

SafeTechSolutions

Final Report

**ASSESSMENT
OF
EMERGENCY MEDICAL SERVICES
IN
SWEETWATER COUNTY, WYOMING**

December 2015



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Executive Summary

SafeTech Solutions spent four months in 2015 studying the EMS system in Sweetwater County. This study included four site visits, three community/group meetings, approximately 40 interviews with key stakeholders, extensive research about Sweetwater County and its EMS system, thorough analysis of Wyoming Ambulance Trip Reporting System data, and in-depth scrutiny of financial and operational data for each of the County's four active ambulance organizations.

Based on its findings, SafeTech Solutions recommends that Sweetwater County temporarily shore up its failing ambulance services to protect the public health while engaging in a long-term process of creating a single, unified, integrated countywide EMS system. Sweetwater County has significant resources and foundational structures already in place to create a countywide EMS system, and, led by the Ambulance Service Board, is well positioned to transition from the current patchwork of ambulance organizations to a new, more sophisticated, effective, efficient and sustainable countywide EMS system.

SafeTech Solutions recommendations are based on the following key observations:

1. There is a patchwork approach to the delivery of EMS in Sweetwater County.
2. EMS is a vital and desired element of healthcare and quality of life in Sweetwater County.
3. EMS in Sweetwater County has always been and continues to be subsidized.
4. Sweetwater County has significant resources within the County to fund EMS.
5. The current EMS system design is inefficient.
6. Workforce recruitment and retention is and will continue to be a major challenge in Sweetwater County.
7. As operating today, Wamsutter EMS and Eden Valley Ambulance are out of compliance with Wyoming state EMS licenses and are not sustainable.
8. There is a perceived lack of fairness among communities in Sweetwater County regarding how the financial burden of EMS is shared.
9. There is a lack of clarity surrounding the kind and level of EMS for which Sweetwater County residents are willing to pay.
10. The foundational structures and practices for a single, integrated, countywide EMS system already exist in Sweetwater County.

In summary, SafeTech Solutions recommends:

1. Sweetwater County should create a single, integrated, countywide EMS delivery system that is overseen by the County and appropriately funded.
2. Sweetwater County must assist the existing unsustainable ambulance agencies in the County in meeting immediate needs.
3. Sweetwater County should embark on a visioning process to create a single, integrated, countywide EMS system design.

4. Sweetwater County should support the vision for a single, integrated EMS system with a detailed system design.
5. Sweetwater County should create an implementation plan that incentivizes participation in the new EMS system.

I. Introduction & Assessment Methodology

Like many rural counties in America, Sweetwater County, Wyoming, faces growing challenges in meeting its out-of-hospital emergency medical care needs. Although the County currently has four active ground ambulance organizations, at least two of these organizations are struggling to meet all requests for service. All four face challenges to some degree related to financial sustainability, geographic isolation, low call volume, increasing labor costs, insufficient revenues, regionalization of healthcare, demands for ever-more sophisticated out-of-hospital clinical care, competition from air medical services, and workforce recruitment and retention.

The awareness of these challenges and the desire to overcome them led to the filing of two applications to the Wyoming Office of EMS and Trauma for grant money to fund assessments of the EMS systems in Sweetwater County. High Desert Rural Healthcare District filed an application on behalf of Wamsutter EMS, and the Sweetwater County Commission filed on behalf of Sweetwater Medics, Castle Rock Ambulance Service in Green River and Eden Valley Ambulance in the Eden-Farson area.

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. SafeTech Solutions has worked with rural Wyoming EMS agencies through its EMS Leadership Academy and previous assessments in Fremont County and Carbon County.

The goals of the Sweetwater County assessment project are to:

- Evaluate the sustainability, reliability and long-term survivability of EMS in the County, including the current structure and operations of the four active ambulance organizations;
- 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 and 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, interviews and community meetings. Three different consultants visited Sweetwater County to review documents and data, conduct interviews and assess

operations. In addition to evaluating the ambulance organizations (organizational structure, leadership and operations), SafeTech Solutions paid special attention to the social, economic, demographic, cultural and political issues in Sweetwater County, carefully analyzing data and making its recommendations based on industry best practices, as well as what is practical and doable in Sweetwater County. Recommendations were presented to key stakeholders in meetings in which the public was invited to provide feedback.

This report summarizes the findings, key observations and recommendations for the Sweetwater County EMS system. Also included in the appendices are individual reports on the assessment of the County's four active ambulance organizations, with key observations and recommendations for each.

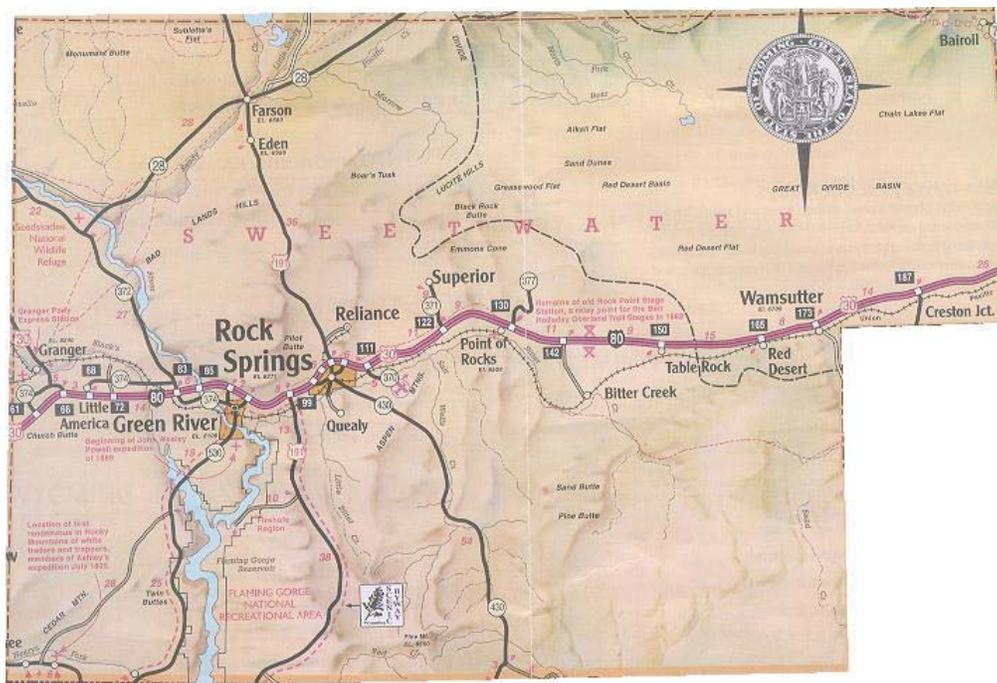
II. Overview of Sweetwater County

Sweetwater County's geography, climate, economy and demographics all inform and present unique challenges for the creation and delivery of out-of-hospital EMS.

The Land

Sweetwater County is a 10,427-square-mile county in the southwestern part of the state of Wyoming. It is nearly twice the size of Connecticut and larger than seven U.S. states (Rhode Island, Delaware, Connecticut, Hawaii, New Jersey, New Hampshire and Vermont). It is Wyoming's largest county by area and the eighth-largest county in the United States.

Because of its size, Sweetwater County has 568.8 highway miles, the most of any county in the state. Interstate 80, which runs from California to New Jersey, goes through the middle of Sweetwater County following the route of the Overland Trail and the Lincoln Highway. I-80 passes through the towns of Wamsutter, Rock Springs and Green River. U.S. Route 191 is the primary north-south connector in the County, running from the Utah border just east of Flaming Gorge National Recreation Area through Rock Springs, Eden and Farson toward Jackson and Yellowstone National Park.



Daily vehicle miles traveled on Sweetwater County's 500-plus miles of highway are estimated to be 2,459,412 by passenger vehicles and 898,183 by truck, well more

than any other Wyoming county.¹ Constant use of the major arteries through Sweetwater County results in frequent repair and construction on the highway, big rig accidents, and potentially hazardous winter driving that impacts ground ambulance transport times.²

The geography of Sweetwater County includes high plains, plateaus, buttes, mesas and canyons, all of which are part of the Wyoming Basin. Surface features reflect erosion by wind and water in a semi-arid, cold-temperature environment. Sweetwater County includes the Killpecker Sand Dunes, which are the largest living dune system in the United States.³ The relatively barren surface geography in Sweetwater County hides a rich deposit of underground minerals. Coal and trona are the most significant solid leasable mineral resources in the County and have been produced commercially for several decades. Oil shale resources also are present in commercial quantities.⁴

The Climate

The climate in Sweetwater County ranges from an average low of 10 degrees F in winter to an average high of 86 degrees F in summer. Precipitation averages about nine inches per year in a region that is considered to be semi-arid. Average snowfall in winter months is between six and eight inches per month. Generally, inclement weather does not adversely impact major arteries; however, High Desert Rural Health Care District reports that the town of Wamsutter can become “completely isolated during frequent winter I-80 closures caused by ice or blowing snow.”⁵

The Economy

Although originally settled by Native Americans, the land now known as Sweetwater County first experienced significant growth when the transcontinental railroad caused a demand for coal to power its locomotives in the late-1800s. Mining and railroad building thus went hand-in-hand; and ever since, Sweetwater County has been one of the nation’s primary sources of mineral resources, including oil and natural gas, trona, uranium, phosphate and coal. Annually, Sweetwater County produces 5.2 million barrels of oil, 237 million cubic feet of natural gas, 18.6 million tons of trona (soda ash), 287 tons of uranium, and 8.9 million tons of coal.⁶

¹ Source: 2013 state data, provided by HDRHCD

² Source: HDRHCD Narrative Analysis Needs Assessment Application, 2015

³ Source: TourWyoming.com

⁴ Source: BLM’s Solid Mineral Occurrence and Development Potential Report for the Rock Springs Field Office, August 2012

⁵ Source: HCRHCD’s Narrative Analysis Needs Assessment Application, 2015

⁶ Source: Rock Springs Business & Economic Development Alliance Sweetwater County Industry Profile, 2015

Because of its rich natural resources, Sweetwater County makes the third highest contribution in mineral taxes of any county in the state. In 2014, Sweetwater's total mineral taxable valuation was \$2,047,856,259, or 12.8 percent of the statewide total.⁷ Total ad valorem production tax assessed was \$136,274,730.

The People

With the growth of mining in the mid- to late-1800s, Sweetwater County began to attract large numbers of immigrants from all over Europe, as well as the Far East. Diversity became the hallmark of coal towns, and Rock Springs is infamous for its Chinese massacre in 1885, when white European miners killed 28 of their Chinese counterparts during a wave of anti-Chinese sentiment. Although ethnic diversity is more limited today, Rock Springs is still touted as the "Home of 56 Nationalities."⁸

Rock Springs (pop. 24,045) is the largest city in Sweetwater County, and many of its residents are descendants of original mining families. Rock Springs also is the oldest population center in the County, dating back to 1861 when it was one of the stage stops on the Pony Express route. It later was turned into one of the stops on the nation's first transcontinental railroad from Omaha to Sacramento. Green River (pop. 12,630) is the only other city in Sweetwater County and also serves as the County seat. The unincorporated areas of Eden and Farson and the Town of Wamsutter all have populations of fewer than 500 residents each. Eden and Farson are four miles apart and share a post office, community hall, volunteer fire department, ambulance service and K-12 school.

In addition to serving its residential population, Sweetwater County must account for service to transients, who travel through or to the County for work and pleasure. Informants in Wamsutter report that the town's resident population significantly increases during the workweek by dozens of oil and gas field laborers, many of whom live as far away as Casper and Laramie and who commute to Wamsutter on a daily or weekly basis. In addition to workers, parts of Sweetwater County attract tourists. Flaming Gorge National Recreation Area, the Pilot Butte Wild Horse Scenic Loop Tour, and the Big Sandy Dam and Reservoir are good examples of some of the natural attractions that bring both people and vehicles to the County. This transient population adds an increased burden in terms of traffic, motor vehicle accidents, industrial related injuries and EMS.

The U.S. Census Bureau estimates that there are currently about 45,000 people living in the entirety of Sweetwater County, an increase of about 2.7 percent since the 2010 census. Eighty percent are white; 15 percent identify as Latino or Hispanic. In terms of education, 91 percent report having completed high school; 18 percent have a bachelor's degree or higher.⁹

⁷ Source: Wyoming Department of Revenue 2015 Annual Report

⁸ Source: Rock Springs Chamber of Commerce, April 2015

⁹ Source: US Census Bureau

A majority of Sweetwater County residents own their homes, and at \$71,525, median household income is more than \$14,000 higher in Sweetwater County than the state average. This is due to the large number of people employed in the relatively high-paying mining industry.¹⁰ Unemployment in the County is about four percent, the same as the statewide average. Most residents are employed in the private sector, although two of the County's largest employers are the local school districts. Twenty-seven mining companies employ thousands of workers.

Sweetwater County's Top 10 Employers (by size)

Organization	Number of employees
Sweetwater School District #1	1,258
Tronox (trona mining & processing)	969
Halliburton (industrial support)	620
Tata Chemicals (trona mining & processing)	503
Sweetwater School District #2	460
Solvay Minerals (trona mining & processing)	459
OCI Chemicals (trona mining & processing)	415
Bridger Coal Company	407
Pacific Corp. (utility company)	362
Memorial Hospital	346

Source: Rock Springs Chamber of Commerce, April 2015

Examining Sweetwater County's population centers even further, one finds the most community stability in the more established cities of Rock Springs and Green River, where, for example, median household income is \$70,918 and \$71,766, respectively. The median value of owner-occupied housing units in Rock Springs is \$185,100 and \$202,400 in Green River. Median gross rent is just above \$900 in both cities, which is about \$130 more than the state average.¹¹

Although comparable census data is not available for Wamsutter and Eden Valley, anecdotal evidence suggests that the economy in these more rural parts of the County is not as robust. Informants in Wamsutter report that the population there is more transient due to the boom/bust nature of the gas and oil industry. Most of the housing in Wamsutter consists of pre-fabricated homes or trailer homes, and there are relatively few retail services in the town to support its residents.

The Health & Well-Being of the County Population

University of Wisconsin Population Health Institute and the Robert Wood Johnson Foundation each year publish health rankings that shed light on the health and

¹⁰ Source: Wyoming Department of Workforce Services, Research & Planning, September 2015

¹¹ Source: US Census Bureau

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 puts the overall health of Sweetwater County residents 17th among 23 Wyoming counties. In looking at Health Factors alone (including smoking, obesity, alcoholism, access to clinical care, injury deaths and other factors), Sweetwater County ranks 20th of 23, and in Quality of Life, it has the worst ranking in the state.

What do these rankings mean? More Sweetwater County residents report that they are in poor or fair health than any other groups in the state. Similarly, residents report more “poor physical health days” and more “poor mental health days” per month than residents in any other Wyoming County. In terms of quantitative data, 9.5 percent of newborns in Sweetwater County are born at low birthweight compared to 8.6 percent statewide. Twenty-four percent of Sweetwater residents are smokers compared to 20 percent statewide. Twenty-nine percent are obese, compared to 26 percent statewide. Numbers in Sweetwater County are higher than the state average for numbers of people who report excessive drinking and for alcohol-impaired driving deaths. All of these factors impact healthcare and EMS systems.

County Healthcare Facilities

Sweetwater County residents are served by Memorial Hospital in Rock Springs, a 99-bed acute care facility that is designated as a Wyoming Area Trauma Hospital (comparable to an ACS Level III facility). The 25-bed Emergency Department is staffed by physicians who are employed by the University of Utah. Memorial is several years into a partnership with University of Utah that also includes air medical services. According to the terms of that partnership, at least four Memorial ED physicians must be residents of Sweetwater County; others may be physicians in training with the University in Salt Lake City.

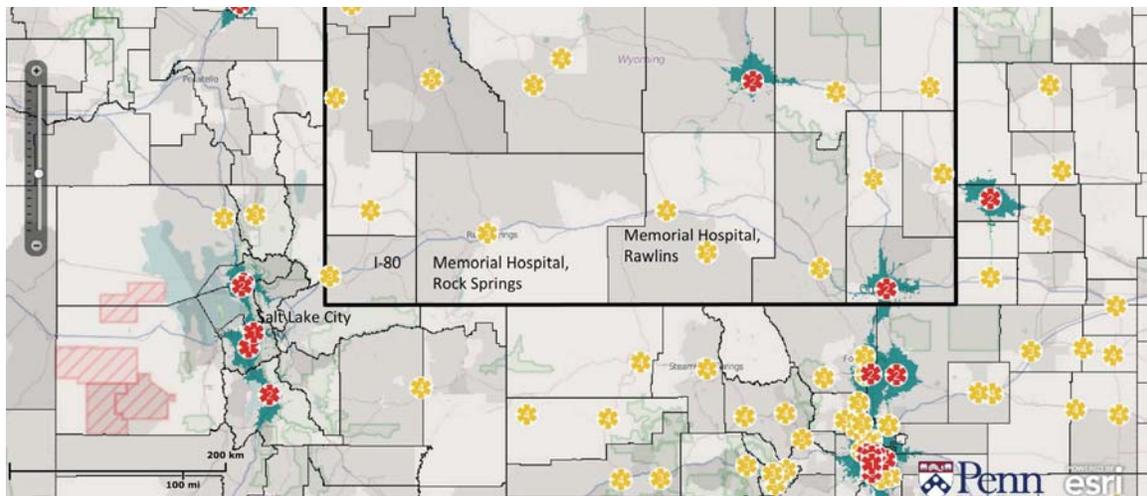
Memorial Hospital physicians and nurses are available 24/7 to provide ATLS (Advanced Trauma Life Support), ACLS (Advanced Cardiac Life Support), PALS (Pediatric Advanced Life Support) and TNCC (Trauma Nurse Certified). Originally called Miners’ Hospital, Memorial Hospital serves an average of 23,000 patients each year. The initial authority for construction of the Miners’ Hospital was included within the Constitution for Wyoming when the territory was admitted to the Union on July 10, 1890.

Residents on the eastern side of Sweetwater County meet their healthcare needs by traveling out of county to Memorial Hospital of Carbon County in Rawlins. Memorial

in Rawlins is a 25-bed critical care facility that serves as the only Community Trauma Hospital (a state designation with criteria derived from ACS Level IV) in Carbon County. In addition to a 24/7 Emergency Department, the hospital offers surgery, intensive care, radiology, obstetrics and other medical specialties. Rawlins is a 40-mile drive from Wamsutter along I-80 compared to 68 miles from Wamsutter to Rock Springs.

