and limestone that has been eroded over time by large rivers, including the Colorado River, which flows through the southeastern corner of Grand County. This erosion has created a stunning landscape of large canyons and rock formations that make Grand County a popular tourist destination. Arches National Park, a red rock wonderland containing the world's largest concentration of sandstone arches, is located entirely within the boundaries of Grand County.<sup>1</sup>

Grand County is bisected by Interstate 70, which runs from Colorado to its terminus in Millard County, Utah. I-70 is a major through-route from the southwestern U.S. to the East Coast, bringing more than three million cars and trucks across Grand County borders each year.<sup>2</sup>

### Economy

Much of the history of Grand County has been the story of small family farms and orchards, livestock and mining. The uranium boom of the 1950s brought the first real population expansion to the area, with the number of residents increasing from 3,000 to nearly 10,000 in just three years.<sup>3</sup> By the mid-1950s, almost six hundred producers on the Colorado Plateau were shipping uranium ore. Employment in the industry topped 8,000 workers in the mines and mills.<sup>4</sup> Potash, salt mining and milling operations added to the local economy until 1983 when the market for uranium dropped. Most mining and milling operations ceased at that time.<sup>5</sup>

Oil exploration in the 1920s led to the development of the Moab Oil Field. Records from the Utah Division of Oil, Gas and Mining indicate that approximately 2,200 petroleum wells have been drilled in the Moab Field Office from the late 1800s through December 2014, of which approximately 281 continued to produce. As of 2014, 248 were inactive but capable of producing, 7 were injection wells, and 1,644 were plugged and abandoned. Cumulative

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<sup>1</sup> <http://www.grandcountyutah.net/383/About-the-County>

<sup>2</sup> Grand County General Plan, 2012

<sup>3</sup> [http://onlinelibrary.utah.gov/research/utah\\_counties/grand.html](http://onlinelibrary.utah.gov/research/utah_counties/grand.html). Used by permission. *Beehive History 14: Utah Counties*. 1988. Utah State Historical Society, 300 Rio Grande, Salt Lake City, UT 84101-1182, 801/533-3500

<sup>4</sup> [http://historytogo.utah.gov/utah\\_chapters/utah\\_today/utahsuraniumboom.html](http://historytogo.utah.gov/utah_chapters/utah_today/utahsuraniumboom.html)

<sup>5</sup> <http://www.grandcountyutah.net/387/History>

production within the Moab Field Office through 2014 totaled over 63 million barrels of oil and over 1.3 trillion cubic feet of natural gas.<sup>6</sup>

In addition to mineral wealth, Grand County's natural beauty has made tourism a major contributor to the local economy. Arches National Monument was established in 1929 and attained National Park status in 1971. During the 1970s and 1980s, Moab became perhaps the most important center for river running, mountain-bicycling, and four-wheel drive recreation in Utah.<sup>7</sup> Grand County also has served as the location for many of Hollywood's great western movies. Today, tourism and retail make up over half of the employment in the county. Higher-paying professional and technical services account for more than one-fifth of the jobs.<sup>8</sup>

## People

Approximately 9,429 people live in Grand County, according to U.S. Census Bureau estimates. More than 90 percent are white, and more than half (approximately 5,000) live in the city of Moab. Forty-two percent of residents live in unincorporated regions of the county, and three percent live in the town of Castle Valley.

The age structure is typical of a recreation-based, western, rural community. A recent decline in school-aged children reflects a national trend towards an increase of childless households. Baby boomers (ages 46-64) are evident in the Grand County age structure. The 18-to-29-year-age group, which is attracted to the outdoor recreation lifestyle and fills many of the jobs in the county, is also evident in the Grand County age structure.<sup>9</sup>

Approximately half of the full-time population in Grand County is part of the labor force. The average household size is 2.35 persons, with 72 percent of residents owning homes and 28 percent renting. The average per capita income totals over \$29,000, which is just below the state average and ranks 12th highest out of Utah's 29 counties.<sup>10</sup>

The population is expected to grow, according to the county's General Plan, which forecasts an additional 2,134 residents to live in Grand County by 2030. The city of Moab is forecasted to accommodate over half of that growth. The unincorporated areas of the county are allocated 42 percent of the forecasted growth, or an additional 881 people by the year 2030.<sup>11</sup>

In addition to permanent residents, Grand County has two types of part-time residents: second home/vacation home owners and seasonal workers. Second home use parallels the

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<sup>6</sup> <http://www.blm.gov/ut/st/en/fo/moab/energy.html>

<sup>7</sup> *ibid*

<sup>8</sup> Grand County General Plan, 2012

<sup>9</sup> Grand County General Plan, 2012

<sup>10</sup> Grand County General Plan, 2012

<sup>11</sup> Grand County General Plan, 2012

peaks and off-seasons of the tourist seasons. Seasonal workers also reside in the region during the busy times of year when jobs are available.<sup>12</sup>

Tourism accounts for some 1.6 million tourist visitor days annually. In 2008, the two national parks in the area had a combined visitation greater than 1.3 million people; state parks had over 200,000 visitors. The Utah Office of Tourism indicates that half of leisure visitors are on day trips, while the other half stay an average of 2.25 nights in the area. Short-term occupancy options in Grand County include more than 4,000 campground sites and hotel rooms.<sup>13</sup>

## **Healthcare in Grand County**

The University of Wisconsin Population Health Institute and the Robert Wood Johnson Foundation each year publish health rankings that shed light on the health and wellness of resident populations by county throughout the United States. The annual County Health Rankings measure vital health factors, including high school graduation rates, obesity, smoking, unemployment, access to healthy foods, the quality of air and water, income, and teen births in nearly every county in America. Experts compile the rankings using county-level measures from a variety of national data sources.

The *2015 County Health Rankings* report ranks Grand County 24<sup>th</sup> in health and wellness out of 26 reporting counties in Utah, which suggests that the overall health of Grand County's permanent residents is poor compared to other counties within the state. Fifteen percent of residents report poor mental or physical health an average of 3.6 to 3.8 days per month, compared to under 3.0 days per month among top U.S. counties. Eight percent of babies born in the county are underweight, compared to six percent among top performers and seven percent statewide. Teen birthrates in Grand County are substantially higher than average, as are rates of sexually transmitted disease, alcohol-impaired driving deaths, and injury deaths. Of particular concern is suicide. Rates of suicide mortality are 43 percent, compared to 19 percent statewide and 12 percent nationwide.<sup>14</sup> Twenty-two percent of children live in poverty, and 34 percent in single-parent households, compared to 13 percent and 19 percent statewide respectively.

Part of Grand County's challenge with healthcare is the large number of uninsured – 27 percent – compared with 14 percent in Utah and across the U.S.<sup>15</sup>

Grand County residents meet their healthcare needs at Moab Regional Hospital, a 17-bed Critical Access Hospital and Level IV Trauma Center. The Emergency Department is equipped with specialty rooms for pediatrics, OB/GYN, trauma, critical care, and wound care; telemedicine and telestroke technology; a decontamination room; and state-of-the-art imaging equipment, including MRI, CT, X-Ray scanners. Patients with neurologic systems

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<sup>12</sup> Grand County General Plan, 2012

<sup>13</sup> Grand County General Plan, 2012

<sup>14</sup> Moab Regional Hospital Community Health Needs Assessment, June 2016

<sup>15</sup> Moab Regional Hospital Community Health Needs Assessment, June 2016

suspicious for acute stroke are evaluated by a neurologist from the University of Utah Hospital using telemedicine technology in the Emergency Department; however, the closest hospital to receive stroke victims is San Juan Hospital in a neighboring county. Non-urgent healthcare is provided by Moab Family Medicine, Moab Regional Medical Clinic and a variety of clinics and physicians outside the county.

### III. Overview of the EMS System in Grand County

Emergency medical care in Grand County includes a 911 emergency call system, emergency medical dispatch, first response, ground ambulance, search and rescue, air medical transport, medical oversight and quality assurance. The system works through the coordinated efforts of a variety of agencies that includes:

- Grand County Sheriff's Department
- Grand County EMS
- Grand County Search and Rescue
- Moab Police Department
- Castle Valley First Responders
- Thompson Springs Fire Department
- Moab Valley Fire Department
- Moab Regional Hospital
- Classic Air Medical
- St. Mary's Careflight Medical Services

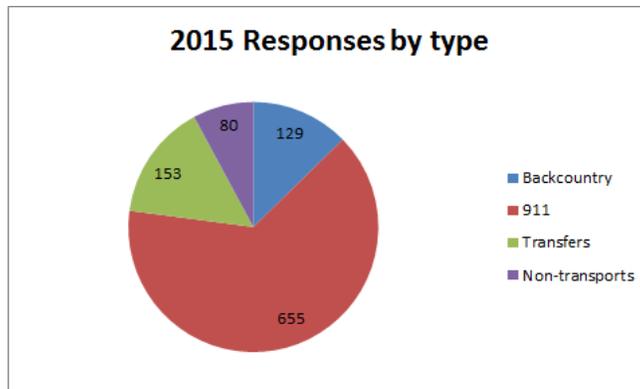
The system uses a tiered response, with first responders and local search-and-rescue teams providing first and Basic Life Support (BLS) response, and Grand County EMS providing Advanced Life Support (ALS) response and medical transport. Air medical resources are also used for scene response, transport and interfacility transport.

#### **Call Volume**

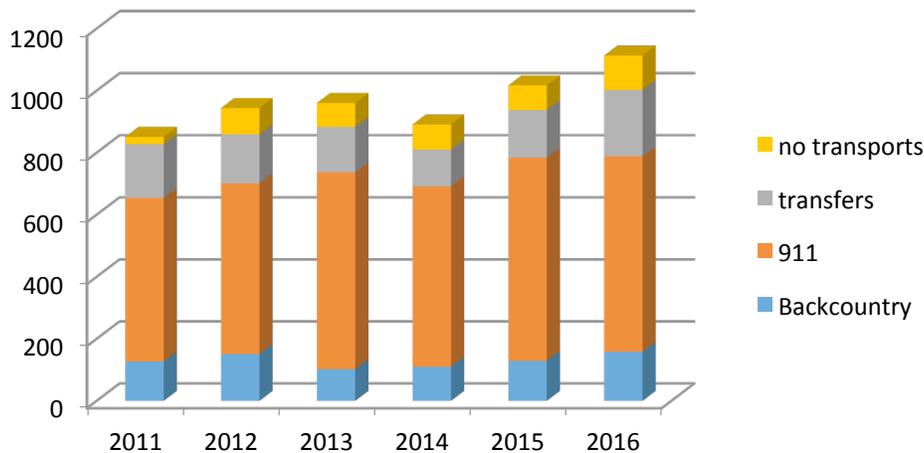
Grand County has approximately 1,000 annual requests for out-of-hospital EMS, with 90 percent of calls resulting in patient transports. More than 10 percent of calls require backcountry response to wilderness areas. More than 40 percent of medical transports are for patients who do not reside in Grand County.

Total EMS call volume for 2015 is reported to be 1,017. This number does not include air medical responses, for which data was unavailable. Of the 1,017 ground responses:

- 655 were for 911 calls (response and transport),
- 153 were for interfacility and airport medical transfers,
- 129 were for backcountry/wilderness rescues, and
- 80 calls resulted in non-transports.



## Year-by-Year Response Trend



### Communications & Dispatch

Calls for out-of-hospital EMS are received by Grand County Sheriff’s dispatch center, the local public safety answering point. The center answers more than 25,000 calls per year and is staffed by professional dispatchers certified in POST’s public safety dispatcher program<sup>16</sup> and certified as Emergency Medical Dispatchers.<sup>17</sup> The dispatch center does not routinely provide pre-arrival instructions and does not use emergency medical dispatch software.

<sup>16</sup> Peace Officer Standards Training Commission (P.O.S.T.) has a certification course for dispatchers employed by agencies participating in POST’s public safety dispatcher program.

<sup>17</sup> Emergency Medical Dispatch certification is an international certification from the International Academies of Emergency Dispatch that attests to the specific and highly specialized knowledge, skills, abilities and attributes of an emergency medical telecommunicators.

First responders and EMS are summoned via pager and radio. Responders use VHF radio and cell phones for communications. Because of the rugged terrain, both radio and cell phone coverage is limited in remote, wilderness areas.

Grand County EMS does not pay for dispatch services. The relationship between the dispatch center and EMS is reported to be functional, but not amiable. Both the communication center and EMS report disagreements about when to start EMS resources and who is in charge of emergency scenes.

## **First Response**

First response in Grand County is provided by a variety of agencies that provide a range of services and levels of emergency medical care. These agencies include:

- Grand County Sheriff's Department
- Grand County Search and Rescue
- Moab Valley Fire Department
- Moab Police Department
- Castle Valley First Responders
- Thompson Springs Fire Department
- National Park Service

Throughout the county, Grand County Sheriff's Department deputies respond to medical emergencies with basic medical equipment and AEDs to provide initial stabilization, support and scene safety.