There is no Level 1 or Level 2 Trauma Center in Sweetwater County. Patients who need very high levels of care are transported to Salt Lake City, which is 185 miles from Rock Springs or two hours and 45 minutes by ground ambulance one-way. Air medical transportation is available through Memorial Hospital in Rock Springs.

Federally Designated Trauma Centers In and Around Sweetwater County



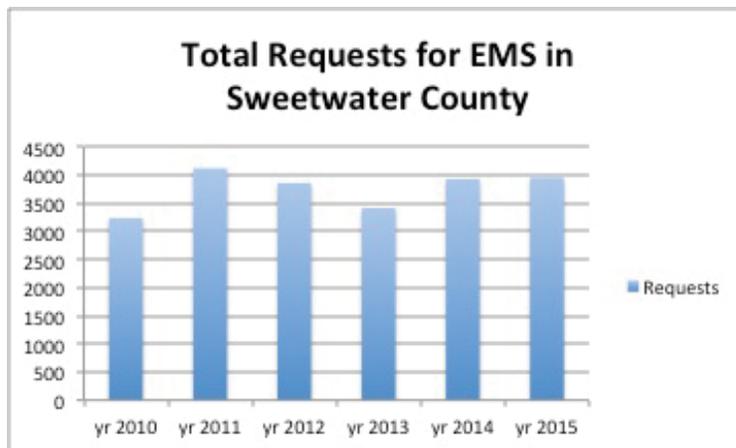
Two nursing homes serve Sweetwater County: Sage View Care Center in Rock Springs and Castle Rock Convalescent Center in Green River. Sage View also provides hospice care. Assisted living is available for the ill and elderly in several facilities in and around Rock Springs and Green River. Sweetwater County Community Nursing Service has clinics in both cities to serve adults and children with immunization, HIV testing, home health and basic medical services.

Since fall 2015, residents in and around Wamsutter have been served by the reopening of the Wamsutter Community Health Center, providing limited primary, urgent and occupational medical care. The clinic is operated by Memorial Hospital of Rock Springs and funded by High Desert Rural Health Care District.

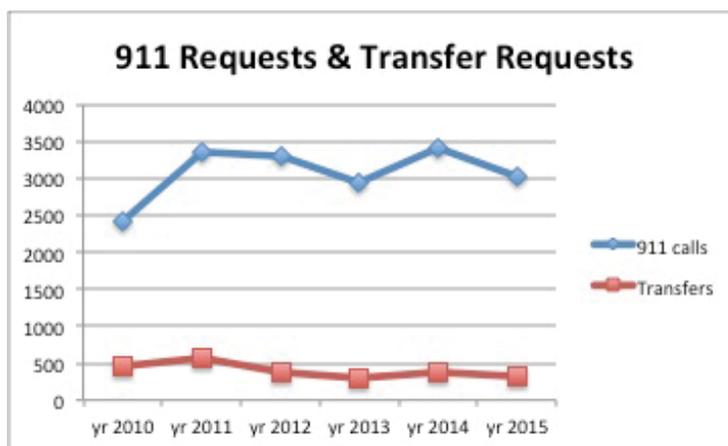
III. Overview of Sweetwater County EMS System

EMS in Sweetwater County includes emergency dispatch, first response, ambulance service, air medical service, receiving hospitals and medical oversight and quality assurance. Ambulance services developed locally and organically without comprehensive planning or provision for long-term sustainability. Over the past three-plus decades, however, various parts of the emergency medical system have sought to work collaboratively while maintaining local autonomy.

The number of requests for EMS in Sweetwater County in 2015 is estimated to be 3,956. This number is relatively comparable to the annual EMS run volume in the County for the past five years, with a high of 4,118 EMS requests in 2011 and a low of 3,231 in 2010.¹²



More than 3,000 of these requests for service came through the 911 system. The balance is mostly interfacility patient transfers.¹³



¹² Source: WATRS

¹³ Ibid.

EMS calls in Sweetwater County are handled by four independent ambulance organizations: Sweetwater Medics, Castle Rock Ambulance Service, Wamsutter EMS and Eden Valley Ambulance. Each of these agencies operates completely independently with its own organizational structure, director, staff, equipment, facilities, vehicles and budget. While there is some cooperation among services, it is limited to mutual aid response or when a higher level of care is needed.

Based in Rock Springs, Sweetwater Medics is the largest of the four ambulance organizations, serving approximately 24,000 residents living over 3,095 square miles in and around Rock Springs. A private, for-profit, ALS service, Sweetwater Medics is funded by patient billing and a County subsidy.

Castle Rock Ambulance Service is the second-largest EMS provider in the County, responsible for some 24,000 residents living in 1,834 square miles in and around Green River. Part of Castle Rock Hospital District, Castle Rock Ambulance is funded primarily by billing patients for medical transport and a County subsidy, as well as financial and operational support from the Castle Rock Hospital District.

Wamsutter EMS covers some 1,500 residents¹⁴ and 2,076 square miles in and around the Town of Wamsutter. Owned and operated by the Town of Wamsutter, it operates with volunteers only and is funded by patient billing, the Town of Wamsutter, High Desert Rural Health Care District and donations.

Located in the northwest part of the county, Eden Valley Ambulance responds to some 660 people¹⁵ living in 1,834 square miles, including the unincorporated areas of Farson and Eden. An all-volunteer organization, Eden Valley Ambulance is owned and operated by the Eden Farson Fire Control District and funded through a mill levy.

All together, the four Sweetwater County EMS agencies operate six staffed ambulances (two based in Rock Springs, two in Castle Rock, one in Wamsutter and one in Eden Valley) to respond to the approximately 4,000 calls each year. Total employees in the Sweetwater County EMS system number approximately 76. Total number of vehicles is 14, plus there are two air medical units. The system uses four ambulance stations/garages in four geographically diverse locations, is subsidized through three taxing districts as well as the County General Fund, regularly transports patients to two hospitals in and outside the County, and dispatches through two communications centers.

¹⁴ Population served by each ambulance organization is based on designated First Call-Out Area, not on census population data.

¹⁵ Ibid.

Sweetwater County: A Tally of the EMS System

	Sweetwater Medics	Castle Rock Ambulance	Wamsutter EMS	Eden Valley Ambulance	TOTALS
Calls (2014)	2,641	1,154	60	74	3,929
Employees	36	26	6	8	76*
Director	1	1	1	1	4
Admin.	0	3	0	0	3
Paramedic	11	2	0	0	13
EMT-I, A	8	17	4	4	33
EMT	13	4	2	3	22
Other	6	4	0	1	11
Vehicles	7	3	2	2	14
Stations	1	1	1	1	4
Tax. District	0	1	1	1	3
Hospitals					2
Com Center					2
Air Medical					2

* Employees do not add up to 76 because some employees are counted in more than one category.

Communications & Dispatch

Ground ambulances are dispatched by a countywide 911 center. The Sweetwater Combined Communications Joint Powers (SCCJP) Board dispatches for Sweetwater Medics, Castle Rock Ambulance and Eden Valley Ambulance, as well as Rock Springs PD, Green River PD,



**Sweetwater Combined Communications
Joint Powers Board**

Granger PD, Bairoil PD, Rock Springs FD, Green River FD, Sweetwater County FD, Sweetwater Fire District #1, Farson FD, Grander FD, Superior FD, and the County Emergency Management Agency. There are currently no representatives of the EMS agencies on the SCCJP Board.

Unlike the rest of the county, emergency medical calls in the Wamsutter area are routed to Carbon County Communications Center in Rawlins, which dispatches Wamsutter EMS and Carbon County EMS in the eastern part of Sweetwater County. Although SCCJP does not charge for dispatch services, Wamsutter EMS pays

approximately \$1,000 annually to Carbon County Communications Center for 911 response and dispatch.

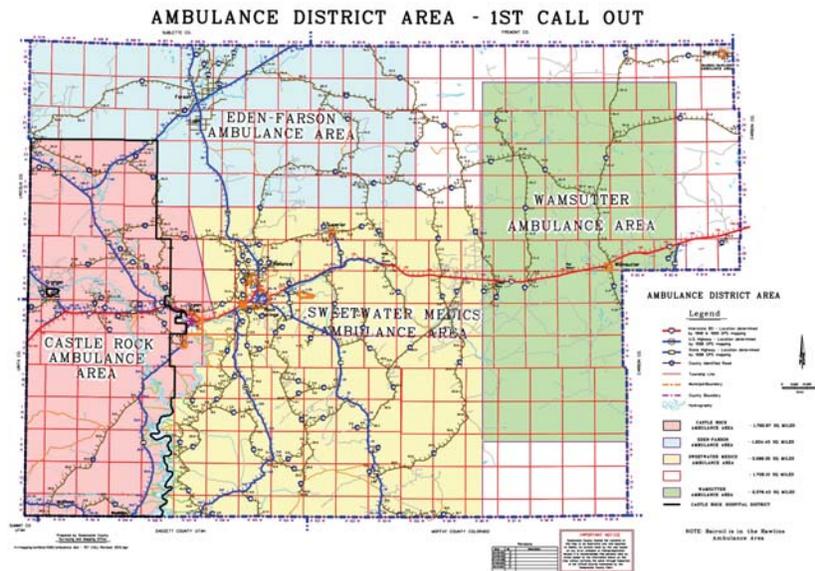
Radio communications in Sweetwater County are part of the WyoLink statewide, trunked, VHF P-25-compliant public safety communications system. The system is designed to coordinate and integrate communications among state, local and federal public safety agencies. Paging is conducted through analog paging technology. Throughout Sweetwater County, radio coverage is reported to be strong in most areas.

First Response

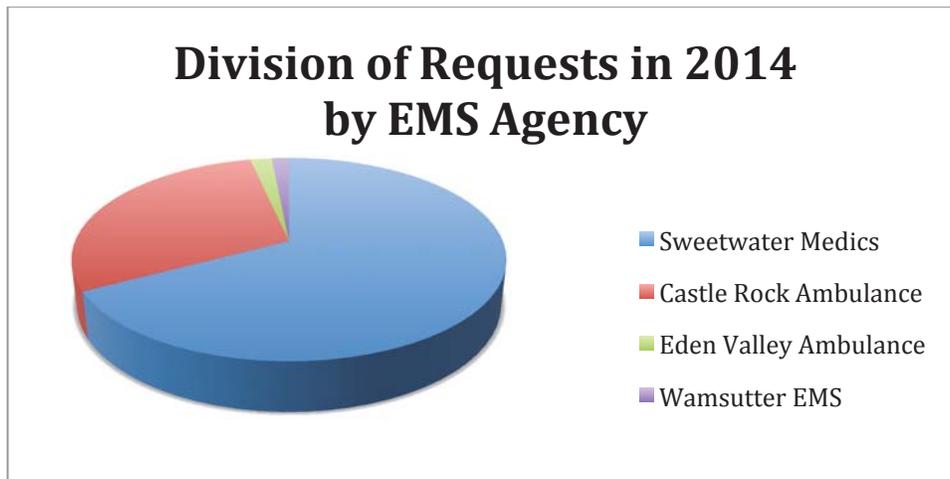
There is no uniform system of first response in Sweetwater County. Law enforcement agencies are generally started to co-respond with EMS agencies, but in some areas, law enforcement may not be available. Fire departments first respond to assist with heavy rescue and extrication. The Rock Springs Fire Department first responds to all medical emergencies with paramedics and ALS engines within city limits. Outside of Rock Springs, first response is provided by Sweetwater County Fire District #1. The fire department in Green River does not provide first response to Castle Rock Ambulance Service. Outside of the Rock Springs area, rural fire departments increasingly have struggled to find staff and may not respond when called. Some of the trona mines have first responders on site and operate ambulance services that may transport on and off site.

911 Response & Medical Transport

Dispatch sends ambulances from the four County EMS organizations based on a coordinated system of ambulance districts, also known as first call-out areas, as designated in the following map:

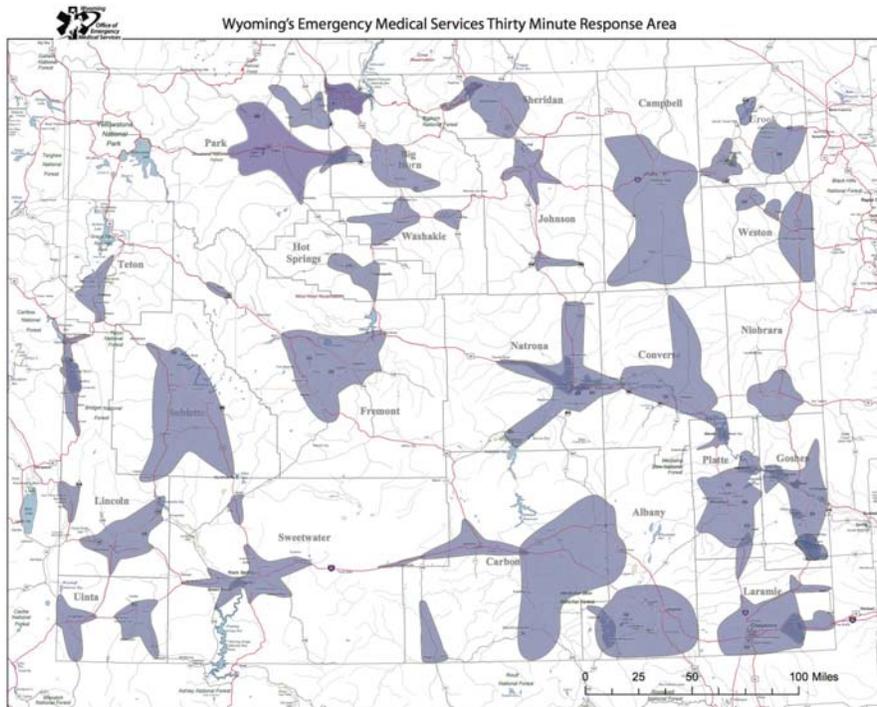


Sweetwater Medics is responsible for the largest (3,098 square miles) and most populated (24,000 people) of the first call-out areas, and as a result responds to the most calls. Castle Rock Ambulance in Green River covers 1,783 square miles and 24,000 people and has the second-largest call volume. The all-volunteer organizations in Wamsutter, covering 2,076 square miles, and Eden Valley, covering 1,834 square miles, respond to many fewer calls, mostly because of the rural nature of their first-in call areas. In 2014, Sweetwater Medics received 2,641 requests for service, Castle Rock Ambulance 1,154, Eden Valley Ambulance 74 and Wamsutter EMS 60.



Beyond the first call-out area, the ambulance organizations back up one another according to a system of mutual aid agreements. EMS in Sweetwater County also is provided by Carbon County EMS, which is simultaneously dispatched to calls in the eastern part of Sweetwater County due to the unreliability of Wamsutter EMS. Some local industrial sites also provide private ambulance response for their personnel.

Despite the presence of EMS in the population centers, geographically, much of Sweetwater County cannot be reached in 30 minutes or less, according to the map below from the state Office of EMS.



Transport from an emergency scene to definitive medical care is a challenge in Sweetwater County because the area has so few hospitals. As mentioned above, the only hospital in the County is located in Rock Springs, which can be a two-hour drive or more from the far reaches of the County. Memorial Hospital in Rawlins is an option for EMS patients in the easternmost part of the County; however, it is not an option for patients who need a high level of care. Ground transport to the Level I Trauma Center in Salt Lake City can take six hours round-trip or more (depending on time spent at the receiving hospital), which means that an ambulance transporting patients to Salt Lake City is out of service and unavailable for other calls.

Air Medical Service

When ground transport to Salt Lake City is not an option (because a patient is too critical or because weather or other reasons prevent a ground crew from making the trip), Sweetwater County has two options for air medical transportation. The first is AirMed, owned and operated by University of Utah, which maintains both a fixed wing plane at Rock Springs-Sweetwater County airport and a helicopter at Memorial Hospital. The other is Guardian Flight, which is available to serve patients at Memorial Hospital in Rock Springs, although it no longer maintains a base there.

AirMed's flight crew consists of a flight nurse, a flight paramedic and pilot. The fixed wing team is stationed in town just minutes from the hospital. The rotor wing team is stationed at the hospital. According to AirMed, 2015 call volume was as follows:

2015 AirMed Call Volume	Rotor Wing	Fixed Wing
January	15	16
February	14	13
March	14	20
April	17	22
May	11	28
June	18	25
July	27	26
August	26	22
September	22	21
October	19	22
Total (10 months)	183	215
Approximate Annual	208	248
Scene flights/year	18	0

The approximate helicopter flight time from Rock Springs to Farson is 17 minutes. The approximate flight time from Rock Springs to Wamsutter is 30 minutes.

Of course, air medical transport also has its limitations. For the rotor wing, the ceiling and visibility are limiting factors for accepting flights. During the peak of the winter months, there may be occasions that the helicopter is unable to fly one to three days a week. The rotor wing is a high-maintenance machine and is out of service several hours a month. The level of and time spent on maintenance depend on hours of use. The fixed wing is able to operate in most weather and requires less down time for maintenance. In addition to the helicopter stationed in Rock Springs, there are five rotor-wing aircraft located in the Salt Lake Valley, as well as one fixed-wing aircraft located at the Salt Lake City International Airport. These aircraft function as a secondary means of transport if Rock Springs' aircrafts are on a mission or out of service.

Industrial EMS

Some of the trona mining operations in Sweetwater County operate private industrial ambulance services staffed by first responders and mine employees. These services operate within Wyoming statutes but were not part of this sustainability assessment.

Receiving Hospitals

Most EMS transports in Sweetwater County go to Memorial Hospital in Rock Springs, a 99-bed acute care facility that is designated as a Wyoming Area Trauma

Hospital (comparable to an ACS Level III facility). Residents on the eastern side of the County are transported to Memorial Hospital in Rock Springs or Memorial Hospital in Carbon County in Rawlins. (Despite having the same name, the two hospitals are not affiliated with one another.) Rawlins is a 40-mile drive from Wamsutter along I-80, compared to 68 miles from Wamsutter to Rock Springs.

There is no Level 1 or Level 2 Trauma Center in Sweetwater County. Patients who need very high levels of care generally are transported to Salt Lake City, which is 185 miles from Rock Springs or two hours and 45 minutes by ground ambulance one-way. Air medical transportation is available to higher levels of acute care through Memorial Hospital in Rock Springs.