In the remote backcountry, Grand County Search and Rescue (part of the Grand County Sheriff's Department) provides emergency medical First Response, BLS and a variety of search, rescue and recovery services. The organization currently has approximately 20 active volunteer members and responds to nearly 100 requests for service each year.

Within the city of Moab, Moab Police Department officers respond to medical emergencies with basic medical equipment to provide initial stabilization, support and scene safety. Some squads are equipped with AEDs.

Moab Valley Fire Department responds to emergency medical calls that require heavy rescue, extrication, hazmat, underwater or swiftwater rescue. The fire department is part of a special fire protection district that responds to 100 to 125 calls per year from three fire stations that are equipped with 28 pieces of apparatus. The department has 38 firefighters, three of which are full-time paid; the balance are volunteers.

Along the 1-70 corridor, Thompson Springs Special Service Fire District provides intermittent EMS first response from a single station in Thompson. The department currently has three active volunteer members. It responds only when these members are available.

In the small community of Castle Valley 16 miles northeast of Moab, EMS First Response is provided by Castle Valley First Responders. The group is owned and overseen by Grand County EMS, but operates somewhat independently as a local volunteer first responder agency. Castle Valley First Responders are Emergency Medical Responder (EMR) trained, and respond in an ambulance provided by Grand County EMS. They do not transport. Currently, the group has 11 members, of which three to four are active.

The National Park Service provides emergency medical First Response within Arches National Park and Canyonlands National Park. Park service personnel provide initial response, stabilization and movement of patients from backcountry locations. The level of emergency medical care varies with the training of Park Service personnel responding.

### **EMS Response & Medical Transport**

Grand County EMS is the sole provider of ground ambulance services in Grand County. Ambulances respond from a fixed station in Moab with EMTs/EMT-As and Paramedics providing ALS care. The agency provides 911 response, stabilization and transportation; medical support and transportation between medical facilities as well as medical standby at events where EMS may be needed, emergency medical education, and backcountry response with rope rescue and river rescue capabilities.

Grand County EMS endeavors to staff three ambulance units 24 hours per day with a combination of paid and on-call staffing, as follows. Occasionally, a fourth unit is staffed.

Ambulance Unit	Staffing	Status	Available
1	1 EMT or Paramedic 1 EMT or Paramedic	On duty at station On call (responds to station when needed)	24/7
2	1 EMT or Paramedic 1 EMT or Paramedic	On duty at station 12 hrs.; on call 12 hrs. On call (responds to station when needed)	24/7
3	1 EMT or Paramedic 1 EMT or Paramedic	On call (responds to station when needed) On call (responds to station when needed)	24/7

Grand County EMS strives for a five-minute chute time (time from call until unit rolling toward call) for its first unit. Fully staffing second and third units can be difficult at times. When needed, administrative staff and other qualified personnel may respond in a non-transporting echo unit to provide initial patient care and stabilization.

On-task time for 911 calls can range from 30 minutes to several hours due to distances, geography, weather and the diverse nature of calls. On-task time for interfacility transfers can range from 5 to 10 hours.

In the event that Grand County EMS is not available or additional ambulance resources are needed, Grand County EMS has mutual aid agreements with:

- Emery County EMS in Green River, Utah (52 miles/50 minutes from Moab);

- San Juan EMS in Monticello, Utah (54 miles/56 minutes from Moab); and
- Lower Valley Fire Protection District in Fruita, Colorado (101 miles/90 minutes from Moab).

### **Air Medical Resources**

Helicopters and fixed wing aircraft are used in Grand County for scene response, rescue and interfacility transports. Air medical services are provided primarily by Classic Air Medical and St. Mary's Careflight Medical Services. Classic Air Medical maintains a helicopter in Moab; St. Mary's Careflight responds from Grand Junction, Colorado.

The exact number of air medical responses and transports is difficult to determine. There is no formal tracking of air medical use in Grand County. SafeTech Solutions estimates there may be 10 to 20 or more air medical transports per month from the county.

### **Receiving Medical Facilities**

Approximately 80 percent of EMS patients in Grand County are transported to Moab Regional Hospital. Approximately 19 percent of EMS patients in Grand County are transported to St. Mary's Hospital and Medical Center in Grand Junction, Colorado (112 miles from Moab). Approximately 1 percent of EMS patients are transported elsewhere, including University of Utah Medical Center in Salt Lake City, Utah (214 miles from Moab), a medical clinic in Green River, Utah (52 miles from Moab), and other destinations.

St. Mary's Hospital and Medical Center is a 346-bed general medical and surgical hospital. It is designated as a Level II Trauma Center by the American College of Surgeons and has more than 42,000 emergency department visits per year.

The University of Utah Medical Center is a 527-bed general medical and surgical hospital. It is designated as a Level I Trauma Center by the American College of Surgeons and sees some 36,000 emergency department patients each year.

### **EMS Education**

Access to EMS education in Grand County is limited. Grand County EMS is the primary provider of EMS education in Grand County, offering:

- First aid and CPR training (it is a designated American Heart Association training center),
- First Responder training,
- EMT and advanced EMT training, and
- Continuing EMS education for EMTs and Paramedics.

Paramedic education is not available in Grand County. The nearest paramedic programs are located at:

- Western Colorado Community College, in Grand Junction, Colorado;

- Weber State University in Ogden, Utah;
- Utah Valley University in Orem, Utah; and
- Dixie State University in St. George, Utah.

### **EMS System Oversight & Planning**

Currently there is no formal body or group that oversees the overall EMS system or conducts system-wide planning in Grand County. System-wide planning and oversight is informal and ad hoc. Grand County EMS is overseen by a county administrator and the county council.

## IV. Description of Grand County EMS

Grand County EMS is a combination agency with full-time, part-time and paid on-call staff that provides an advanced level of emergency medical response and transport in eastern Utah. Its 3,700-square-mile response area contains nearly 6,000 miles of roads and trails and includes some of the most remote backcountry in the state. Grand County EMS has one of the highest per capita call volumes in Utah because of heavy tourism in the area. Many of Grand County EMS' calls involve extended patient contact because of remote backcountry and distances to definitive medical care.

The stated mission of Grand County EMS is as follows:

“As a community-built agency, Grand County Emergency Medical Services is dedicated to providing the highest level of Public Safety and Public Health for our residents and visitors. We protect lives through pre-hospital emergency medical care, transport, rescue, disaster response and public education.”

### **Historical Perspective**

Formal ambulance services began in Grand County in 1973. A volunteer ambulance service was formed and eventually came to be overseen and operated by the hospital in Moab. In 2000, the ambulance service transitioned from hospital ownership to county ownership under the condition that the ambulance service remain financially self-sustaining. Through most of its 40-year history, the ambulance service provided BLS services only, and was staffed with volunteers or employees paid less-than-regular wages.

In 2003, Grand County Resolution #2610 gave oversight of EMS to the Canyonlands Health Care Special Service District. However, such oversight has never been realized. Today, Grand County EMS continues to operate as a department of the county, as it has since 2000.

### **Organizational Ownership & Structure**

Grand County EMS is owned and operated by Grand County and operates as a department of Grand County government. The EMS Director is hired by and reports to the Grand County Council Administrator, who reports to the Grand County Council. The Council Administrator oversees 13 direct reports within the county government, including the EMS director. The Grand County Council is made up of seven elected council members.

The current Grand County EMS Director was hired in 2012 and has led the department to deliver higher levels of emergency medical care using a combination of paid and on-call staff as well as volunteers. The director works alongside a full-time, paid assistant director and several captains, who serve in supervisory and special assignment roles.

## Workforce

Grand County EMS currently has 35 employees, six of whom work full-time. The balance work part-time or on-call and are paid less-than-regular wages. Of the 35 employees, there are:

- 14 Paramedics
- 13 AEMTs
- 8 EMT-Basics

Employees range in age from 19 to 53, with a median age of 30. The staff is 60 percent female, 40 percent male, and 90 percent white. Fourteen percent of the staff lives an hour or more away from Moab. Employees report their motivation for belonging to Grand County EMS as follows:

- Opportunity to serve their community,
- Opportunity to obtain EMS experience,
- Opportunity to obtain backcountry experience,
- Opportunity to stay involved in EMS while working another career,
- Opportunity to work when needed and available, and
- A desire to develop a career in EMS or emergency services.

Full-time employees are paid hourly wages when on duty, and on responses or transports. On-call employees are paid one hour's worth of their wage to be on-call (available from home or a remote location) for 12 hours. Non-salaried compensation is as follows:

### Hourly Employee Compensation

Title	Current Compensation	National Averages
EMT	\$11.31	\$15.19
AEMT	\$13.10	
Paramedic	\$15.92	\$21.98
Captain/Supervisor	1 hr call time	\$25.34
Asst. Director	\$18.98	\$26.80 - \$37.62
Director	\$26.48	\$40.84 - 47.77

Full-time employees work 48/96-hour weeks. They frequently work 12 hours during daytime hours for their regular hourly wage, and 12 hours overnight at the on-call rate of one hour of regular pay for 12 hours being on-call away from the station. If employees are called in, they are paid regular hourly wages or overtime wages.

Full-time employees describe the county benefit package, which includes full health insurance, dental care and the state retirement plan, as "fair" or "good." Grand County EMS provides \$150 annual uniform allowance and some reimbursement for attendance at EMS conferences and meetings.

## Facilities, Vehicles & Equipment

Grand County EMS is housed in three buildings in Moab:

- a garage facility,
- an older home within walking distance of the garage that serves as crew quarters, and
- administrative offices and training facilities in a former senior center building (not within walking distance of the garage and crew quarters).

The three buildings provide adequate space; however, the separation creates access and communication issues. The house used for crew quarters is run-down and inadequate.

Grand County EMS has modern, up-to-date equipment and vehicles that appear to be well maintained.

### Vehicles, Trailers and Major Equipment

<b>Ambulance 1T150</b> 66,245 miles	Wheeled Coach	2012 Chevy 3500HD Chassis Equipped with Power Lift cot, Zoll X series ALS/critical care monitor
<b>Ambulance 1T513</b> 117,461 miles	Wheeled Coach	2009 Ford F-350 Chassis Equipped with Power Lift cot, Zoll X series ALS/critical care monitor
<b>Ambulance 1T514</b> 213,000 miles	Wheeled Coach	2004 Ford F-350 Chassis Equipped with Power Lift cot, Zoll X series ALS/critical care monitor
<b>Ambulance 1T512</b> 20,770 miles	Wheeled Coach	2005 Ford E-350 Chassis 4X4 Backcountry Equipped with standard cot, Zoll E series ALS monitor
<b>Ambulance 1T515</b> 17,102 miles	Wheeled Coach	2007 Ford E-350 Chassis 4X4 Backcountry Equipped with standard cot, Zoll E series ALS monitor
<b>Ambulance 1T500</b> 131,174 miles	Wheeled Coach	1999 Ford F-350 Chassis Equipped with standard cot, Zoll E series ALS monitor
<b>Ambulance new</b> No mileage or equipment to date	Demers	2016 Sprinter
<b>Med 1 QRV</b> 55,262 miles	2006 Ford F150 (4 door) Quick Response Unit Equipped with AED, ALS equipment when staffed by ALS personnel	
<b>Med 2 QRV</b> 26,071 miles	2013 Ford Explorer Interceptor Package Quick Response Unit Equipped with AED, ALS equipment when staffed by ALS personnel	
<b>Med 3 QRV</b> 78,000 miles	2003 Ford F150 (2 door/extended cab) Quick Response Unit Equipped with AED, ALS equipment when staffed by ALS personnel	
<b>Multi-Casualty Incident Trailer</b>		Fully equipped for disaster response

### Medical Oversight & Quality Assurance

The clinical care provided by Grand County EMS is guided and overseen by internal processes that include physician medical direction, up-to-date clinical protocols, clinical quality review, and continuing EMS education.