Medical Oversight & Quality Assurance

Sweetwater Medics, Castle Rock Ambulance and Eden Valley Ambulance contract for medical direction from Philip Najm, M.D., an emergency medicine physician at Memorial Hospital in Rock Springs. Najm provides regular feedback on calls, occasionally attends EMS training sessions, and takes calls and emails as necessary. Najm oversees the same medical protocols for all three EMS organizations. Online medical control for these organizations is provided by Memorial Hospital Emergency Department. Each EMS agency has its own independent agreement with its medical director. Najm receives no compensation for serving as medical director.

Wamsutter EMS contracts for its medical direction from Dwayne Ables, D.O. An emergency medical physician, Ables is based at Memorial Hospital in Rawlins. Ables provides feedback on all aspects of EMS operations. Online medical control is provided to Wamsutter EMS by Memorial Hospital in Rawlins. Ables receives no compensation for serving as medical director.

All EMS organizations in Sweetwater County have their own approach to ensuring the quality of service delivered. There is no uniform approach to data collection in the County. On a statewide level, all EMS organizations submit call data to the Wyoming Ambulance Trip Reporting System (WATRS); however, WATRS is not used in the County as a quality assurance tool.

Although there is some variance of quality and level of care provided by the ambulance organizations based on experience and level of training, emergency department staffs at both receiving hospitals report that prehospital emergency care provided by County ambulance crews is acceptable. Patient care protocols are consistent with industry norms, and no major concerns about clinical care on the ambulance were reported.

The entirety of EMS in Sweetwater County is overseen by the Sweetwater County Ambulance Service Board. The Board is comprised of seven individuals representing various parts of the EMS system. Current Board members include the Rock Springs Fire Chief, Highway Patrol rep, Memorial Hospital CEO, Sweetwater County Sheriff,

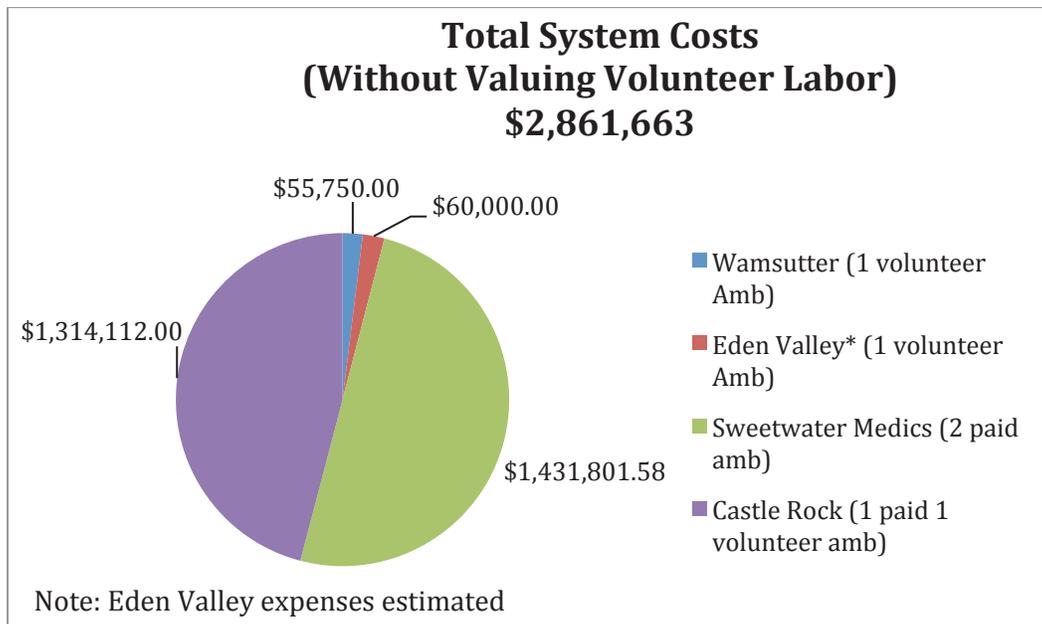
Sweetwater County Fire District #1 rep, Rock Springs Police Chief and an at-large appointee. The Board meets monthly.

EMS Education

Basic Life Support, First Responder and EMR education is provided locally by the four ambulance organizations in Sweetwater County. Western Wyoming Community College has an EMT program. Paramedic education is offered at Casper College, Laramie County Community College and Weber State University. There is some collaboration among the County EMS organizations to provide continuing education for EMS personnel, although continuing education can be a challenge for personnel for whom EMS is not their primary occupation.

EMS System Finance & Funding

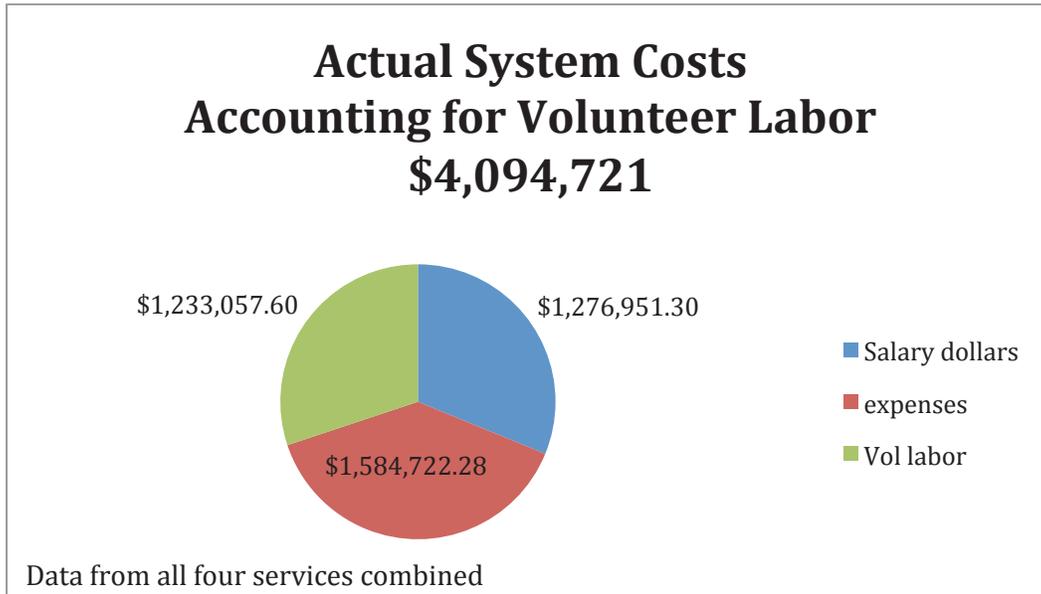
The four active ambulance organizations report spending just over \$2.8 million on the delivery of EMS to Sweetwater County residents. SafeTech Solutions derived this total by adding up reported operating expenses (vehicles, fuel, medical supplies, other supplies, ambulance equipment, facilities, communications and paid labor). This total does not account for the cost of first response or the cost of air medical service in Sweetwater County, nor does it take into account the value of volunteer labor.



This total of \$2.8 million for EMS is deceptively low because it fails to take into account the valuation of volunteer labor that is subsidizing EMS operations in three of the four ambulance organizations in Sweetwater County. This hidden cost is not unique to Sweetwater County. Rural EMS systems across America have failed to

account for the value of volunteer labor for years, making rural EMS systems appear more economically viable than they truly are.

SafeTech Solutions calculated the valuation of that volunteer labor in Castle Rock, Wamsutter and Eden Valley at \$1,233,057.¹⁶ When one accounts for volunteers, the true total cost of the EMS system in Sweetwater County exceeds \$4 million.



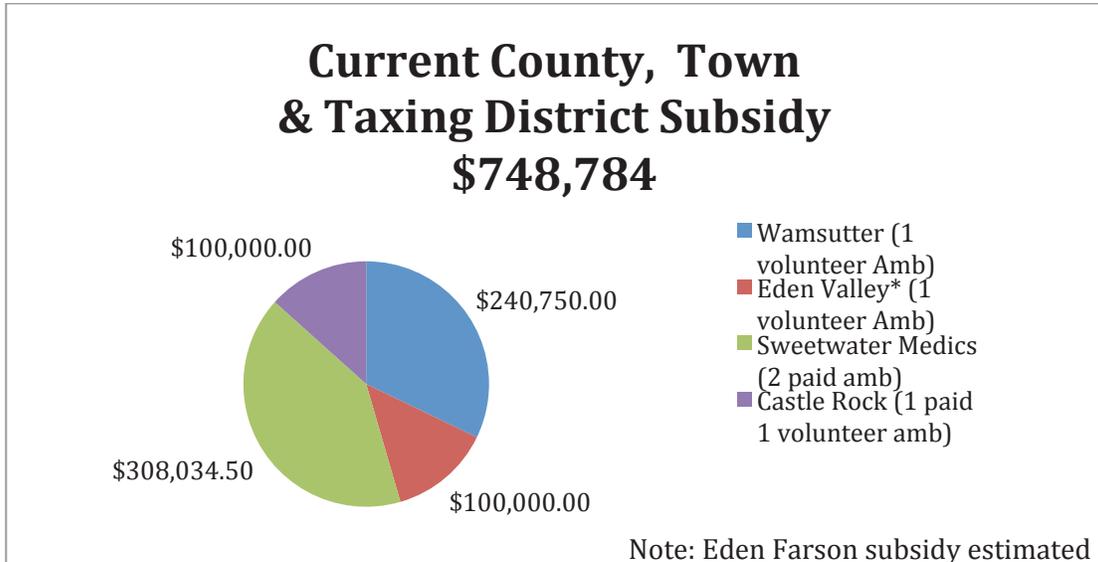
The challenge for Sweetwater County, like most other rural EMS systems in America, is that volunteerism is drying up. As a result, Sweetwater County will have to find other sources of revenue to fund its ambulance staffing needs.

EMS in Sweetwater County today is funded in several ways. Sweetwater Medics, Castle Rock Ambulance and Wamsutter EMS bill patients for transport. Revenue collected through patient billing accounts for \$1.8 million, or about 60 percent of the revenue necessary to fund the current EMS system.¹⁷ More modest revenues result from charging for public education classes, event standby, and other miscellaneous medical transport services. In some cases, the ambulance organizations collect donations (both cash and in-kind) from local businesses and residents. The other

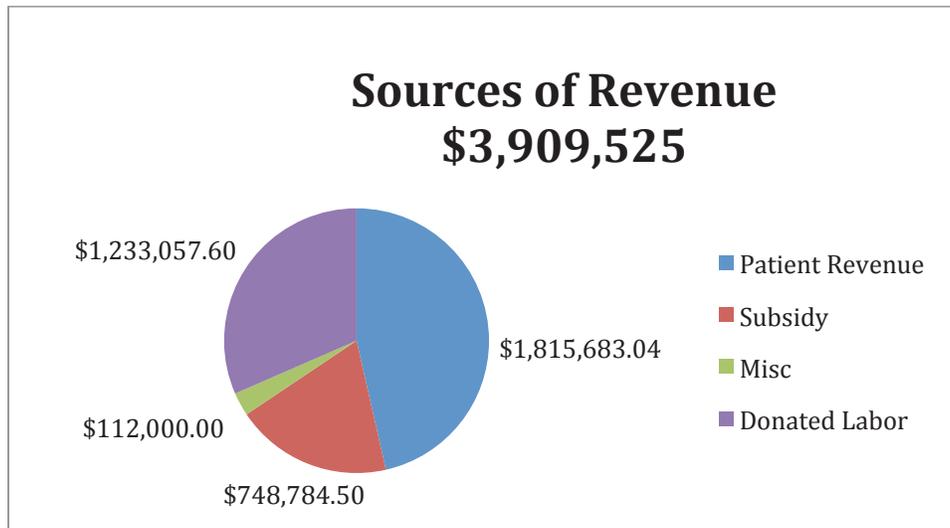
¹⁶ A note about SafeTech Solutions' determination of the value of volunteer labor: The value of donated labor is calculated using the value of a volunteer hour, which in Wyoming is \$23.46/hour, as determined by the Independent Sector, a not-for-profit organization that calculates value of volunteer hours for all 50 states using Bureau of Labor Statistics data. The \$23.46/hour rate includes the cost to replace a volunteer with a full-time, benefitted employee. In our experience, Independent Sector volunteer labor value is generally accurate, although tends to be on the conservative side. SafeTech Solutions calculated the value of volunteer labor based on \$23.46/hour multiplied by the number of people and the number of hours that volunteers served on-call or on-duty shifts.

¹⁷ Although patient revenues fund about 60% of current needs, if the volunteer subsidy disappeared entirely, current levels of revenue from patient transports would fall far shorter of meeting total need.

major funder of the EMS system is tax subsidies that come through the County General Fund and special taxing districts. Annual subsidies for each EMS agency are as follows:¹⁸



All totaled, taxes being funneled into the EMS system annually account for \$748,784, just under one-quarter of the funds that would be necessary to pay for the current EMS system should the volunteer subsidy disappear entirely.



It should be noted that these calculations do not take into account either the cost of or revenues from the air medical component of the EMS system, which currently is operated by an out-of-state vendor under contract with Memorial Hospital in Rock

¹⁸ The calculation of subsidies is based on 2015 figures and does not include the one-time \$0.06 sales tax that funded Castle Rock ambulances and equipment in 2013.

Springs; however, SafeTech Solutions estimates the value of air medical transport revenues to be \$13,900,000. Operational expenses were not assessed.

IV. Key Observations

There is a patchwork approach to the delivery of EMS in Sweetwater County.

EMS in Sweetwater County developed locally and organically without countywide design or coordinated planning and continues to operate as such.

Over the years, various public and private entities have owned the local ambulance organizations, and they have used a variety of means to fund and subsidize them. Rock Springs has a long history of for-profit ambulance operations. The ambulance in Green River once was owned by the city and is now owned by a taxing district. Ambulance service in Wamsutter once was provided by a not-for-profit and is now a city service. The ambulance organization in Eden Valley is part of a fire taxing district but operates independently from the local fire department.

Similarly, there has been no uniform approach to funding EMS in Sweetwater County. Sweetwater Medics and Castle Rock Ambulance are subsidized from the County general fund. Castle Rock Ambulance, Wamsutter EMS and Eden Valley Ambulance are subsidized by independent taxing districts. Eden Valley Ambulance does not bill patients for ambulance transport, and Wamsutter EMS has only recently begun to bill for service.

The patchwork of ambulance agencies, funding mechanisms and operational approaches is not a true system. Likewise, challenges to the delivery of EMS are met with an uncoordinated patchwork of temporary fixes. As a result, EMS in Sweetwater County is overly complex, poorly coordinated, sometimes competitive and all-the-time inefficient.

EMS is a vital and desired element of healthcare and quality of life in Sweetwater County.

Geography, climate, distances to medical facilities, high levels of trauma and limited resources combine to make EMS a vital service in Sweetwater County.

Informants view the availability of ambulance transport to definitive medical care as vital to their sense of security and well-being. Specifically, informants in Wamsutter and Eden Valley deemed their local EMS resources as essential to life and safety issues. During a community meeting in Wamsutter, participants said the local ambulance service has been instrumental in saving lives that may have been lost had the patients been forced to wait for EMS to respond from Rock Springs and/or other more populated regions of the County.

Healthcare providers also reported that EMS is a vital component of a rural health care system that has limited resources and depends on having a medically

supported means of moving patients both from home or the scene of an emergency to a care center and moving patients between care centers.

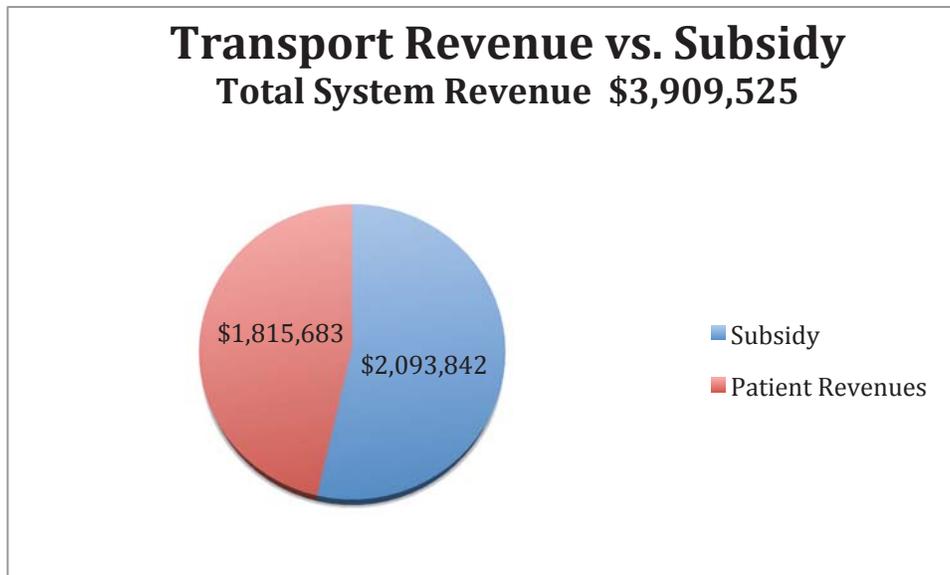
EMS in Sweetwater County has always been and continues to be subsidized.

Across the United States, 911 ambulance service is funded through private insurance, Medicare and Medicaid, all of which reimburse ambulance organizations for patient transport. In rural areas, however, because of low call volume, reimbursement alone typically does not cover the cost of having EMS available 24/7/365. As a result, rural EMS services are forced to rely on subsidies.

The four ambulance organizations in Sweetwater County all are subsidized. These subsidies come in the following forms:

- Tax subsidies from the County, town or special taxing districts
- Financial donations from individuals, corporations, businesses and other organizations
- Fundraising
- In-kind donations of goods and services
- Donated (volunteer) labor

SafeTech Solutions estimates that 54 percent of the total cost of EMS system in Sweetwater County is subsidized.



The largest portion of the subsidy (\$1.2 million) is provided by donated labor. This subsidy has largely been unaccounted for and has remained hidden in budgets. This subsidy is disappearing and therefore causing the need for additional subsidies from other sources.

Sweetwater County has significant resources within the County to fund EMS.