Medical direction is provided by a board-certified emergency medicine physician practicing in Provo, Utah. The role of medical direction is defined by a job description that ensures

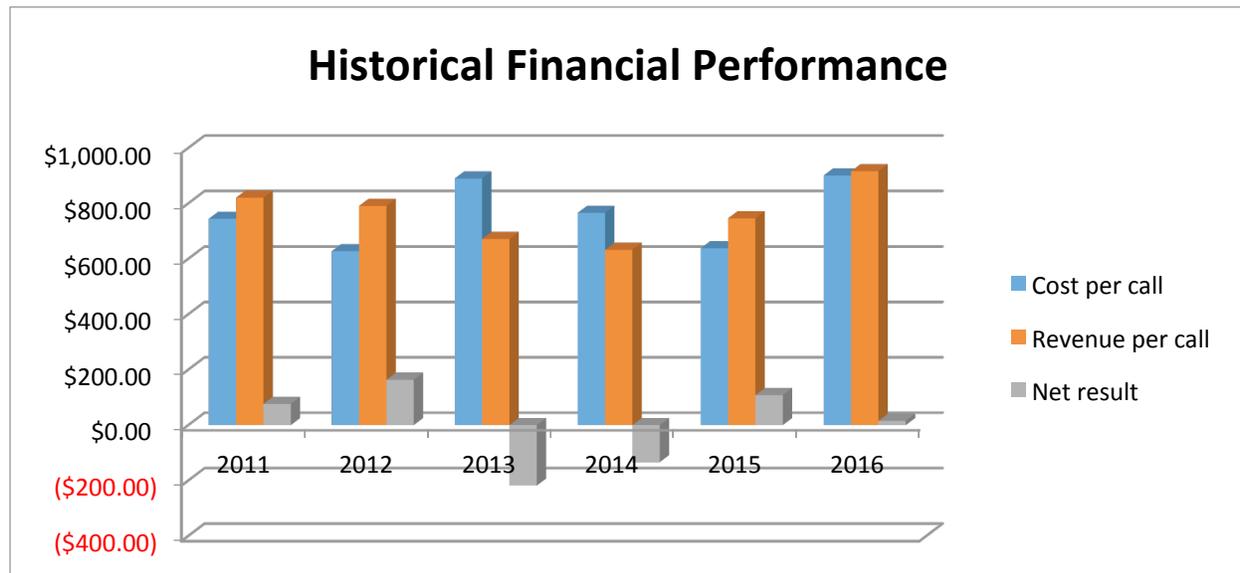
physician involvement in establishing and guiding clinical care, protocol development, chart review, individual provider performance and performance review, and ongoing training and education. The physician conducts regular, face-to-face case reviews and education and training with the staff. Grand County EMS has a written contract with the physician and pays \$300 per month for the service.

Clinical protocols are up-to-date and reflect common and current out-of-hospital clinical practices and clinical best practices. Protocol compliance and clinical quality is reviewed through regular internal chart review by the assistant director, who is the designated quality coordinator. Clinical knowledge and skills are assured through an in-depth onboarding process and ongoing clinical review and continuing education.

### Finance & Funding

Grand County EMS operates with an annual budget of roughly \$1 million. The service generates approximately \$1 million worth of income, primarily through fees charged for treatment and transport. Thus, it operates essentially at break-even (based on projected 2016 run volume and financial performance).

Unlike many governmental agencies and other departments in Grand County, Grand County EMS is expected to operate solely on revenues generated through fee income. In past years, this financial model has generated surpluses, while in other years, it has resulted in losses. When revenues exceed expenditures, excess funds are set aside for future use or capital expenditures.



	2011	2012	2013	2014	2015	2016
Cost per call	\$744.32	\$627.51	\$889.78	\$765.76	\$637.88	\$900.59
Revenue per call	\$820.71	\$790.69	\$671.60	\$632.31	\$745.78	\$915.78
Net result	\$76.39	\$163.18	(\$218.18)	(\$133.45)	\$107.90	\$15.19

Grand County EMS receives funding through the annual county budgeting process. The director submits a budget for approval and is expected to operate within the approved budget. Historically, the department's expenditures are to be no more than the projected amount of revenue collected through billing. The department has been able to limit expenditures by relying on subsidized, donated labor (volunteers).

In fact, much of the true cost of Grand County EMS is hidden, due to the use of less-than-full-time staff. These volunteers provide the bulk of the staffing for Grand County EMS but are not paid regular wages. The true cost of operating Grand County EMS, which is close to \$2.2 million when the volunteer hours are accounted for, would result in a net operating loss.

Grand County EMS' ability to generate additional revenue by raising fees is severely limited due to rate regulation. The Utah Department of Health, Division of Family Health and Preparedness sets the maximum amount that an ambulance service can charge. The state determines those rates by surveying cost and revenue data from ambulance services in the state and setting rates based upon the income that it estimates is needed to provide financial viability. The process is heavily influenced by cost and revenue data submitted by ambulance services that use volunteer labor, resulting in rates and do not truly reflect the real cost of providing EMS.

For example, the chart below shows Grand County EMS transport rates (the maximum amounts allowed by the state) compared to national averages as provided by the 2015 Medicare ambulance cost file. While Grand County's EMS mileage rate is close to the national average, its service rates are significantly below national averages. These mandated rates significantly limit Grand County EMS' ability to generate enough revenue to be self-sufficient when accounting for the full costs of providing service.

Billing Levels	Current Rates	National Averages
Mileage	\$31.65/ mile	\$30 - \$40
ALS non-emergency	n/a	
ALS emergency	n/a	\$2,500 - \$3,500
BLS non-emergency	\$707.00	
BLS emergency	\$707.00	\$1,000 - \$2,000
ALS2 emergency	\$1,365.00	\$3,000 - \$4,000
ALS1 scheduled	\$1,365.00	
ALS1 emergency	\$1,365.00	
Specialized Critical Transport (SCT)	none allowed	\$3,500 - \$4,500

Grand County EMS uses a billing agency (HSI or Health Services Integration, Inc.) to facilitate billing for its services. HSI appears to be providing excellent services to Grand County EMS with an efficient and effective claims management process and user portal.

In 2015, Grand County EMS had a payer mix that was roughly 60% non-governmental payers and 40% governmental payers. This payer mix results in reimbursement of roughly \$0.40 on every dollar billed. This information, coupled with the state regulated rates, further contributed to Grand County EMS' limited ability to generate enough fee revenue to cover the true costs of EMS.

## V. Key Observations

### **1. EMS is a vital and essential element of healthcare and quality of life in Grand County and essential to Grand County being a world-class tourist destination.**

Demographics, geography, climate, distances to medical facilities, tourism and the limits of local medical specialties create an important need for EMS in Grand County. Local residents, business owners, visitors, medical staff and government officials all view EMS as a vital service in Grand County that is essential to safety and quality of life. A local business owner described the need for quality EMS in Grand County as an expectation of the growing tourism industry.

With more than one million visitors each year to Arches National Park, Canyonlands National Park, Dead Horse Point State Park, the Colorado River, scenic byways, and thousands of square miles of red rock landscapes, local residents, business owners and government officials all describe tourism as the county's economic lifeline and future. Such a future suggests a growing need for medical resources, especially emergency medical resources that can respond not only to local needs but also to the inevitable emergencies that result from activities such as mountain biking, hiking, four-wheel driving, river rafting, canyoneering, rock climbing and jumping, ballooning, and skydiving.