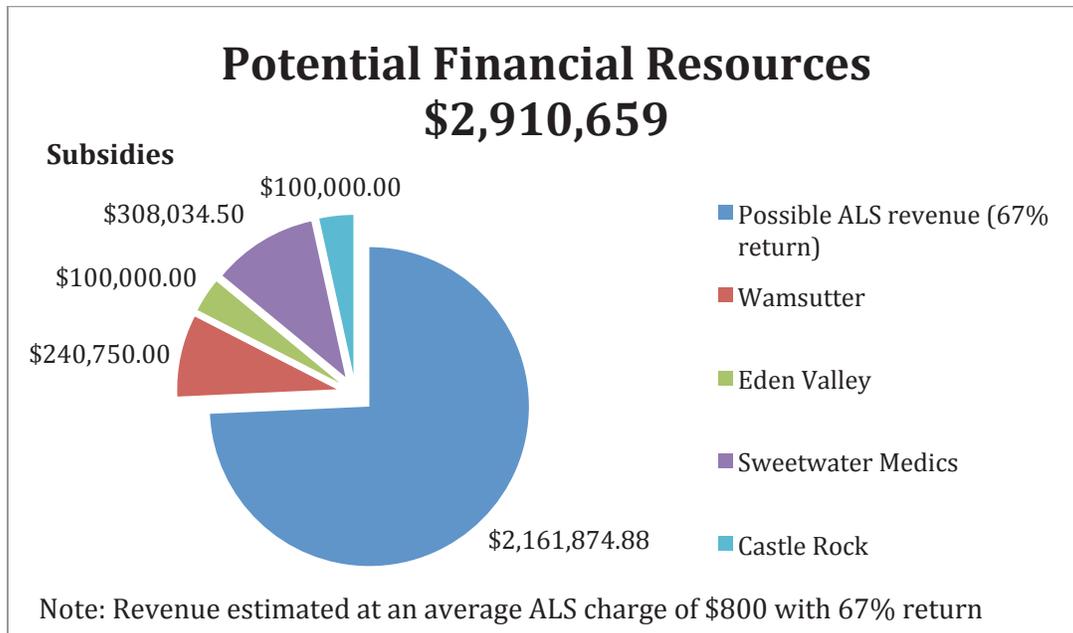
Sweetwater County has significant resources already dedicated to EMS, including funding mechanisms, political structures, people, vehicles, equipment and facilities.

Sweetwater County EMS System Resources	
Calls (2014)	3,929
EMS employees (does not include air medical employees)*	76
Directors	4
Administrators	3
Paramedics	13
EMT-I, A	33
EMT	22
Other (EMRs, drivers and other personnel)	11
Ambulance units staffed daily with paid or volunteer providers	6
Vehicles	14
Stations	4
Taxing districts	3
Agencies providing first response and/or extrication services	8
County contracts with ambulance agencies	2
County ambulance oversight boards	1
Hospitals receiving 911 patients (second hospital in Carbon County)	2
Com Centers used for dispatch (second Com Center in Carbon County)	2
Aircraft staffed	2

* Specific employee categories do not add up to 76 because some employees are counted in more than one category.

In addition to assets as described above, Sweetwater County already has significant financial resources wrapped up in its current patchwork EMS system that could be reallocated to support a new, integrated EMS system.

As noted above, some \$748,784 is available from city, town and county governments in the form of financial subsidy. SafeTech Solutions estimates based on today's call volume that there is potential for an additional \$2.1 million to fund the system if all patients were billed for transport. This figure assumes an average ALS charge of \$800 per transport and an industry standard 67 percent collection rate.



Current & Potential Financial Resources	
Value of all revenue sources today* including volunteer labor	\$3,909,525
Current county, town, district subsidy	\$748,784
Value of volunteer labor	\$1,233,057
Miscellaneous revenue in the system (education fees, standby fees, financial donations, etc.)	\$112,000
Potential revenue from all sources in an integrated EMS system (without donated labor, ground ambulances only)	\$2,910,659
Value of fixed assets (vehicles, equipment, facilities)	Unknown
Estimated value of air medical revenues	\$13,900,000

* Does not account for value of first response or air medical service.

The current EMS system design is inefficient.

EMS as it is currently provided in Sweetwater County is inefficient and has extensive duplication in administration, vehicles, supplies, equipment and personnel. As a result, agencies compete for financial resources, attention, community support, patient transfers and workers.

In having four agencies staffing six units, the system is missing opportunities to gain efficiencies through dynamic deployment in which units are staffed, deployed and staged in a manner that creates the most efficiency in resource use.

Long-distance patient transfers from one care facility to another are an important subsidy to a 911 system. Inefficiencies in the current system make it difficult to ensure that at least one staffed ground ambulance is always available to transfer

patients. Informants report that air medical resources are being used unnecessarily to transfer patients because ground units are not available. Reimbursement for long-distance transfers are greater than 911 transfers, and an efficient system will always maximize transfer revenues.

Workforce recruitment and retention is and will continue to be a major challenge in Sweetwater County.

All ambulance organizations report challenges with workforce recruitment and retention. These challenges are related to:

- A general shortage of EMS workers in Wyoming;
- The continuing decline in volunteerism and the inability to replace volunteers who are leaving. The decline in volunteerism is related to changes in rural socio-economic conditions, aging rural populations, changing attitudes about volunteerism, the increasing demands of working in EMS and the regionalization of healthcare resources;
- Many EMS workers' belief that EMS is not a lifelong career;
- Relatively low wages and benefits paid by EMS agencies compared to wages and benefits paid by other industries in Sweetwater County, including local fire departments and air medical service;
- The high cost of living in Sweetwater County¹⁹;
- Distance of Sweetwater County from major metropolitan areas, where there are more EMS-trained providers;
- The absence of a paramedic training program in Sweetwater County;
- The relatively low volume of 911 calls in Sweetwater County; and
- The hours of time demanded by long-distance transfers.

As operating today, Wamsutter EMS and Eden Valley Ambulance are out of compliance with Wyoming state EMS licenses and are not sustainable.

All state ambulance services are regulated by the Wyoming Department of Health and must have a license issued by the same. To hold and keep its license, the license holder must staff an ambulance with at least one driver and one licensed EMT (W.S. 33-36-101 Chapter 4, section 2, a). It must have an ambulance en-route within 10 minutes of a call, and its ambulance must be available for calls 24 hours a day, seven days a week without exception (W.S. 33-36-101 Chapter 2, Section 11,a & b). It is not permitted to operate on a part-time basis or only when volunteers are available.

¹⁹ The MIT Living Wage Calculator suggests that an adult living with two children in Sweetwater County must earn a minimum of \$27.73/hour or \$57,672 before taxes to cover the cost of basic living expenses, such as food, child care, medical, housing and transportation. By comparison, Sweetwater Medics pays its top-earning paramedics only \$19/hour, while the average wage in Sweetwater County is \$26.76/hour, according to the 2013 County Profile.

SafeTech Solutions assesses the sustainability of volunteer ambulance services by considering: the number of active volunteers on a service's roster, multi-year trends regarding total numbers of active volunteers and the ability of an ambulance service to fully schedule call time. In more than a decade of studying volunteer ambulance services, SafeTech Solutions has determined that:

- Fourteen active volunteers are needed to safely and humanely staff one 24/7 ambulance unit;
- When a service dips below 10 active volunteers, it is nearly impossible to increase those numbers because the call-time load on volunteers is too great and the organizational culture becomes primarily focused on survival;
- A five-year trend of declining roster size suggests that volunteerism will most likely continue to decline; and
- The stress on volunteers dramatically increases and makes it more likely volunteers will quit when a service is incapable of regularly and consistently creating a call schedule with at least two volunteers to cover call time 24/7. An "all-call" system suggests that all volunteers are responsible 24/7 and increases stress because no one is ever really not on call.

Today, Wamsutter EMS responds to only 50 percent of its requests for service. From November 1, 2014 to November 1, 2015, there were 72 requests for ambulance service in the Wamsutter EMS service area.²⁰ Wamsutter EMS responded to only 36 of those requests for service.

In the past year, Eden Valley Ambulance has not been able to respond to at least two requests for service because there was a shortage of people available to staff the ambulance.²¹ The organization also has had multiple days when staff was not available and was forced to notify the communication center that it was out of service and not available.²²

Neither Wamsutter EMS nor Eden Valley Ambulance are able to create a call schedule in which all time slots are filled. There are times of the day and days of the week when people simply are not available, and the volunteer agencies operate solely on the hope that someone will respond if service is needed.

Both Wamsutter EMS and Eden Valley Ambulance have rosters of fewer than 10 volunteers (Wamsutter has six, and Eden Valley Ambulance has eight). Both are unable to schedule volunteers 24/7. Both have five-year trends of declining numbers of active volunteers. As a result, as operating today, neither organization is sustainable.

²⁰ Dispatch figures come from Carbon County Communications Center, which currently dispatches Wamsutter EMS.

²¹ Source: Eden Valley Ambulance staff

²² Source: Eden Valley Ambulance staff and Sweetwater Medics staff

There is a perceived lack of fairness among communities in Sweetwater County regarding how the financial burden of EMS is shared.

In community meetings, taxpayers, EMS leaders, volunteers, EMS workers, governmental officials and business leaders all expressed concerns about an unfair sharing of the financial burden for EMS. The following concerns were expressed:

- Taxpayers expressed concerns about being taxed by a taxing district for EMS but also paying into the County general fund, which is being used to subsidize EMS in Rock Springs and Green River.
- Taxpayers expressed concern about being taxed by a taxing district for EMS but also receiving a bill for services when services are used.
- EMS leaders expressed concern that some ambulance organizations in the County are not billing, which negatively impacts reimbursement rates paid by insurance and Medicare.
- Government officials expressed concern that some cities and towns in the County are unwilling to help with the subsidy of EMS.
- Government officials expressed concern that some of the taxing districts are unwilling to fully use the funds they have collected for EMS.
- Business leaders expressed concern about subsidizing EMS by being pressured to let employees who are volunteers leave work to attend to an ambulance call.
- Business leaders involved in mining and mineral extraction expressed concerns about paying too large of a share for EMS through taxing districts.
- EMS workers expressed concern that wages and benefits are considerably lower for EMS in Sweetwater County than other similar public safety and healthcare wages and benefits in the area.
- Taxpayers, EMS leaders and government officials expressed concern that many patients served by locally funded EMS organizations do not live in Sweetwater County and therefore do not pay into the system. Many responses and transports in Sweetwater County appear to be for people passing through Sweetwater County on its busy highways.

There is a lack of clarity surrounding the kind and level of EMS for which Sweetwater County residents are willing to pay.

While SafeTech Solutions found a general desire to have local EMS resources available to residents 24/7/365, experts were unable to clarify the level and amount of EMS service for which residents are willing to pay. For example, are residents willing to pay for the full costs of having 24-hour ambulance coverage in the rural communities of Wamsutter and Eden Valley?

The cost of ambulance service can be estimated by looking at full costs broken down into unit hour costs (the hourly costs of having one ambulance and crew ready and

available to respond). The following chart shows typical unit hour costs in rural markets like Sweetwater County.

Estimated Unit Hour Cost for Rural Ambulance Service		
Labor	\$23.46/hr x 2 medics per ambulance	\$47
Vehicle, ALS equipment & supplies, fuel, insurance, facility	\$140,000/year/8,760 hours in a year	\$16
Administrative	30% of above costs	\$19
Unit Hour Total		\$82
Annual cost per unit	(\$82 x 24 x 365)	\$718,320
Cost for 5 units		\$3,591,600

The foundational structures and practices for a single, integrated, countywide EMS system already exist in Sweetwater County.

Some of the best EMS systems in the United States are those that contract for services and have independent oversight of the contracted agency to ensure high performance in the areas of clinical operations, customer service, response time reliability and cost efficiency.

In contracting with Sweetwater Medics and Castle Rock Ambulance Service, Sweetwater County has wisely set up an Ambulance Service Board of knowledgeable members who oversee the performance of the contractors. The contract with Sweetwater Medics is performance-based and has clear penalties for non-compliance. The Board is empowered to ensure that the contracted agency meets the performance expectations of the County. The current Ambulance Service Board is well positioned to oversee a single, integrated, countywide EMS system in the future.

V. Recommendations

Today, EMS is delivered in Sweetwater County through a patchwork of EMS agencies, funding tools and contracts. Two of the four ambulance agencies are not sustainable, and the system is inefficient. However, Sweetwater County has significant resources and foundational structures in place to create an integrated, efficient and sustainable countywide EMS system.

Sweetwater County should create a single, integrated, countywide EMS delivery system that is overseen by the County and appropriately funded.

The current approach of funding four independent ambulance organizations is not effective or efficient. A single, integrated, countywide EMS delivery system should be created in which there is a single ambulance provider for the entire County. That ambulance provider could be an existing EMS agency that contracts to provide EMS within Sweetwater County (the preferable solution), a new EMS agency that contracts to provide EMS within Sweetwater County, or the County could create its own governmental ambulance service.

Should Sweetwater County adopt the recommendation to create a single, integrated, countywide EMS system, SafeTech Solutions makes the following additional recommendations to support that process.

Sweetwater County must assist the existing unsustainable ambulance agencies in the County in meeting immediate needs.

Both of the unsustainable volunteer agencies must immediately address non-compliance by taking one or more of the following steps:

- Contracting for coverage (from another EMS agencies) for uncovered hours;
- Suspending operation as an ambulance service and becoming a first-responder organization (in which they may respond as volunteers are available); and/or
- Surrendering their ambulance license and becoming a substation of another EMS organization, in which they operate legally on a part-time basis under the umbrella of the other agency.

County assistance with this process must be a topic of discussion and planning among the Ambulance Service Board, the unsustainable agencies, other ambulance agencies in the County and the Wyoming Department of Health Office of EMS and Trauma. Neither Wamsutter EMS nor Eden Valley Ambulance should seek to become a full-time paid EMS provider, as such an approach would be extremely costly and make poor use of resources.

Sweetwater County should embark on a visioning process to create a single, integrated, countywide EMS system design.

Creating a vision and buy-in for single, integrated, countywide EMS delivery system will require listening, learning and participation. The process will need input from a wide variety of stakeholders, including EMS leaders, first-responder agencies, medical directors, government officials, taxing district board members, taxpayers and industry leaders. Some of the questions that should be answered during the visioning process include:

- How much EMS does Sweetwater County need and/or want?
- What can be learned from other successful rural EMS systems?
- What are taxpayers willing to pay for?
- What are the major concerns of local communities in not having locally owned EMS?
- Should there be a single taxing source to subsidize EMS (i.e. a single countywide taxing district for EMS)?
- What are the major hurdles to achieving a single, integrated delivery system?

The overarching goal of the visioning process is to create a vision of a single, integrated EMS system design and develop buy-in and support for such a model. The process should be led by the Ambulance Service Board with support and help from consultants as needed.

Sweetwater County should support the vision for a single, integrated EMS system with a detailed system design.

Once a vision for single, integrated EMS delivery model is in place, a detailed design and implementation plan for the system will be needed. The design and plan should draw on the best practices of other systems.

The best EMS systems today achieve a balance between performance and cost while earning the satisfaction of patients, taxpayers, elected officials, EMS leaders, employees and other customers. Such a balance can be achieved when the overall system design holds the agency delivering services accountable for five important performance results:

- Employee engagement
- Clinical excellence
- Response reliability
- Economic efficiency
- Customer satisfaction

Successful performance typically results from a system in which²³:

- The EMS organization is held accountable.
- There is an independent oversight entity.
- All service costs are accounted for.
- Economic efficiency is paramount.
- The system is appropriately funded.

Sweetwater County should create an implementation plan that incentivizes participation in the new EMS system.

Bringing together multiple communities, agencies and funding mechanisms into a single, integrated, countywide EMS delivery system will be challenging. Just as in school consolidation, local communities are likely to want local control and oversight of their operations for as long as possible. The implementation plan should incentivize participation in the design and discourage non-participation while at the same time honoring and celebrating past local commitment and dedication.

²³ These best practices have been adapted from the American Ambulance Association's 2014 *EMS Structured for Quality: Best Practices in Designing, Managing and Contracting for Emergency Ambulance Service*.

SafeTechSolutions

Final Report

**ASSESSMENT
OF
SWEETWATER MEDICS
IN
SWEETWATER COUNTY, WYOMING**

December 2015



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Executive Summary

As the largest EMS organization in Sweetwater County, Sweetwater Medics is well positioned to provide a leadership role in ensuring that the County has high-quality EMS going forward. Sweetwater Medics can strengthen its leadership position even further by hiring executive leadership, implementing more professional business practices and creating a clear vision for the future of the organization. Part of that vision should include playing a significant role in the creation and operation of a single, integrated, countywide EMS delivery system.

SafeTech Solutions' recommendations are based on the following key observations:

1. Sweetwater Medics is a progressive EMS organization with high employee engagement.
2. The future vision of Sweetwater Medics is unclear.
3. Sweetwater Medics operates with part-time leadership, some of whom may have possible conflicts of interest because of other roles in the community.
4. Sweetwater Medics faces significant local and regional recruitment and retention challenges.
5. Financial accounting is inconsistent year to year.
6. Revenue growth is not proportional with run-volume growth.
7. Sweetwater Medics is not sufficiently aggressive in pursuing patient transfer revenue.
8. Sweetwater County's subsidy to Sweetwater Medics needs evaluation to determine if it helps or hinders Sweetwater Medics' financial performance.
9. Sweetwater Medics is frequently called upon to cover for other County EMS organizations that cannot adequately respond to calls.
10. Sweetwater Medics is structured and positioned to lead EMS development and change in the County.

In summary, SafeTech Solutions recommends:

1. Sweetwater Medics' leadership should clarify an organizational vision.
2. Sweetwater Medics should become a leader in the visioning and planning process to create a single, integrated, countywide EMS delivery system.
3. Sweetwater Medics should hire full-time executive leadership.
4. Sweetwater Medics should maximize workforce recruitment and retention.
5. Sweetwater Medics should maximize billing revenue by increasing base rates.
6. Sweetwater Medics should make patient transfers a priority and maximize revenues from billing for interfacility transfers.
7. Sweetwater Medics should make accounting practices and reporting consistent year to year.
8. Sweetwater Medics should maximize the benefit of its County subsidy.

I. Organizational Overview

Based in Rock Springs, Sweetwater Medics is the largest of the four primary EMS providers in Sweetwater County, serving approximately 24,000 residents living over 3,098 square miles in and around Rock Springs.



A private, for-profit, ALS service, Sweetwater Medics provides emergency 911 response, interfacility transport, ground ambulance transport for fixed-wing medical helicopters, paramedic intercept, EMS standby and other community services. It does not provide community paramedicine at this time.