Additionally, with increasing regionalization of medical specialties, ensuring that local residents and visitors have reliable and high quality medical transportation to appropriate facilities is an essential part of the local healthcare infrastructure.

### **2. Grand County EMS has made proactive and significant progress in recent years.**

Over the last four years, Grand County EMS has made significant progress in adopting nationally recognized best practices, ensuring reliability, preparing EMS workers, maximizing the use of available resources, advancing the level of care to the community, addressing internal conflicts, and growing the capabilities of the EMS department. Specifically, Grand County EMS has:

- Hired professional and knowledge leadership,
- Increased service to the community from basic to advanced levels of care,
- Updated and expanded medical protocols to meet the unique needs of Grand County,
- Facilitated and supported the development of paramedics,
- Facilitated and supported the advancement of basic EMTs to the Advanced EMT level,
- Strengthened internal education programs,
- Developed reliable scheduling practices,
- Expanded capabilities and safety practices, especially as related to backcountry response,
- Expanded the vehicle fleet,

- Addressed internal conflict,
- Brought more professionalism to the department, and
- Developed accurate and consistent budgeting processes.

Such forward-thinking developments are unusual in rural EMS agencies and demonstrate clear leadership and proactive, visionary thinking and planning.

### **3. Advanced Life Support is appropriate for Grand County.**

Advance Life Support (ALS) is considered a common if not best practice in all major EMS systems across the United States today.

ALS uses an advanced set of algorithms and protocols beyond Basic Life Support and include invasive, life-saving procedures such as advanced airway management, intravenous infusions and medications, synchronized cardioversion, cardiac monitoring, electrocardiogram interpretation and other procedures conventionally used in hospitals. ALS is provided by paramedics, nurses, physicians and other specially trained professionals.

The benefit of ALS in urban environments with short transport times is being questioned; however, researchers believe ALS can be beneficial in rural settings where it takes a long time to reach a hospital.<sup>18</sup>

Grand County presents unique needs where transport times can be long and/or delayed by remote backcountry locations, creating a need for extended on-scene stabilization of patients. In addition, local medical resources and specialties are limited. ALS allows for the patient to receive the highest level of out-of-hospital medical care.

ALS is the common level of prehospital care in most of the developed world and goes hand-in-hand with Grand County positioning itself as a world-class tourist destination.

### **4. Financial performance and efficiency in Grand County are difficult to track and lead.**

Tracking the financial performance of Grand County EMS is difficult because its finances are not clearly separated from the rest of the county. For example, it is difficult to assess whether the department, as operating today, is losing money or if it is operating as efficiently as possible and maximizing its revenues. The current accounting practices do not match with the expectation that the department operate as a break-even business or enterprise fund.

The absence of clear information on financial performance makes planning difficult. It is

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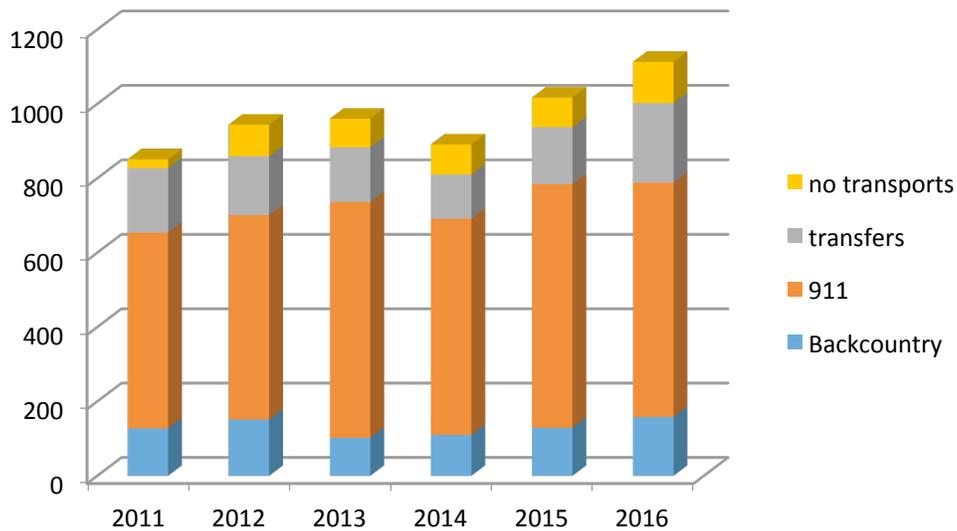
<sup>18</sup> Ryyänen, O.-P., Iiro, T., Reitala, J., Pälve, H., & Malmivaara, A. (2010). Is advanced life support better than basic life support in prehospital care? A systematic review. *Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine*, 18, 62. <http://doi.org/10.1186/1757-7241-18-62>

also difficult for leadership to strengthen efficiency and improve performance.

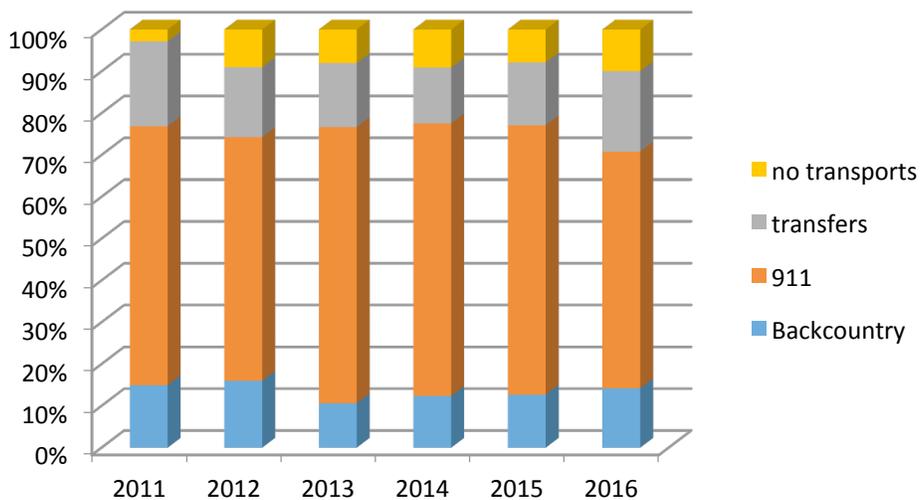
**5. Grand County EMS is not sustainable as operating today.**

Increasing 911 call volume, the demands of interfacility transports, the expectation that Grand County EMS covers its costs, and the decline in donated labor make Grand County EMS unsustainable, as operating today. As noted in the bar graph below, 911 call volume has increased from just over 500 in 2011 to 655 last year.