Ownership & Oversight

Sweetwater Medics is owned by three County residents: Ron Gatti (39.02 percent ownership), Steve Kourbelas (42.95 percent) and Paul Berry (18.03 percent). In addition to their ownership of Sweetwater Medics, Gatti and Kourbelas are employed full-time by the Rock Springs Fire Department, while Berry works for AirMed. All three are licensed paramedics.

Sweetwater County Ambulance Board oversees compliance of a contract for services between Sweetwater Medics and Sweetwater County. The contract, signed in March 2014, regulates staffing, mutual aid, scheduling (minimum of two, two-person crews 24/7), vehicles, equipment, and response times. Within the city of Rock Springs, response times must be 90 percent compliant with an 8:59 goal. Outside the city, the contract requires an average 2:59 chute time (time from initial page to wheels rolling with a full crew). Failure to meet monthly response time requirements results in a penalty of \$100 per one-tenth of a percentage point below the required level.

History

Sweetwater Medics was formed as a Wyoming LLC in 2006. Originally, the company had five partners: Larry Macy, Steven Kourbelas, Ron Gatti, Paul Berry and Kelly Kennedy. Larry Macy had been the director of now-defunct Vase EMS; Kourbelas and Gatti were Vase employees. Macy served as the first ambulance director and first full-time paid employee of Sweetwater Medics; however, he stepped down after only one year of operation, and by December 2012, he had sold his interest in the company to the remaining partners. Kennedy left the company in July 2013 after retiring from his position at the Rock Springs Fire Department.

Private, for-profit ambulance services have provided EMS in Rock Springs since the dawn of modern EMS, and for much of that time, these services have been subsidized by County funds. The longest-operating ambulance service in Rock

Springs was Vase Emergency Medical Services, established in 1956, and for a time the sole provider of EMS in the County. After the founders of Vase died and the company was having difficulty sustaining quality operations, two other ambulance companies were founded: Sweetwater Medics and Rock Springs Regional Ambulance Service. For about three years in the mid-2000s, all three shared EMS calls in the Rock Springs area. Vase shuttered in 2010, and Rock Springs Regional closed in 2012.

At one time, Vase EMS was receiving a subsidy of about \$1 million per year.²⁴ When Sweetwater Medics was established, the County Commission gradually decreased its EMS subsidy to the approximately \$305,000 that Sweetwater Medics receives today.

Finance & Funding

Sweetwater Medics' funding comes from two primary sources: billing patients for transports and a County subsidy. The amount of the County subsidy varies each year and is based upon Sweetwater Medics' projected budget and subsidy request to the County. The City of Rock Springs does not subsidize the ambulance service. Sweetwater Medics patient billing is outsourced to Enhanced Management Services. Collection rate is 67 percent.

Sweetwater Medics reports that the long-term financial stability of the company is sound. Specifically, in a written report to SafeTech Solutions, leadership noted, "2011/2012 was almost a new start for our company. To outlast our competitors, we burnt through all of our capital stores and even cut wages to stay open. After the new contract, we were able to gain sustainable income levels and started to rebuild our capital, return wages to normal levels, and purchase new units. Sweetwater Medics has signed a longer-term contract with Sweetwater County, the first contract being 24 months and the new contract running for 60 months. [As a result,] the ability to plan for long-term goals is easier."

Facilities & Vehicles

Sweetwater Medics operates out of a somewhat crowded building in the heart of Rock Springs that includes an ambulance garage, offices, crew quarters and a small training room. Sweetwater Medics leases the building, but leadership reports that the organization intends to build its own facility in the future.

Sweetwater Medics owns six ambulances (2015 Ford F450 4x4 approximate mileage 8,000; 2013 Ford E350 4x4 approx. mileage 100,000; 2012 Ford E350 2x4 approx. mileage 142,000; 2012 Mercedes Sprinter approx. mileage 150,000; 2002 Ford F450 mileage unknown; 1996 Ford E350 mileage unknown). It also owns a supervisor vehicle (2002 Chevy Tahoe). Three vehicles serve as frontline ambulances.

²⁴ Source: *Rock Springs News*, March 28, 2012

Sweetwater Medics operates with fairly new and well-maintained equipment. In addition to standard EMS equipment, Sweetwater Medics also has Lucas devices, LifePak 15 cardiac monitors and Stryker power load cots. The newest ambulance has an aftermarket power-load system for cots and wheelchairs. All vehicles are equipped with GPS tracking.

Ambulance Operations

Sweetwater Medics staffs two ALS crews 24/7 that are dispatched by Sweetwater Combined Communications Joint Powers Board via radio or pager. Crews respond from a single, fixed location in Rock Springs along with first response provided by the Rock Springs Fire Department within city limits. Outside of city limits, first response is provided by Sweetwater Fire District #1. Response time is regulated by a contract with the County.

Patients are stabilized on scene; most are transported to Memorial Hospital in Rock Springs. Most 911 calls take about 40 minutes from start to finish; however, Sweetwater Medics reports that it can have some extended calls in the Flaming Gorge and southern region near the Utah/Colorado border.

In addition to 911 response, Sweetwater Medics covers many local events, including rodeos, races, football games and other athletic events. Patient transfers out of Sweetwater County are received by the on-duty or on-call supervisor, who approves or denies the request based on resource availability. Ground transfers are predominantly to Salt Lake City (six-hour-plus round trip).

In addition to its two primary on-duty ALS crews, Sweetwater Medics tries to maintain an on-call crew for a back-up third ambulance at all times. The on-duty supervisor also may respond to 911 calls to assist in patient stabilization.

Staffing

Sweetwater Medics employs 10 full-time and 26 part-time paid employees. Field staff includes 11 paramedics, 3 RNs, 8 EMT-Intermediates, 13 EMTs and three ambulance drivers. Field staff work 12- and 24-hour shifts. Typical crew configuration is one paramedic plus one other trained field provider.

Sweetwater Medics Pay and Benefits

Employee Pay Rates

Level	Pay
EMT – Paramedic / RN	\$17.18 - \$19.00 / Hour
EMT – Intermediate / Advanced	\$12.80 – \$15.00 / Hour
EMT – Basic	\$10.60 – \$12.40 / Hour
EMR	\$ 8.50
RN / Transfer Rate (specialty care transports)	1.5 X their hourly Paramedic / RN rate.
Driver	\$13.00 / Hour
Supplemental Pay	
Interfacility Transfer	\$30.00 / Transfer
Event Stand-by	\$25.00 / Hour any level (EMT B – P)
Full Time Specialty pay	
Hiring Committee Chair	\$1200 / Year
Inventory Control	\$1200 / Year
Training Coordinator	\$1200 / Year
Scheduling Coordinator	\$1200 / Year

Employee Benefits

Benefit	Amount	Availability
Continuing Education Bonus	\$250	All Employees
Fluid Self Scheduling	0.00	Full Time Employees
BCBS of Wyoming Health Insurance	Varies	Full Time Employees 100% paid by employer
Aflac Supplemental	Accident and Disability	All employees 100% paid by employer for full time staff
Paramedic Education assistance	\$1200 tuition assistance and meals and travel expenses assessed as needed	Full time employees, and regular part time staff
EMS online subscription	\$50/year/subscription	Full time staff and regular part time staff
Paid Time Off	Accrues 96 hours per year can carry over 192 hours	Full Time Staff

Sweetwater Medics’ pay and benefits are comparable to those paid in neighboring Fremont County (\$12-\$16 for EMTs, \$17-\$22 for paramedics)²⁵; however, wages are relatively low compared to other local public safety agencies, as well as local mining wages.²⁶ Field personnel wages (\$8.50-\$19/hour) also are low in comparison to cost of living in the County.²⁷ As a result, despite historically low turnover, Sweetwater Medics may face a staffing problem in the near future.

In fact, Sweetwater Medics reports, “In 2014, our turnover of full-time employees was at three percent for the previous four years. In the past year, we lost a regular part-time and a full-time paramedic to a local flight company, and a full-time EMT intermediate. Our company has long been ALS-heavy, and we have concentrated most of our hiring efforts on the EMT level. We now find ourselves in a skinny ALS

²⁵ Source: Fremont County EMS

²⁶ The average weekly wage in Sweetwater County is \$1,074, or \$26.76/hour, according to the Wyoming Housing Database Partnership Wyoming Profile Final Report, Volume 1, September 5, 2013.

²⁷ According to the MIT Living Wage Calculator for Sweetwater County, one adult with two children needs to earn \$27.73/hour or \$57,672 before taxes to cover the cost of basic living expenses, such as food, child care, medical, housing and transportation. By comparison, Sweetwater Medics pays its top-earning paramedics only \$19/hour.

position, and we are for the first time advertising to fill ALS positions... We have a local flight company that has recruited some of our ALS providers. We would like to have more available ALS and BLS providers. To accomplish this, Sweetwater Medics has pursued a recruitment campaign and is supporting paramedic and EMT training programs for employees and perspective employees.”

Some field personnel work not only for Sweetwater Medics, but also are employed by the local fire department and/or by other EMS organizations in the County, indicating a high level of commitment to EMS and to the community. Field crews report that they enjoy working at Sweetwater Medics. They appear enthused and engaged about the direction of the organization and the clinical care being provided. However, some staff expressed uncertainty about the future of the organization and the long-term sustainability of the ambulance service in Rock Springs because of the possibility of losing County funding and the potential for the Rock Springs Fire Department to take over medical transport.

Call Volume

The following call data was obtained from the Wyoming Ambulance Trip Reporting System (WATRS):

Sweetwater Medics 2014 Run Volume

Total calls: 2,641

911 responses: 2,185

Flagdown/walk-in/non-emergent: 4

Intercept: 9

Interfacility transfers (scheduled): 138

Interfacility transfer (unscheduled): 213

Medical transport: 85

Mutual aid: 2

Standby: 5

Medical Direction & Quality Assurance

Medical direction is provided by Philip Najm, M.D. Najm provides regular feedback on calls, occasionally attends EMS training sessions, and answers calls and emails as necessary. Najm participates in run reviews, incident investigation and education. Online medical control is provided by Memorial Hospital Emergency Department in Rock Springs.

Sweetwater Medics operates with a process of continuous quality assurance. Quality is measured against protocols, best practices, evidence-based practices, documentation and skill success. This process uses direct observation, chart review, physician observation and clinical remediation. An evaluator reads every patient report to ensure that care is in line with protocols and best practices. Patient care reports also are evaluated for documentation for billing purposes. Sweetwater

Medics encourages continuous quality assurance through a no-punishment reporting policy.

Sweetwater Medics provides its own internal continuing education for field staff. It does not have an EMT program but supports Western Wyoming Community College's EMT program. It also serves as a preceptor site for paramedic programs at Casper College, Laramie County Community College and Weber State University. It encourages the ongoing development of its field staff by providing tuition reimbursement for staff members who desire to further their education.

Community Perception

Generally speaking, informants think highly of Sweetwater Medics and the service and clinical care it provides. Local residents expressed some reservation and suspicion around Sweetwater Medics being a for-profit organization. Local hospital personnel expressed concerns about whether Sweetwater Medics makes transfers a priority.

II. Key Observations

As the largest EMS organization in Sweetwater County, Sweetwater Medics is uniquely positioned to provide a leadership role in ensuring that the County has high-quality EMS going forward. However, the organization must decide whether it wants to have a larger role in the future development of EMS in Sweetwater County, which would require strengthening its executive leadership and commitment to lead.

Sweetwater Medics is a progressive EMS organization with high employee engagement.

As one of the youngest, largest and busiest EMS organizations in Sweetwater County, Sweetwater Medics has created a reputation for progressive clinical care, good community service and a positive work culture for employees.

Residents, healthcare providers and other EMS organizations in Sweetwater County all speak well of Sweetwater Medics and report having confidence in the services and care it provides. The organization is deeply involved in its local community and in the larger healthcare community and active in a variety of clinical programs, such as STEMI, stroke and trauma care. Sweetwater Medics has been proactive in working with other EMS organizations, creating mutual aid agreements and developing unified clinical protocols.

The leaders of Sweetwater Medics are engaged, knowledgeable and consistently endeavor to ensure that their organization is proactive and learning about and adopting best practices.

Employees report being enthused about the organization and its leadership. They report being pleased that Sweetwater Medics consistently strives to excel in clinical care and cares deeply about being an asset in the eyes of the community it serves.

The future vision of Sweetwater Medics is unclear.

As it exists today, Sweetwater Medics does not have a clear vision for the future. Between 2006 and 2014, Sweetwater Medics competed with two other for-profit ambulance services for the Rock Springs' market. One of the ambulance services had served Rock Springs for 50 years. During that time, the vision for Sweetwater Medics was necessarily focused on survival, providing a high quality of service and being perceived as a desirable community asset.

Today, the organization's slogan is "Professional Care with a Personal Touch." Its website describes the service as offering "the highest level of prehospital care with state-of-the-art equipment and professional customer service." Having survived the competition and having become the only EMS organization in Rock Springs,

leadership is only now beginning to ask what role, if any, the organization can play in the future of EMS in Sweetwater County. Part of the impetus for SafeTech Solutions' assessment was to gain some clarity about that issue.

Sweetwater Medics operates with part-time leadership, some of whom may have possible conflicts of interest because of other roles in the community.

Sweetwater Medics does not have full-time executive leadership. Executive leadership of the organization is spread among the three owners, all of whom work full-time jobs apart from Sweetwater Medics. The owners appear to schedule their work with Sweetwater Medics around other employment positions.

Two owners work as full-time firefighters on the Rock Springs Fire Department. The other works as director for AirMed operations in Rock Springs. Both Rock Springs Fire Department and AirMed compete with Sweetwater Medics for employees. Sweetwater Medics employees report that both the Fire Department and AirMed offer better wages and benefits than Sweetwater Medics. Sweetwater Medics owners report that both the fire department and air medical services have been and continue to recruit employees from Sweetwater Medics.

While it is understandable why the owners work in other well-paying jobs in the community, such an arrangement could suggest negative perceptions about the organization, such as:

- Sweetwater Medics' future is uncertain, as the owners are unwilling to commit full-time to the organization;
- Sweetwater Medics lacks stability (the owners are keeping their other jobs) and is unable or unwilling to pay for executive leadership;
- Sweetwater Medics is a stepping stone organization to more stable and better paid and benefited organizations; and
- Sweetwater Medics is a side business for the owners and therefore primarily focused on the bottom line.

While the organization may do well operationally, the absence of full-time executive leadership could be holding back the organization from growth and more success.

Sweetwater Medics faces significant local and regional recruitment and retention challenges.

In recent years, Sweetwater Medics has found that the recruitment and retention of high-quality, experienced EMS workers is becoming increasingly difficult. This is likely to be an ongoing and perhaps growing challenge for the following reasons:

- A general and growing shortage of EMS workers in Wyoming and the multi-state region;
- The location of Sweetwater County in relation to larger regional population centers;

- A lack of competitive wages and benefits;
- More attractive positions with other organizations, such as the fire department and air medical service;
- The owners' example of working full-time in other organizations;
- More demand for EMS workers in the County, as volunteer ambulance services become paid services;
- EMS often is not viewed as a lifelong career for many workers;
- The high cost of living in Sweetwater County;²⁸
- The regionalization of healthcare and the demand for long-distance transfers; and
- The lack of local paramedic training programs

Financial accounting is inconsistent year to year.

Sweetwater Medics exhibits poor accounting practices. Specifically, line items are not comparable longitudinally. For example, in some years, revenue is placed into multiple revenue categories, and in other years, it is placed in a single line item. Within expenses, in some years, partner compensation is broken out, but in other years, it is not reported at all, leaving questions about how partners were compensated and whether the “salaries and wages” line item included or excluded partner compensation. These inconsistencies obstruct year-to-year comparison, financial reporting and forecasting, and fail to provide the transparency that Sweetwater Medics needs as good stewards of public funds.

Revenue growth is not proportional with run volume growth.

Over the past five years, Sweetwater Medics has not experienced significant growth in transport revenues when compared with run volume. In 2010, Sweetwater Medics reported 1,392 patient transports²⁹ and total reported gross revenue from billing of \$1,110,149. In 2014, ambulance responses had grown to 2,641, with gross revenue of \$1,212,090. The additional 1,249 responses represent only \$101,940 in additional revenue, or a net revenue of only \$81.62 per call.

Using Sweetwater Medics' current average billed amount (\$807.45) and average reimbursement (\$546.48), one would anticipate an additional revenue of \$682,553 from those additional 1,249 calls. Using data from a similar service in Wyoming with an average charge of roughly \$1,700 and average reimbursement of roughly \$1,000 per call, potential revenue would be \$1,249,000 for 1,249 calls.

²⁸ The MIT Living Wage Calculator suggests that an adult living with two children in Sweetwater County must earn a minimum of \$27.73/hour or \$57,672 before taxes to cover the cost of basic living expenses, such as food, child care, medical, housing and transportation. By comparison, Sweetwater Medics pays its top-earning paramedics only \$19/hour, while the average wage in Sweetwater County is \$26.76/hour, according to the 2013 County Profile.

²⁹ WATRS data

Sweetwater Medics is not sufficiently aggressive in pursuing patient transfer revenue.

While ground transfers from Rock Springs to locations such as Salt Lake City, Denver and Cheyenne or Casper can take six to eight hours round trip, reimbursement for ground interfacility patient transfers is significantly higher than that for 911 transports and, therefore, is a potential source of revenue that Sweetwater Medics is not maximizing.

For example, on an ALS transfer with mileage from Rock Springs to Salt Lake City of 185 miles and an ALS base rate of \$2,000 (the middle point of \$2,500 and \$1,500) with ALS mileage of \$30 per mile, the gross revenue per transfer could be \$3,775 per transfer.³⁰ If Sweetwater Medics did 10 additional transfers per month, it could earn as much as \$453,000 of additional revenue each year.

Likewise, hospital employees report that Sweetwater Medics is not always available when needed for ground transfers and that the ambulance service sometimes prioritizes standby events over ground transfers. This decision results in another ambulance organization or air medical services performing the transfer and a loss of potential revenue for Sweetwater Medics.

It is difficult to clearly establish whether transfer volume for Sweetwater Medics is increasing or decreasing. According to WATRS data, Sweetwater Medics transfer volume declined between 2011 and 2014. Sweetwater Medics reports doing 587 ground transfers between July 1, 2014 and July 1, 2015. Multi-year data from air medical services was not available.

The problem is exacerbated by the fact that Sweetwater Medics appears to incentivize its employees to work standby events by paying them higher wages than they would earn while doing patient transfers at their regular wage.

Sweetwater County's subsidy to Sweetwater Medics needs evaluation to determine if it helps or hinders Sweetwater Medics' financial performance.

In 2015, Sweetwater Medics received a subsidy from the Sweetwater County general fund of \$308,035. It is not clear if this subsidy is fully needed and/or whether the subsidy is helping or hindering the organization's financial performance.

There may be a negative financial impact to receiving the subsidy. For example, Sweetwater Medics may feel pressure to keep billing rates low. Sweetwater Medics rates are below the average rate charged within the region, as well as state and

³⁰ At 50% return on patient billing, $\$1,000 + (\$15 \text{ per mile} \times 185 \text{ miles}) = \$3,775$.

national averages, which are between \$1,500 and \$2,500, plus mileage of between \$20-30/mile for ALS transports.³¹ In addition, the increasing levels of County subsidy could act as a disincentive for Sweetwater Medics to improve its financial performance (strengthen billing and collections, aggressively pursue ground transfers, reduce expenses).

A review of financial records for the past five years shows the following earned revenue/subsidy ratio:

Sweetwater Medics: Transport Revenue vs. County Subsidy: Year by Year

	2010	2011	2012	2013	2014	2015
Transport Revenue	\$1,110,149	\$929,305	\$1,183,170	\$1,301,895	\$1,212,090	\$1,082,473
County Subsidy	\$75,000	0	\$123,984	\$254,167	\$282,675	\$308,034
Gross Revenue	\$1,112,159	\$954,639	\$1,301,202	\$1,303,908	\$1,491,016	\$1,390,507
Subsidy as Percentage of Gross	6.7	0	9.5	19.5	18.9	22.15

With the County subsidy providing a larger percentage of Sweetwater Medics’ gross revenue each year, one has to wonder if the subsidy is helping or hurting Sweetwater Medics’ maturation into a profitable business. Increasing rates could provide Sweetwater Medics with the financial resources it needs to increase employee compensation to be more competitive, as well as to strengthen the organization’s overall financial picture. A strong financial position could provide several positive benefits, including reducing or eliminating the need for public support, providing resources for a new headquarters facility, allowing the organization to be more competitive with compensation, and creating a reserve account. Further, receiving a subsidy keeps the organization’s finances in the public eye and open to critique.

Sweetwater Medics is frequently called upon to cover for other County EMS organizations that cannot adequately respond to calls.

Sweetwater Medics is becoming more involved in the provision of EMS countywide. As Eden Valley Ambulance struggles with staffing, Sweetwater Medics is responding to the Eden-Farson area and covering times and days when Eden Valley Ambulance does not have staff. As Wamsutter EMS struggles with staffing, Sweetwater Medics has been asked to extend its coverage on I-80. Castle Rock Ambulance and Sweetwater Medics are increasingly providing backup for each other.

³¹ National average is based on SafeTech Solutions’ conversations with ambulance leaders around the country.

While Sweetwater Medics continues to provide help to other EMS organizations and proactively promote more collaboration, the current County model is inherently inefficient. There is a need for a countywide approach to EMS in which the provision of quality EMS is unified, assured, effective and efficient.

Sweetwater Medics is structured and positioned to lead EMS development and change in the County.

Sweetwater Medics is positioned to assume a leadership role in the development of a single, integrated, EMS delivery system for Sweetwater County for the following reasons:

- It has been successful in developing a progressive organization with high employee engagement;
- It has the largest service area, call volume and workforce;
- It operates under a performance-based contract with the County with an independent oversight board already in place;
- Its leaders understand how to create a sustainable EMS operation (although they have yet to do so without a County subsidy); and
- It has earned respect within the County.

III. Recommendations

Sweetwater Medics' leadership should clarify an organizational vision.

An organization's vision impacts how it is led and structured, how it conducts its activities and how it develops its financial position. The three owners of Sweetwater Medics should clarify where the organization is headed as a business entity and its scope and reach. Specifically, the owners should consider:

- Opportunities for Sweetwater Medics as a premier regional EMS organization with the financial health to successfully compete with fire departments and air medical services for the best employees;
- Whether owners will continue to lead and maintain the organization without devoted full-time executive leadership;
- Whether owners will seek to grow the organization in service area, volume and revenues;
- What role the organization will play in the future development of EMS in Sweetwater County; and
- Whether Sweetwater Medics will strive to be the leader of EMS throughout Sweetwater County and perhaps beyond the County.

Sweetwater Medics should become a leader in the visioning and planning process to create a single, integrated, countywide EMS delivery system.

SafeTech Solutions recommends that Sweetwater County engage in a vision and planning process to create a single, integrated, countywide EMS delivery system that is overseen by the Ambulance Service Board.

Sweetwater Medics and its leaders should become leaders in that process in the following ways:

- Begin to imagine the design of a system that is unified and makes effective and efficient use of resources;
- Assist the Ambulance Service Board in creating a visioning process;
- Foster friendly and non-threatening discussions between current ambulance services leaders about a unified system design;
- Develop relationships with key County thought-leaders and decision-makers and foster discussions with them about a unified EMS system design;
- Assist the County's two unsustainable ambulance services in finding ways to obtain coverage, become compliant or transition; and
- Listen to input of field staff regarding the development of a unified system design.

Sweetwater Medics should hire full-time executive leadership.

If Sweetwater Medics is to grow and assume a leadership role in the development of EMS throughout Sweetwater County, the organization needs full-time, dedicated, prepared and rested leadership. Hiring full-time, paid leadership will convey a powerful message to the employees, community and governmental leaders. Full-time leadership will enhance the ability of the organization to become a leader in the visioning and planning process to create a single, integrated, countywide EMS delivery system.

Sweetwater Medics should maximize workforce recruitment and retention.

The ability of an organization to attract and keep a quality workforce is a leading determinant of its success. Sweetwater Medics should become highly competitive in the market for EMTs and paramedics within the region. Specifically, it should:

- Ensure wages and benefits are competitive with the local fire department and air medical service;
- Formally assess and measure employee engagement and address engagement issues;
- Ensure operational leadership is available, respected and engagement savvy;
- Create and maintain an appealing employee culture;
- Seek to attract the best personnel at all levels; and
- Continue to ensure that field staff have desirable crew quarters, vehicles and equipment.

Sweetwater Medics should maximize billing revenue by increasing base rates.

Sweetwater Medics should evaluate billing rates to ensure that it is billing at the highest possible rates. Norms within the region, state and the nation for ALS transport are between \$1,500 and \$2,500, and mileage rates are \$20-\$30 per mile. A simple way to calculate a better base rate is to take total required expenses³² divided by anticipated run volume. This number generally will be higher than what is reasonable to charge per call; however, it provides both justification and rationale for a rate increase.

Sweetwater Medics should make patient transfers a priority and maximize revenues from billing for interfacility transfers.

Interfacility transfers can be a significant part of an EMS organization's revenue. Sweetwater Medics should aggressively pursue transfer revenue by:

³² Required means what expenses could be or should be, not what they are. For example, if employee compensation needs to be higher, calculate the desired compensation and add this amount to total expenses.

- Displaying to transferring hospital personnel that the organization wants to do patient transfers;
- Ensuring appropriate transfer resources are always available;
- Becoming involved in reviewing air and ground transfers with hospital personnel to ensure patients are not transferred by air medical resources unnecessarily;
- Appropriately rewarding/incentivizing transfer crews; and
- Ensuring billing for transfers is maximized.

Sweetwater Medics could be generating significant revenue if it prioritized interfacility transfers as a critical part of its financial sustainability. With limited data, it appears that Sweetwater Medics could generate revenues exceeding the expenses needed to staff resources to respond to all requests for transfers. Additionally, it appears that Sweetwater Medics could gain additional transfers, possibly enough to support a dedicated ambulance for interfacility ground transfers. Most rural, ground ambulance services generate their operating revenue from transfers.

Sweetwater Medics should make accounting practices and reporting consistent year to year.

By adopting a general accounting practices-approved chart of accounts along with consistent, detailed and full accounting of all revenues and expenses, Sweetwater Medics will be better able to use financial data to understand and lead its financial and operational future. The organization will be able to look at historical trends, forecasts for the future and provide transparent reporting on how public funds have been used, as well as why they may be needed and at what funding level.

Sweetwater Medics should maximize the benefit of its County subsidy.

Sweetwater Medics should ensure that any subsidy received by the County is used to further the betterment of the organization, such as hiring full-time executive leadership.

SafeTechSolutions

Final Report

**ASSESSMENT
OF
CASTLE ROCK AMBULANCE SERVICE
IN
SWEETWATER COUNTY, WYOMING**

December 2015



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Executive Summary

Castle Rock Ambulance Service is in the midst of a great change as it moves from an all-volunteer service to a combination department with paid and volunteer personnel. SafeTech Solutions commends the organization for effectively making this difficult transition and recognizing that volunteers are no longer an effective means of staffing a reliable community ambulance service. However, in the long run, the best approach to sustainable EMS in Sweetwater County is to create a single, integrated EMS delivery system. Castle Rock Ambulance Service should participate in a visioning and planning that system to ensure that planners recognize and value the role that Castle Rock Ambulance Service may play in the new model and to ensure that the needs and desires of the Green River community are considered in the planning process.

SafeTech Solutions' recommendations are based on the following key observations:

1. Castle Rock Ambulance Service is in the midst of navigating a major operational and cultural transition.
2. Staffing a second ambulance 24/7 presents both financial and employee engagement challenges and may not be needed at the current level of call volume.
3. Recruitment and retention of paid employees and volunteers will continue to be a challenge.
4. Castle Rock Ambulance Services' discounted clinical contracts limit revenue potential.
5. Expenses for current Castle Rock Ambulance operations appear to be high.
6. Castle Rock Ambulance Service may be able to operate without a subsidy.
7. The advantages of belonging to Castle Rock Hospital District are unclear.
8. The value that Sweetwater County gets from Castle Rock Ambulance Service being a distinct and separate EMS entity may be difficult to justify in the future.
9. Vehicle replacement may be a future challenge for Castle Rock Ambulance Service.
10. Sweetwater County would benefit from an integrated, countywide approach to EMS delivery that includes an ambulance based in Green River.
11. Structures and resources exist to support a single, integrated, countywide approach to EMS delivery.

In summary, SafeTech Solutions recommends:

1. Castle Rock Ambulance Service should continue to transition away from relying on volunteer staff.
2. Castle Rock Ambulance Service should study the impact of not staffing a second ambulance.
3. Castle Rock Ambulance should evaluate the need to maintain three operational ambulance vehicles and plan a schedule for vehicle replacement.

4. Castle Rock Ambulance Service should evaluate the benefit and risk of being part of the Castle Rock Hospital District.
5. Castle Rock Ambulance Service should position itself to maximize workforce recruitment and retention.
6. Castle Rock Ambulance Service should deepen its collaboration with Sweetwater Medics for operational efficiency.
7. Castle Rock Ambulance Service should participate in a visioning and planning process to create a single, unified, integrated, countywide approach to providing ambulance services in Sweetwater County.

I. Organizational Overview

Castle Rock Ambulance Service is the second-largest EMS provider in Sweetwater County, responsible for some 24,000 residents living in 1,834 square miles in and around Green River. This area includes several mining operations as well as the Flaming Gorge National Recreation Area.



Ownership & Oversight

Castle Rock Ambulance Service is part of Castle Rock Hospital District (CRHD) and operates under a contract with Sweetwater County. CRHD’s mission is to “promote, maintain and improve the health of our community in a caring and cost-effective manner.” Services include the ambulance, a family practice and pediatric clinic, a lab and radiology. Castle Rock Ambulance Service is led by a paid EMS director who reports to the Hospital District CEO and is supported by a paid, full-time administrative assistant.

History

Castle Rock Ambulance Service, formerly known as Green River Ambulance, was owned and operated by the City of Green River until 1983, when it was transferred to CRHD.

Finance & Funding

According to its 2015 budget, Castle Rock Ambulance is funded primarily by billing patients who use its services. Patient billing is budgeted to bring in more than \$1 million annually. In actuality, annual revenue is closer to \$500,000 because of contractual discounts. An additional \$10,000 (estimate) is collected from public education programs (first aid and CPR). CRHD does its own billing and collections on behalf of the ambulance service.

Facilities & Vehicles

Castle Rock Ambulance Service operates out of an adequate building that provides a crew quarters, training room, offices, medical equipment storage and ambulance garage. The building was built in 1983 and refurbished in the 2000s.

Castle Rock Ambulance Service has three Horton ambulances (all of the same model), which were acquired through a \$0.06 sales tax funded through the Castle Rock Hospital District. Each vehicle has about 20,000 miles on it. In addition to the standard ambulance equipment, Castle Rock Ambulance has Lucas devices, LifePak

15 monitors, Stryker power load cots and a newly acquired Stryker Power Load system.

Ambulance Operations

Castle Rock Ambulance is a combination department of largely Intermediate-level field providers who provide Advanced Life Support under Wyoming state law. As of 2015, the service staffs one full-time ambulance with paid crew, and a second crew is on call 24/7 that is staffed by volunteers.

Ambulances are dispatched by Sweetwater Combined Communications Joint Powers Board, which also dispatches for Sweetwater Medics and Eden Valley Ambulance. The relationship between dispatch and Castle Rock EMS is reported to be strong. There is not a contract or fee for service agreement between the two agencies, and dispatch services are provided free of charge.

Castle Rock Fire Department does not act as first response with the ambulance service; however, the Green River Police Department will respond within the City of Green River. The Sweetwater County Sheriff's Department responds with the ambulance outside Green River city limits.

Once stabilized, the vast majority of patients are transported to Memorial Hospital in Rock Springs. While Castle Rock Ambulance does not operate under any contractual response time requirements, average chute time for the primary ambulance is within one minute. Second ambulance chute time is within 10 minutes. A typical run, Castle Rock Ambulance reports, takes about 90 minutes.

Primary mutual aid is with Sweetwater Medics. Castle Rock Ambulance reports that it often is asked to back up Sweetwater Medics and occasionally is requested to provide patient transfers from Memorial Hospital in Rock Springs to Salt Lake City and other higher-level hospitals. Supervisors accept patient transfer assignments only if they have sufficient on-duty crews and vehicles to cover Green River. Transfers can take up to eight hours. Castle Rock Ambulance also provides occasional mutual aid to Daggett County, Utah. Air medical services are occasionally used when a long scene time is anticipated or it is beneficial to the patient.

Some of the trona mining operations in and near the Castle Rock service area operate private industrial ambulance services staffed by first responders and mine employees. These services operate within Wyoming statutes but were not part of this sustainability assessment.

Castle Rock Ambulance works well with other EMS agencies; however, its relationship with the local fire department is strained. Castle Rock has tried to foster the relationship through joint training opportunities and resources, and it reported being dismissed. CRFD is reported to be very "anti-EMS." Fire vehicles do not respond on EMS calls unless requested.

Staffing

Castle Rock Ambulance Service transitioned from a volunteer organization to a partially paid, full-time staffing model in 2014 after call volume was “getting more than the volunteers could handle,” according to EMS Director John Taylor.³³ The current staff roster includes 12 full-time employees (including the EMS director and an assistant), two part-time office employees and 12 casuals/volunteers. Field staff includes two paramedics, 11 EMT-Intermediates, six A-EMTs, four EMTs, two EMRs and two ambulance drivers. The service has had some trouble attracting full-time Paramedics.

Castle Rock Ambulance field employees currently work 12-hour shifts, while volunteers are on-call. The primary ambulance is staffed with paid, on-site staff. The second ambulance is staffed by scheduled volunteers or per diem employees who are paid an hourly stipend to be on call (\$2-\$2.50/hour), plus regular wages (\$12-\$17/hour for EMTs, and \$15.50-\$19/hour for paramedics) when on the ambulance.

Full-time employees appear to be engaged and enthused about the direction of the organization. Since the organization has added paid employees, motivation among some of the volunteer per diem staff has diminished.

Call Volume

The following call data was obtained from the Wyoming Ambulance Trip Reporting System (WATRS):

Castle Rock Ambulance Service 2014 Run Volume

Total calls: 1,154

911 responses: 1,087

Flagdown/walk-in/non-emergent: 1

Intercept: 0

Interfacility transfers (scheduled): 4

Interfacility transfer (unscheduled): 11

Medical transport: 18

Mutual aid: 0

Standby: 33

Medical Direction & Quality Assurance

Medical direction is provided by Philip Najm, M.D. Najm provides regular feedback on calls, occasionally attends EMS training sessions, and answers calls and emails as necessary. Najm also participates in run reviews, incident investigation and

³³ Source: *Green River Star*, October 8, 2014

education. Online medical control is provided by Memorial Hospital Emergency Department. Patient care reports are reviewed for protocol compliance.

Community Perception

Castle Rock Ambulance enjoys a positive reputation in the community. Community residents are proud of the local ambulance service and speak highly of the volunteers who have sustained the service through the years. Castle Rock Ambulance provides CPR and first aid training programs to the community and provides free event coverage for community activities, such as athletic events, rodeos and concerts.

II. Key Observations

Castle Rock Ambulance Service is in the midst of navigating a major operational and cultural transition.

For more than 30 years, Castle Rock Ambulance Service was staffed primarily by volunteers. During the past decade, an increase in call volume and a decline in volunteers have increasingly made the volunteer staffing model unreliable. The service has struggled to find available volunteers at all times of the day and week.

In 2014, Castle Rock Ambulance Service hired paid personnel to staff one ambulance 24/7. Volunteers are staffing a second ambulance 24/7. After 20 years of predominantly volunteer staffing, this change presents a significant operational and cultural transition as the organization moves from an all-volunteer staffing model to a combination staffing model (using both paid and volunteer staff). This change presents both opportunities and challenges.

The opportunities include:

- More ease with scheduling and service reliability;
- Paid EMS workers receiving tangible benefits (salary) for their work may result in more loyalty to the organization (when receiving wages and benefits that are competitive within the regional market);
- The ability to expand operations (e.g., take more long-distances transfers or cover more events) with committed paid employees;
- More depth in the regional EMS system in terms of backing up other agencies; and
- Greater opportunities for transport revenue as more calls are answered and higher levels of service can be offered.