**Year-by-Year Call Volume**



**Call Types as % of the Total**



Interfacility transfers also are increasing. While the increase may be small, because of the length of these transfers (5 to 10 hours per transfer), they have a big impact on the resources of the organization. Many of the on-call volunteer employees are reluctant to take these calls because of the time commitment.

Grand County EMS is funded by the revenues it collects for medical transportation from insurance, Medicare, Medicaid and private payers. Over the years, Grand County EMS has relied heavily on donated labor to contain costs; however, donated labor is declining. Departmental leadership reports significant declines in the availability of on-call employees to fill regular shifts. On-call employees report decreasing willingness to make themselves available for long shifts and interfacility transfers. Fifty percent of the schedule for the second ambulance unit often remains unfilled, forcing the leadership team to work on the ambulance. National trends in Utah and across the United States suggest that volunteerism is increasingly becoming an unreliable primary means of staffing rural ambulance services.

Currently, the accounted cost of operating the department is approximately \$800,000 per year, or an estimated \$900 per call in 2016. But the costs are actually higher than they appear because the current budget fails to account for the use of volunteer labor.

The cost of donated labor is calculated to be \$883,800 per year. This is calculated by valuing the wages and benefits of EMTs at \$20/hr. and paramedics at \$30/hr. These figures are conservative, as the value of an unskilled volunteer hour in Utah is \$23.92.<sup>19</sup>

<b>Cost of Donated Labor</b>							
	12 hrs	12 hrs	Volunteer each day	Hours a day	Annually	Pay	Pay Annually
<b>Truck 1</b>							
Person 1	Paid	Paid		24			
Person 2	Paid	Paid		24	8760	\$20.00	\$175,200.00
<b>Truck 2</b>							
Person 1	Paid	oncall	12	12	3180	\$30.00	\$95,400.00
Person 2	oncall	oncall	24	24	8760	\$20.00	\$175,200.00
<b>Truck 3</b>							
Person 1	oncall	oncall	24	24	8760	\$30.00	\$262,800.00
Person 2	oncall	oncall	24	24	8760	\$20.00	\$175,200.00
<b>Sub total</b>							<b>\$883,800.00</b>

The full cost of providing ambulance services in Grand County with three EMS units is around \$2.2 million per year.

<sup>19</sup> Based on yearly earnings provided by the Bureau of Labor Statistics and estimated by the Independent Sector. See [https://www.independentsector.org/volunteer\\_time](https://www.independentsector.org/volunteer_time)

## Full Cost when Accounting for Donated Labor

Truck	Person	12 hrs	12 hrs	Volunteer each day	Hours a day	Annually	Pay	Pay Annually	Expenses 1/3 of current
Truck 1	Person 1	Paid	Paid		24	8760	\$30.00	\$262,800.00	\$300,706.72
	Person 2	oncall	oncall		24	8760	\$20.00	\$175,200.00	
Truck 2									\$300,706.72
Truck 2	Person 1	Paid	oncall	12	24	6360	\$30.00	\$190,800.00	
	Person 2	oncall	oncall	24	24	8760	\$20.00	\$175,200.00	
Truck 3									\$300,706.72
Truck 3	Person 1	oncall	oncall	24	24	8760	\$30.00	\$262,800.00	
	Person 2	oncall	oncall	24	24	8760	\$20.00	\$175,200.00	
Sub total								\$1,242,000.00	\$902,120.15
Total									\$2,144,120.15

Significantly increasing the revenue that Grand County EMS receives from billing for EMS transports is impossible because the State of Utah regulates billing rates.

Grand County EMS does not have a sustainable business plan for the future.

### 6. EMS is not prioritized in Grand County.

EMS is viewed by residents, business owners, the medical community and visitors in Grand County as an essential public service similar to public works, law enforcement, and schools. However, in structure and funding, it is not treated as an essential service.

While a department of the county, Grand County EMS is expected to operate solely on the revenues it generates. Unlike other departments, however, Grand County EMS must rely on donated labor to balance its books. Furthermore, the wages that it pays are not in line with wages paid in other county departments – especially when considering the responsibility and risks associated with performing the job.

EMS developed as a volunteer service in Grand County. As a result, it appears that the county is reluctant to subsidize EMS and support a paid, full-time staff. This position calls into question whether EMS is best served by being a county department.

Further, EMS operations are spread between three facilities, and the condition of the current crew quarters is unacceptable.

### 7. Relationships between Grand County EMS and colleagues at public safety, hospital and park services are strained.

Working relationships between Grand County EMS and colleagues at public safety, the local hospital and the National Park Service appear to be strained and less than fully collaborative. The issues impacting these relationships appear to be associated with:

- when EMS is called,

- the reach and authority of EMS,
- the role EMS plays in backcountry responses,
- the development of ALS services,
- the increasing responsibility and accountability that EMS has for providing out-of-hospital healthcare, and
- competition for limited resources.

The issues appear to have historical roots. They also may be related to the lack of system-wide EMS planning, as well as how EMS is viewed, understood and undervalued in Grand County.

**8. The opportunity to participate in backcountry EMS is an important reason that many employees want to be part of Grand County EMS.**

The interesting and beautiful geography of Grand County is an inviting backcountry destination that attracts many EMS workers who are willing to volunteer simply to have an opportunity to practice EMS in this unusual environment. Grand County EMS employees readily acknowledge that the backcountry is a prime reason people want to work there. Employees come from far beyond Grand County for the opportunity to work in the backcountry.

Backcountry response is an important part of Grand County EMS' business, but only represents about 12 percent of its calls. Backcountry response is resource-intensive (time and equipment) and demands specialized skill and training. While the backcountry may be a major attractor in recruiting staff, it may draw undue attention and resources away from the regular 911 and interfacility transfer business.

**9. Grand County's EMS leadership is burdened by having to work in both administration and on the ambulance.**

The Grand County EMS director and assistant director are shouldering significant levels of call time because of insufficient staffing. They frequently are continuously on call to ensure that the schedule is full and that there are three units are available to respond. This situation is not sustainable long-term.

As Grand County EMS continues to meet the growing healthcare needs of the community and its more than one million visitors, the EMS director and assistant director must focus on leading and managing the department (creating, planning, developing and building creating), not using their time covering shifts and taking calls. It also appears that the current leaders are trying to fill too many roles in the department (i.e. education, quality, scheduling etc.) and could benefit from additional leadership and management help.