The challenges include:

- A significant increase in operational expenses. Typically, full-time staffing more than doubles unit hour cost of operations;
- Full-time staffing demands more oversight and management, including supervision and human resources;
- Successfully blending full-time and volunteer staffing models, which can be difficult in organizations with a long history of a volunteer-only staffing model. Sustaining volunteer engagement in a combination department can be a challenge when volunteers are expected to perform the same tasks/duties but donate their time (or a portion of their time) while others are fully paid. Successful volunteer engagement demands that volunteers choose to participate in EMS at a volunteer level and that they have no interest or desire to become fully paid employees. This can be particularly difficult when time-on-task in the organization is high.

Staffing a second ambulance 24/7 presents both financial and employee engagement challenges and may not be needed at the current level of call volume.

Castle Rock Ambulance Services currently fields two 24/7/365 ambulance crews. One crew is fully paid, and a second crew is paid an hourly stipend to be on call (\$2-\$2.50/hour), plus regular wages (\$12-\$17/hour for EMTs, and \$15.50-\$19/hour for paramedics) when on the ambulance. The call time alone for the second ambulance adds more than \$40,000 to the budget.

The need for this second ambulance is difficult to justify. Currently, Castle Rock Ambulance Service responds to 3.1 calls per day. On most days, a single ambulance should be able to handle this call volume (data on frequency and duration of second crew use was not provided). There is another fully staffed ambulance service within 20 minutes of Green River that could be used on the rare occasions when the first ambulance is not available.

The employee/volunteer engagement challenges of this model are mentioned above.

SafeTech Solutions recognizes that there may be cultural value in staffing a second ambulance that uses volunteer staffing as a means of easing the transition from volunteer to paid staff.

Recruitment and retention of paid employees and volunteers will continue to be a challenge.

Throughout Sweetwater County, the recruitment and retention of high-quality, experienced EMS workers (both paid and volunteer) is becoming increasingly difficult. This situation is likely to continue and perhaps grow for the following reasons:

- A general and growing shortage of EMS workers in Wyoming and the multi-state region;
- A clear trend in people being unwilling to volunteer or continue volunteering when demands increase;
- The location of Sweetwater County in relation to larger regional population centers;
- The inability to compete with wages and benefits offered in other area industries;
- More attractive EMS positions with other organizations, such as the fire departments and air medical services;
- EMS not being viewed as a lifelong career for many workers;

- The high cost of living in Sweetwater County³⁴;
- The regionalization of healthcare and the demand for long-distance transfers; and
- The lack of local paramedic training programs.

Castle Rock Ambulance Services’ discounted clinical contracts limit revenue potential.

Castle Rock Ambulance Service has appropriate billing rates, but because of contracts with payers through the Castle Rock Hospital District’s clinical operations, reimbursement is significantly impacted.

Contracts with payers often require the acceptance of discounts, which are commonly between 20 percent to 50 percent off retail charges. When organizations such as hospitals negotiate these contracts, they balance increases in revenue in some areas (often outpatient services) with decreases in revenue in other areas (often inpatient areas, such as the ER). The end result is usually positive revenue growth, access to additional customers, and ease in customer and organizational billing practices. However, for small rural ambulance services that have only one product line, the result is a large discount applied to one of the other vendors (commercial insurance) that pays 100 percent of charges (minus the customers deductible). Most small- to medium-size ambulance services do not enter into contracts with payers for this reason. There simply is no financial benefit to accept a discount when the vendor will pay 100 percent of charges without the contract. The consequence for Castle Rock Ambulance Service is a reimbursement rate that averages \$0.50 on the dollar, with little if any benefit from the contract.

Expenses for current Castle Rock Ambulance operations appear to be high.

The expenses for the current Castle Rock Ambulance Service operation appear high, (\$1,314,112 in the 2015 budget) given its operational model.

Typical rural ambulance service expenses should be approximately \$82 per unit hour or \$718,000 annually for operating one 24/7 full-time paid ambulance unit. This includes overhead, vehicles, equipment, supplies, salaries and benefits, etc.

Castle Rock Ambulance Service expenses appear high for operating one full-time unit and one volunteer staffed unit. In fact, given typical unit hour costs, the current Castle Rock Ambulance budget should allow for nearly two full-time, paid crews staffing 16,026 unit hours (one unit year is 8,760 hours).

³⁴ The MIT Living Wage Calculator suggests that an adult living with two children in Sweetwater County must earn a minimum of \$27.73/hour or \$57,672 before taxes to cover the cost of basic living expenses, such as food, child care, medical, housing and transportation. By comparison, Sweetwater Medics pays its top-earning paramedics only \$19/hour, while the average wage in Sweetwater County is \$26.76/hour, according to the 2013 County Profile.

One reason for the apparently inflated expenses may be the cost of administration and overhead. The 2015 budget has \$449,332 in administrative and overhead expenses (supervisor salary, \$62,343; billing office overhead \$10,612; and CRMC overhead adjustment \$376,377). A typical ambulance service spends no more than 30 percent of expenses on administration and overhead.

Castle Rock Ambulance Service may be able to operate without a subsidy.

Castle Rock Ambulance Service is part of Castle Rock Hospital District, a taxing district with a \$7 million budget and \$2.5 million in tax subsidy. Ambulance service operations are part of the overall operational budget of Castle Rock Hospital District, and the District receives an additional \$100,000 subsidy from the Sweetwater County General Fund.

With more than 1,000 calls per year and potential billing revenues of \$1,400,000 (using a national average of \$2,000 per run for a mixed ALS/BLS service and assuming a 70 percent reimbursement rate), it may be possible for the ambulance service to operate without a subsidy and pay its full costs on transport revenues alone.

The advantages of belonging to Castle Rock Hospital District are unclear.

Given the numbers indicated above, it does not appear that Castle Rock Ambulance Service benefits from belonging to the Castle Rock Hospital District. While additional information may be needed to fully value the inclusion or exclusion of the ambulance service in the hospital district, it appears that the ambulance service is providing revenue to the district through administrative fees that the district charges the ambulance service. While the ambulance service needs services such as billing, human resource management, payroll, etc., the fees being charged appear to be higher than what it would cost for Castle Rock Ambulance to provide these services in-house or contract for them with an outside vendor.

The value that Sweetwater County gets from Castle Rock Ambulance Service being a distinct and separate EMS entity may be difficult to justify in the future.

Castle Rock Ambulance Service has more than 30 years of history as an organization that has returned value to its community largely through the subsidization of a dedicated group of local community volunteers. As volunteerism declines and the operational demands of EMS increase, the means of returning value to the community has changed.

Going forward, value will be associated with reliability, sustainability and the quality of services delivered. Such value demands an eye toward efficiency and

necessitates asking: What is the most efficient means of providing EMS to the community of Green River?

With an assumption that the residents of Green River and its surrounding area desire EMS operations with the following attributes –

- Reliable response when needed
- Seamless back up when local resources are busy
- A high level of clinical care
- Experience, engaged and valued EMS workers
- Competent oversight, and
- Lowest possible cost to residents and tax payers

– the most efficient means may be through a single, integrated countywide approach to EMS.

With another ALS ambulance service less than 20 miles away, relatively low volume, the need for full-time staffing, the need to maximize both financial and human resources, and the need to share resources when busy, it is difficult to justify the expense and overhead associated with having two distinct ambulance services in the Green River/Rock Springs area.

Finally, most EMS organizations generate most of the revenue needed to sustain operations through interfacility transfers. Castle Rock Ambulance Service does not regularly provide these services for reasons described above, as well as because the County's sole hospital is not located in Castle Rock Ambulance's service area. Being part of a larger system would allow the ambulance positioned in Green River to benefit from the interfacility transfer revenue stream, as well as provide additional resources to the system as a whole (manpower and vehicles).

Vehicle replacement may be a future challenge for Castle Rock Ambulance Service.

The three vehicles used by Castle Rock Ambulance were acquired around the same time through a special taxing bond. All three have similar mileage and will eventually need to be replaced around the same time, resulting in a significant budgeting burden on the organization.

Sweetwater County would benefit from an integrated, countywide approach to EMS delivery that includes an ambulance based in Green River.

Castle Rock Ambulance will increasingly become more involved in the provision of EMS countywide as call volume continues to grow, the need for long distance transfers out of the hospital in Rock Springs continue, Sweetwater Medics backs up Eden Valley Ambulance and Wamsutter EMS (both struggle with staffing and reliability), and resources for EMS (funding and human resources) continue to be

tight. Therefore, there is a need for an integrated, countywide approach to EMS in which the provision of quality EMS is assured, effective and efficient.

Structures and resources exist to support a single, integrated, countywide approach to EMS delivery.

Some of the best EMS systems are those that contract for services and have independent oversight that ensures that the agency providing services is held accountable for performance in the areas of clinical excellence, customer service, response reliability and cost efficiency.

In contracting with Castle Rock Ambulance and Sweetwater Medics, the County has set up an Ambulance Service Board of knowledgeable members who oversee the performance of the contractors. The Board has begun to develop contracts that are performance-based and has clear penalties for non-compliance. The Board is empowered to ensure that an EMS organization's performance meets the needs of the County.

III. Recommendations

Castle Rock Ambulance Service should continue to transition away from relying on volunteer staff.

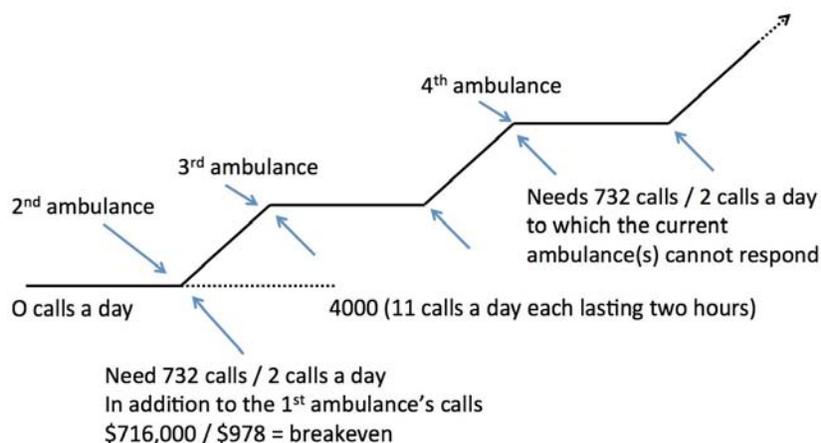
All indicators suggest that volunteer staffing is an unreliable staffing model for the future. While an organization may have some success in containing costs through the use of volunteers and may recruit some interested volunteers in the short term, it should not build an operational plan and budget that relies on volunteer staffing. Castle Rock Ambulance Service should continue to transition away from the use of volunteer staffing and make operational plans and budgets that do not rely of volunteer staffing.

Castle Rock Ambulance Service should study the impact of not staffing a second ambulance.

Fielding a second 24/7 ambulance adds significant expense. Operational efficiency is maintained by identifying thresholds for adding additional resources. Staffing a second ambulance should be done only after a financial review is conducted to determine the number of calls needed to make the second ambulance financially viable while also considering the impact of delayed responses on customers and the communities. Castle Rock Ambulance Service has access to a high-quality ALS service within a reasonable amount of time.

To determine when additional resources are needed, divide the cost of the additional resource by the revenue generated per call. This calculation will result in the number of calls needed before the resource would be viable. For Castle Rock Ambulance Service, the organization would need two calls per day that the existing ambulance is unable to respond to before a second unit would be required.

Volume vs Number of Ambulances



Castle Rock Ambulance Service should evaluate the need to maintain three operational ambulance vehicles and plan a schedule for vehicle replacement.

Typically, an organization will stagger the acquisition of vehicles so that replacement is spaced out and the financial burden is distributed over time. It is unlikely that the County will bond for the replacement of future vehicles. Castle Rock Ambulance Service should, first, evaluate if it needs three vehicles (since it is unclear that it needs two staffed ambulances), and, if so, it should begin a program to aggressively save for the replacement of the vehicles on staggered terms.

Castle Rock Ambulance Service should evaluate the benefit and risk of being part of the Castle Rock Hospital District.

SafeTech Solutions' assessment of Castle Rock Ambulance Service was unable to determine the exact nature of the relationship between the ambulance service and Castle Rock Hospital District and if and how the relationship benefits the ambulance service. The financials suggest that the ambulance service may be better off as an independent entity; however, there may be a powerful and important relationship there that was underappreciated in this assessment.

Castle Rock Ambulance Service should clarify the benefits and liabilities of its relationship with the hospital district by considering the following questions:

- What specific subsidy (in real dollars and in-kind dollars) does the District provide to the ambulance service?
- Could the ambulance service be viable (and perhaps thrive) without a subsidy from the Castle Rock Hospital District by using only transport reimbursements and a County general fund subsidy?
- How does the ambulance service benefit the hospital district's other operations?
- What would be the impact of removing ambulance service from the Hospital District's insurance contracts?
- Could administrative costs be reduced?

Castle Rock Ambulance Service should position itself to maximize workforce recruitment and retention.

A leading determinant of success in EMS is the ability of an organization to attract and keep a quality workforce. Castle Rock Ambulance should become highly competitive in the market for EMTs and paramedics within the region. Specifically, it should:

- Ensure wages and benefits are competitive with the local fire department and air medical service;
- Formally assess and measure employee engagement and address engagement issues;
- Ensure leadership is respected and engagement savvy;

- Create and maintain a culture that employees positively rave about and eliminate conflict created by the paid/volunteer culture;
- Seek to attract the best; and
- Ensure that field staff have the resources they need to do their job.

Castle Rock Ambulance Service should deepen its collaboration with Sweetwater Medics for operational efficiency.

Castle Rock Ambulance should deepen its collaboration with Sweetwater Medics and seek to operate with one 24/7 crew using a dynamic deployment model in which vehicles move to best cover both Rock Springs and Green River. It also should seek to share ground transfers in a way that mutually benefits both organizations.

Castle Rock Ambulance Service should participate in a visioning and planning process to create a single, unified, integrated, countywide approach to providing ambulance services in Sweetwater County.

The most sustainable and efficient means of ensuring that Sweetwater County has reliable and high-quality EMS will be a countywide EMS delivery system that maximizes resources and returns value to residents.

SafeTech Solutions is recommending to the County Commissioners that they create a single, integrated, countywide EMS delivery system that is appropriately funded and overseen by an independent board. Such a model will make the most of resources and be held to performance standards that meet the desires, needs and funding provided. SafeTech Solutions is recommending that the current Ambulance Service Board lead a process of visioning and planning that includes all stakeholders.

Castle Rock Ambulance service should engage and participate in the visioning and planning process. Its leadership should participate by candidly considering opportunities, risks and challenges and ensuring that local concerns are addressed. Local services such as Castle Rock Ambulance will naturally be concerned about the loss of local identity and control and should represent its concerns throughout the process.

Because this process will be a multi-year process and its outcome unknown, Castle Rock Ambulance should seek to operate as effectively and efficiently as possible in the interim.

SafeTechSolutions

Final Report

**ASSESSMENT
OF
EDEN VALLEY AMBULANCE
IN
SWEETWATER COUNTY, WYOMING**

December 2015



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Executive Summary

Eden Valley Ambulance, like many other rural, volunteer-based ambulance services is struggling to survive. It currently is unable to respond to all of its requests for service because of too few volunteers who have too little time to dedicate to working on the ambulance. Because it is missing calls, Eden Valley Ambulance is out of compliance with its state EMS license, which puts it, as well as the citizens in its service area, at risk. While SafeTech Solutions commends Eden Valley volunteers for their service, it believes that Sweetwater County and residents of the Eden-Farson area would benefit from an integrated, countywide approach to the provision of EMS. Eden Valley Ambulance is encouraged to participate in the planning and creation of a single, integrated, countywide EMS system to ensure that the needs and desires of Eden-Farson residents are considered in that process. In the meantime, Eden Valley Ambulance must take action to ensure compliance with its state EMS license and offer reliable EMS service to its service area.

SafeTech Solutions' recommendations are based on the following key observations:

1. Eden Valley Ambulance is out of compliance with its state EMS license.
2. Eden Valley Ambulance, as currently operating, is not sustainable.
3. The Eden-Farson community expressed a strong desire for a reliable and sustainable ambulance stationed in the Eden-Farson area.
4. The historic use of volunteers to staff the ambulance in Eden Valley has obscured the full cost of providing EMS in this rural area.
5. Volunteerism is not a viable staffing model going forward.
6. Transitioning to a full-time or combination department would present significant challenges to Eden Valley Ambulance.
7. Eden Valley Ambulance is losing significant revenues by not billing patients for medical transports.
8. Sweetwater County and residents of the Eden-Farson area would benefit from an integrated, countywide approach to the provision of EMS.

In summary, SafeTech Solutions recommends:

1. Eden Valley Ambulance must become compliant with its state EMS license or immediately suspend operations.
2. Eden Valley Ambulance should not attempt to become a full-time or combination department.
3. Eden Valley Ambulance should bill for patient transport.
4. Eden Valley Ambulance should provide adequate EMS crew quarters.
5. Eden Valley Ambulance should participate in a visioning and planning process to create a single, integrated countywide approach to EMS.

I. Organizational Overview

Located in the northwest part of Sweetwater County, Eden Valley Ambulance responds to some 660 people living in 1,834 square miles, including the unincorporated areas of Farson and Eden. Eden Valley's first-in service area covers areas 25 miles north to Pinedale, 25 miles south to Rock Springs, 30 miles east to Lander and 30 miles west to Kemmerer.

Ownership & Oversight

Eden Valley Ambulance is owned and operated by the Eden Farson Fire Control District. The ambulance director is appointed by the three-person Fire Control District Board. While located in the fire department building, Eden Valley Ambulance operates independently of the fire department and does not answer to the Fire Chief.

History

Eden Valley Ambulance was started in the late 1970s by concerned local residents. Eventually, the service became part of the Eden Farson Fire Control District and has remained part of the District ever since.

Finance & Funding

Eden Valley Ambulance is funded through a mill levy collected by the Eden Farson Fire Control District, which was budgeted to collect \$223,791 in FY 2015-16. Eden Valley Ambulance does not have a formal budget but requests funding from the Fire District Board on an as-needed basis. The District has cash and investments on hand of \$748,991.³⁵ In addition to taxes, in the past several years, the Fire Control District has received donations from Encana, BP, Questar, Bridger Valley Electric, Union Wireless and Devon Energy.³⁶ Eden Valley Ambulance does not bill for patient transport. The reason for this, according to Ambulance Director Jim Barker, is that residents already pay for medical transportation with taxes paid to the Fire Control District.