The salaries of the leadership team are low and are not commensurate with expectations, workload and salaries for similar leadership positions and responsibilities.

**10. Finding and keeping an engaged workforce that is willing to provide all aspects of EMS (not just backcountry) will be a major challenge going forward.**

Like many other EMS agencies in Utah and across the United States, Grand County EMS faces workforce shortages. A shortage of workers is a national trend.

“Our capability to provide adequate pre-hospital care to citizens in need across the country has become greatly diminished. Depleted volunteer numbers and lack of adequate career staffing levels have impacted our ability to provide high quality care. The current staffing shortages in EMS have taxed our response system, increased response times and left patients without adequate levels of care. We will continue heading down this path until everyone is made aware of the problem and measures are taken to stave off impending disaster.”<sup>20</sup>

This trend is related to declining volunteerism, increasing demands of the job, relatively low wages paid to EMS workers, and the increasing demand for long-distance transports in rural areas.<sup>21</sup>

Grand County EMS is experiencing increasing challenges with finding workers who are willing and able to fill regular shifts. In planning for the future, fielding a reliable and high quality workforce may be the department’s greatest challenge.

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<sup>20</sup> Peluse, S. “Critical Staffing Shortages.” *EMS Insider* 9-09-15. retrieved from <http://www.jems.com/ems-insider/articles/2015/07/critical-staffing-shortages.html>

<sup>21</sup> EMS Workforce for the 21st Century: A National Assessment (2008). NHTSA’s Office of EMS.

## VI. Recommendations

### **1. Grand County EMS should build on past successes and continue to make changes that ensure the provision of high quality EMS in Grand County.**

Grand County EMS should build upon the success of the past four years and continue the trend of:

- developing leadership and management capacity,
- improving services delivered,
- ensuring reliability,
- increasing the level of care provided,
- implementing best business practices,
- strengthening workers' skills,
- replacing donated labor with paid labor,
- creating an inviting work environment, and
- assuring quality of care.

### **2. Grand County EMS should build a business plan for sustainable EMS in Grand County that defines the right model for EMS, includes appropriate resource deployment, and accounts for the full cost of EMS.**

Planning for the future demands a sustainable business plan. Grand County EMS must develop a comprehensive business plan that envisions the gradual establishment of the following:

- Staffing of three ambulance units 24/7;
- Replacement of donated labor with fully paid staff for three units;
- The creation of an employment value proposition (wages, benefits, opportunities) that ensures the development, recruitment and retention of a quality workforce;
- The development of a reasonably sized leadership team that accounts for leadership, management, and supervision, and fits the needs of the organization;
- Appropriate vehicles and equipment and regular replacement;
- Prioritization of interfacility transfers;
- Acquisition/development of a reasonably sized facility; and
- Use of on-call or volunteers to staff backcountry needs.

This plan should clearly project all costs and revenues from billing for services, and identify any needed subsidy. SafeTech Solutions estimates the full cost of annual operation to be approximately \$2.1 million.

### **3. Grand County EMS should identify possible and appropriate funding resources.**

As part of the development of a sound business plan, Grand County EMS must identify funding resources. Some of the potential funding resources suggested during this

assessment include:

- County general fund,
- Special healthcare taxing district tax,
- Transient Room Tax.

Each of these options presents challenges and opportunities that will become clear with more exploration and investigation.

**4. Grand County EMS should identify the best and most appropriate “home” for Grand County EMS.**

Best ownership of EMS in Grand County can be clarified with a business plan and the identification of the likely funding resources. During this assessment, the following options were discussed:

- Remain a county department,
- Become part of the Canyonlands Health Care Special Service District,
- Become an independent not-for-profit organization,
- Become part of the Grand County Sheriff’s Office,
- Become part of the Moab Regional Hospital, or
- Contract for EMS services from an out-of-county vendor.

## VII. Implementation Steps

Grand County EMS should implement the above recommendations gradually. A stepped implementation process starts with the development of positive relationships in the community, telling a powerful story about EMS, and gradually winning support for a more sustainable EMS system in the future. SafeTech Solutions recommends the following implementation steps.

### **1. Engage the community in planning for a sustainable future.**

The leaders of Grand County EMS should involve a variety of key stakeholders in planning for the future. Form a local EMS stakeholder group to review and build support for a business plan, funding options, and future “home” for EMS. This group should include residents, business leaders, municipal and county officials, hospital leaders, medical community leaders, law enforcement, and the Park Service.

### **2. Gradually transition to a more sustainable EMS model, while continuing to use current resources and stop-gap solutions that maintain current levels and quality of care.**

As community support builds for a more sustainable EMS system, gradually transition EMS to its new “home” by implementing a sound business plan and financial model. A gradual transition will require temporary continued use of current resources, looking for stop-gap solutions, and ensuring that all stakeholders involved in the transition are successfully led through the change.

### **3. Seek local medical direction to help solidify the value of EMS in the community.**

A medical director can play an important role in building community support for EMS. The physician’s knowledge, expertise, position and relationships can be a powerful asset in building local support for EMS and navigating local political issues. A local medical director is a powerful way of showing stakeholders that EMS is truly a local service.

### **4. Strengthen the relationship between Grand County EMS and local medical staff to ensure that Grand County EMS is the first choice for interfacility transfers.**

Interfacility transfers are likely to increase in coming years. Transfers are an important revenue source and an important service to provide in a rural area with limited medical specialties. Grand County EMS should seek to gain as much of the transfer business as possible by developing a trusting, open and mutually beneficial relationship with local hospital and medical staffs.

**5. Strengthen Grand County EMS' workforce value proposition to improve recruitment and retention of EMS personnel.**

Finding and keeping quality EMS workers, especially paramedics, is likely to be an ongoing challenge for Grand County EMS. Through appropriate planning and budgeting, Grand County EMS should ensure that its recruiting value proposition (pay, benefits, career opportunities and perks) is competitive and compelling enough to attract workers from across Utah and beyond.

**6. Deploy backcountry resources in a manner that capitalizes on a willing and engaged workforce but does not impede daily 911 and transfer operations, or negatively impact leadership and management.**

**7. Continue to move toward a full-time, paid staffing model, while respecting and honoring volunteers and volunteerism in the organization.**

As funding allows, daily 911 and transfer operations should be staffed with fully paid employees. However, volunteerism has been a large part of Grand County EMS' history and culture. Grand County EMS should endeavor to use volunteers or on-call employees in ways that honor the dedication of those who have consistently donated their time over the years without creating unobtainable expectations.