Ambulance Operations

An Intermediate-level service, Eden Valley Ambulance is dispatched by the Sweetwater County Combined Communications Joint Powers Board. Volunteers are paged and respond from home to the fire station to staff the ambulance. The majority of patients are transported to Memorial Hospital in Rock Springs (43 miles from Farson). Occasionally, Sweetwater Medics will meet Eden Valley Ambulance on its way to Rock Springs, and a paramedic will assist with care on the ambulance, as

³⁵ Proposed 2015-16 Budget

³⁶ Pinedale Online, January 7, 2013

needed. The air medical helicopter stationed in Rock Springs is called to a scene response when there are multiple patients, critical patients and/or long extrications. Mutual aid agreements are in place with Sweetwater Medics and Sublette County EMS.

Facilities & Vehicles

Eden Valley Ambulance operates out of the fire station in Farson. There is no specific EMS crew quarters, and training and garage facilities are shared with fire personnel. Eden Valley Ambulance has a 2012 Dodge 4500 ambulance that was paid for in part by a contribution of \$30,000 from Encana Oil & Gas, with a 2007 Ford Type III ambulance as back-up. The crew operates with LifePak 15 monitors and a Lucas device.

Staffing

The ambulance director is paid a small annual stipend. He runs the ambulance service with an unpaid assistant director. Field staff includes eight volunteers (4 EMT-Intermediates, three EMTs and one EMR). The average age of the staff is 46 years old. There are large gaps in the call schedule, which reflects a challenge in finding enough people to staff the ambulance during certain hours of the day and certain days of the week. Members report that the service had missed calls in 2015 (no one responded when paged), and service leadership has been forced to notify the dispatch center when no one was available. Ten years ago, Eden Valley Ambulance regularly had a roster of 15 active volunteers.

Call Volume

The following call data was obtained from the Wyoming Ambulance Trip Reporting System (WATRS):

Eden Valley Ambulance 2014 Run Volume

Total calls: 74

911 responses: 74

Flagdown/walk-in/non-emergent: 0

Intercept: 0

Interfacility transfers (scheduled): 0

Interfacility transfer (unscheduled): 0

Medical transport: 0

Mutual aid: 0

Standby: 0

Staff reports that about 70 percent of the calls to Eden Valley are for trauma. WATRS data shows that the actual number in 2014 was 53 percent (39 of the 74 calls in 2014 were for trauma, including 29 for traffic accidents).

Medical Direction & Quality Assurance

Medical direction is provided by Philip Najm, M.D. Online medical control is provided by Memorial Hospital Emergency Department. The service has no formal internal quality assurance program; however, field staff does skills training twice a month. Hospital staff in Rock Springs reports adequate clinical care that is representative of a rural EMS service with limited opportunity to practice skills.

Community Perception

Local residents speak highly of the services provided by Eden Valley Ambulance and are appreciative of the dedication of the volunteers. Some community informants are not aware that the ambulance service is struggling with staffing and reliability.

II. Key Observations

Eden Valley Ambulance is out of compliance with its state EMS license.

All state ambulance services are regulated by the Wyoming Department of Health and must have a license issued by the same. To hold and keep its license, Eden Valley Ambulance must staff an ambulance with at least one driver and one licensed EMT (W.S. 33-36-101 Chapter 4, section 2, a). It must have an ambulance in route within 10 minutes of a call, and its ambulance must be available for calls 24 hours a day, seven days a week without exception (W.S. 33-36-101 Chapter 2, Section 11,a & b). It is not permitted to operate on a part-time basis or only when volunteers are available.

Eden Valley Ambulance, as currently operating, is not sustainable.

SafeTech Solutions assesses the sustainability of volunteer ambulance services by considering: the number of active volunteers on a service's roster, multi-year trends regarding total numbers of active volunteers, and the ability of an ambulance service to fully schedule call time. In more than a decade of studying volunteer ambulance services, SafeTech Solutions has determined that:

- Fourteen active volunteers are needed to safely and humanely staff one 24/7 ambulance unit;
- When a service dips below 10 active volunteers, it is nearly impossible to increase those numbers because the call-time load on volunteers is too great and the organizational culture becomes primarily focused on survival;
- A five-year trend of declining roster size suggests that volunteerism will most likely continue to decline; and
- The stress on volunteers dramatically increases and makes it more likely volunteers will quit when a service is incapable of regularly and consistently creating a call schedule with at least two volunteers to cover call time 24/7. An "all-call" system suggests that all volunteers are responsible 24/7 and increases stress because no one is ever really not on call.

Today, Eden Valley Ambulance is unable to respond to all of its requests for service. Eden Valley Ambulance leadership reports that there were multiple days in 2015 in which the ambulance did not have enough staff in the area to be available, and the organization needed to defer coverage to Sweetwater Medics. Eden Valley Ambulance has been advising Sweetwater Combined Communications center when it does not have personnel available.

Eden Valley Ambulance has a regular schedule of people who are available and on call. However, service members report that there are often significant times when no one is available, and the schedule consistently has holes. Leaders report being uncertain about their ability to operate exclusively with volunteers in the near future.

Eden Valley Ambulance currently has eight people on its roster, not all of whom are available to take calls. The service has a five-year trend of declining roster numbers and has not been able to rebuild its roster to a sustainable level.

These factors suggest that, as operating today, Eden Valley Ambulance is in jeopardy of losing its license and is not sustainable long-term. The current situation is not only unhealthy for the community, the ambulance service's failure to respond as required by its license may make Eden Farson Fire Control District liable for damages that could result from a missed or delayed response.

The Eden-Farson community expressed a strong desire for a reliable and sustainable ambulance stationed in the Eden-Farson area.

Because of Eden Valley's remote location, distances to healthcare resources, area geography, climate and frequent motor vehicle accidents on U.S. Highway 191, leaders and members of Eden Valley Ambulance as well as community residents believe it is imperative that there be a reliable ambulance stationed in the Eden-Farson area.

Informants made the following points concerning the desire and need for ambulance service in Eden Valley:

- While EMS is seldom used, when an ambulance is called, it is usually for a significant, life-endangering problem;
- The approximately 40-minute wait for an ambulance from Rock Springs is too long;
- Frequent bad weather in winter has the potential to significantly extend wait time for an out-of-town ambulance service and could result in loss of life;
- Ambulance services are an expectation of the people paying taxes to the Eden Farson Fire Control District; and
- Eden Valley Ambulance often responds to points north of Farson where response from other services could be in excess of one hour.

The historic use of volunteers to staff the ambulance in Eden Valley has obscured the full cost of proving EMS in this rural area.

Ambulance services in the Eden-Farson area have always been heavily subsidized by a variety of sources, including donated labor, taxes, industry grants and gifts, and individual donations. By far the largest subsidy of EMS in Eden Valley has been donated labor. The value of a volunteer hour in Wyoming has been calculated to be \$23.46.³⁷ The value of having two EMTs available on an ambulance 24/7 is \$411,019 per year.

³⁷ The value of donated labor is calculated using the value of a volunteer hour, which in Wyoming is \$23.46/hour, as determined by the Independent Sector, a not-for-profit organization that calculates

Volunteerism is not a viable staffing model going forward.

Volunteerism in Sweetwater County is no longer a reliable means for subsidizing ambulance operations and should not be considered as a long-term staffing option. These findings are based on SafeTech Solutions' extensive study of EMS volunteerism, including work in other Wyoming communities.

The decline in volunteerism is the result of a perfect storm of economic, social and demographic changes. Economic survival in rural communities is forcing many rural residents to work more hours and travel farther to work. With the decline of Main Street and the growing regionalization of shopping, education, worship, recreation and healthcare, people's loyalty and dedication to the local community is changing. The average age of populations in many rural communities is increasing. Rural young people often leave their communities for education and employment, and many do not return. Those who stay may not share the previous generations' commitments to local causes.

Adding to this situation are increasing demands and expectations placed on volunteer EMTs and paramedics. The level of clinical care provided and the accountability for this care continues to increase. Public and government expectations for emergency services preparedness also have increased.

In recent decades, there has been a dramatic and continuing regionalization of rural healthcare resources and specialties, such as cardiac care, stroke care and trauma care. In many rural areas, this regionalization has meant the availability of fewer local resources, longer transport times, and more ambulance transfers of patients among healthcare facilities. For many rural EMS providers, the demands of rural EMS have become simply too much and have grown beyond what a volunteer should be expected to provide. Former volunteers in Sweetwater County talked about the increasing demands of education, certification and training as factors in their decision to stop volunteering.³⁸

In recent years, the decline in volunteerism has become critical in many rural communities. Leaders of rural ambulance services across Wyoming report shrinking rosters and dramatic decreases in the availability of EMS personnel remaining on their rosters. Efforts to recruit new volunteers have not kept pace with the departure of volunteers and those donating less time.³⁹

value of volunteer hours for all 50 states using Bureau of Labor Statistics data. The \$23.46/hour rate includes the cost to replace a volunteer with a full-time, benefitted employee.

³⁸ Confidential informant interviews with SafeTech Solutions

³⁹ *The Future of Rural Ambulance Services in South Dakota: A Case Study of the Murdo Ambulance Service*. SafeTech Solutions, LLP. 2013.

A Crisis and Crossroad in Rural North Dakota Emergency Medical Services. The North Dakota Rural EMS Improvement Project. SafeTech Solutions, LLP. 2011.

The decline of volunteerism in EMS is a national trend. A 2008 national study of the EMS workforce concluded that the decline in volunteerism will continue and is not likely to be reversed.⁴⁰ A return to the days when Eden Valley Ambulance was able to fully staff its ambulance services with willing and eager volunteers is unlikely.

Transitioning to a full-time or combination department would present significant challenges to Eden Valley Ambulance.

As operating today, Eden Valley Ambulance is part of the Eden Farson Fire Control District. The fire district has three uncompensated Board members, no full-time employees and no significant infrastructure in terms of administration and human resources. The ambulance shares a building with the fire department and has no crew separate quarters for 24/7 operations.

Transitioning a small volunteer ambulance service into a full-time paid or combination ambulance department demands significant planning, investment and structure. Such an endeavor also would require leadership/management, budgeting, a facility, human resource planning (a wage and benefit package), a dynamic recruitment and retention program, and a plan and resources to deal with overtime as well as the difficulties associated with fielding a 24/7 staff in Eden-Farson.

Some of significant challenges would include:

- Recruiting an experienced manager;
- Developing human resource capabilities;
- Recruiting staff to work in an ambulance service that only responds to 70 calls per year;
- Retaining staff;
- Backfilling staffing shortages and paying overtime for staffing shortages; and
- Subsidizing the full cost of a paid and/or combination service, which could be as much as \$718,000/year.

Eden Valley Ambulance is losing significant revenues by not billing patients for medical transports.

Eden Valley Ambulance does not currently bill for medical transport. Ambulance service leaders report that not billing is part of an unwritten agreement with local residents who pay taxes through the Fire Control District for ambulance services and expect ambulance services to be provided without any additional fees. However, Eden Valley Ambulance also reports that a significant portion of patients

Future of Emergency Care: Emergency Medical Services at the Crossroads. Institutes of Medicine of the National Academies. 2006.

A Quiet Crisis: Minnesota's Rural Ambulance Services at Risk. Minnesota Department of Health. 2002.

⁴⁰ *EMS Workforce for the 21st Century: A National Assessment.* National Highway Traffic Safety Administration: Office of Emergency Medical Services. 2008.

transported do not live in the Eden-Farson service area and, therefore, do not pay taxes.

In not billing for services, Eden Valley Ambulance is losing an estimated \$40,000 in revenues, based on customary billing and collection rates in similar services.

Eden Valley Ambulance's decision not to bill for patient transport also has a negative impact on other ambulance services in the region because it affects the "usual and customary" charges in the region. Payers such as Medicare, Medicaid and private insurance (Blue Cross and Blue Shield) determine reasonable reimbursement for services by averaging charges in a specific geographic region. For example, if ambulance service A charges \$800, ambulance B charges \$1,000, and ambulance C charges \$600, the usual and customary charge for the area would most likely be \$800. If instead, ambulance C charges zero, the usual and customary would most likely be \$600, resulting in a potential loss of \$200 per call for every call billed by ambulances A and B.

Sweetwater County and residents of the Eden-Farson area would benefit from an integrated, countywide approach to the provision of EMS.

Creating a full-time, paid EMS organization in Eden Valley would be expensive and likely unsustainable; however, an integrated, countywide approach to EMS that would benefit all Sweetwater residents could at the same time provide Eden-Farson-area residents with the reliable EMS resources it needs at a reasonable cost.

Sweetwater County presents unique EMS challenges because of its size, distances between towns, weather issues, limited workforce and long distances required to transport patients to a hospital. The County has four population areas where EMS is needed: Rock Springs, Green River, Wamsutter and Eden-Farson. Both Wamsutter and Eden-Farson are struggling to maintain their own ambulance services.

The current EMS system in Sweetwater County is inefficient. To handle approximately 4,000 ground ambulance requests annually, the system utilizes four distinct organizations, 76 EMS personnel, six staffed ambulance units, and 14 vehicles. The full cost of the current EMS system, including the value of volunteer labor, is more than \$4 million. The subsidy of this system provided by donated labor (valued at \$1.2 million) is going away. Continuing to operate as four separate organizations will result in ongoing inefficiencies and insufficient EMS service to County residents.

The current EMS system has potential revenues of nearly \$3 million. If resources were consolidated and channeled toward a single, integrated, countywide EMS delivery system, there would likely be enough resources in the system for Eden and Farson to have adequate EMS coverage.

In recent years, Sweetwater County has begun to set up structures to create a single, integrated, countywide EMS delivery system. These structures include the establishment of an Ambulance Service Board and performance-based contracting.

III. Recommendations

Eden Valley Ambulance must become compliant with its state EMS license or immediately suspend operations.

As operating today, Eden Valley Ambulance is at risk of losing its license to provide ambulance services. Eden Valley Ambulance should seek to remedy this situation as quickly as possible by taking one or more of the following actions:

- *Fill the current schedule of volunteers to ensure 24/7 coverage.* This means ensuring that the ambulance is available to respond 24/7 using locally available volunteer staffing. However, success seems unlikely given the small roster size and current availability of some volunteers;
- *Become a first responder agency only and cede ambulance service to Sweetwater Medics.* In Wyoming, first-responder agencies respond to emergencies when available and provide care and stabilization of the patient while waiting for an ambulance to respond. First-responder agencies do not transport patients and are not required to respond 24/7. Becoming a first-responder agency would allow local volunteers to respond when available. This action would bring appropriate attention to today's operational reality and reduce the stress on current volunteers;
- *Contract with another ambulance service to cover hours in which Eden Valley Ambulance staff cannot volunteer.* If the community believes that it is essential that there be an ambulance stationed in Eden-Farson, contract with a neighboring EMS organization to station an ambulance in Eden-Farson when there are no volunteers scheduled; and/or
- *Become a part-time satellite station to another EMS organization.* This is a model in which Eden Valley Ambulance would surrender its ambulance license and become part of a neighboring ambulance service. It then would operate as a satellite or substation of the parent ambulance service. When there is a request for service in the satellite area, both the parent ambulance station and the satellite station would be started. If the satellite station has personnel and can respond, it would cancel the parent's response. This situation would allow Eden Valley Ambulance to operate when it is able. The downside of this model is the loss of local ownership and license.

Eden Valley Ambulance should not attempt to become a full-time or combination department.

SafeTech Solutions recommends that Eden Valley Ambulance does not seek to transition its volunteer service to a fully paid or combination service. The lack of local resources, the expense, and the challenge of recruiting and retaining a workforce make success unlikely.

Eden Valley Ambulance should bill for patient transport.

While seeking to become compliant and participating in countywide EMS planning, Eden Valley Ambulance should begin billing for services. This means contracting with a reputable billing company and following its guidance to ensure that Eden Valley Ambulance is able to collect revenue from Medicare, Medicaid, private insurance and private payers.

Eden Valley Ambulance should provide adequate EMS crew quarters.

The future of EMS in Eden-Farson will, in all likelihood, include full-time ambulance crews who are on duty for 12- to 24-hour periods. Such an arrangement calls for a place for ambulance crews to be stationed. The current ambulance location within the fire station does not have dedicated ambulance quarters. Dedicated space should include:

- Day room;
- Kitchen;
- Sleeping quarters (for men and women);
- Bathroom/shower; and
- Storage space.

Eden Valley Ambulance should participate in a visioning and planning process to create a single, integrated countywide approach to EMS.

The most sustainable and efficient means of ensuring that Eden-Farson has reliable and high-quality EMS will be a single, integrated, countywide delivery model that maximizes resources and returns value to Sweetwater residents.

SafeTech Solutions is recommending to the County Commissioners that a single, integrated, countywide EMS delivery model be created that is appropriately funded and overseen by an independent board. Such a model will make the most of resources and be held to performance standards that meet the desires, needs and funding provided. SafeTech Solutions is recommending that the current Ambulance Service Board lead a process of visioning and planning that includes all stakeholders.

Eden Valley Ambulance should engage and participate in the visioning and planning process. This means its leadership should participate by candidly considering opportunities, risks and challenges and ensure that local concerns are addressed. Local services like Eden Valley Ambulance will naturally be concerned about the loss of local identify and control and should represent their concerns throughout the process.

SafeTechSolutions

Final Report

**ASSESSMENT
OF
WAMSUTTER EMS
IN
SWEETWATER COUNTY, WYOMING**

December 2015



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Executive Summary

Wamsutter EMS, like many other rural, volunteer-based ambulance services is struggling to survive. It currently is unable to respond to all of its requests for service because of too few volunteers who have too little time to dedicate to working on the ambulance. Because it is missing calls, Wamsutter EMS is out of compliance with its state EMS license, which puts it, as well as the citizens in its service area, at risk. While SafeTech Solutions commends Wamsutter EMS volunteers for their service, it believes that Sweetwater County and residents of the Wamsutter area would benefit from an integrated, countywide approach to the provision of EMS. Wamsutter EMS is encouraged to participate in the planning and creation of a single, integrated, countywide EMS system to ensure that the needs and desires of Wamsutter-area residents are considered in that process. In the meantime, Wamsutter EMS must take action to ensure compliance with its state EMS license and offer reliable EMS service to its service area.

SafeTech Solutions' recommendations are based on the following key observations:

1. Wamsutter EMS is out of compliance with its state EMS license.
2. Wamsutter EMS, as currently operating, is not sustainable.
3. The historic use of volunteers to staff the ambulance in Wamsutter has obscured the full cost of providing EMS in this rural area.
4. Volunteerism is not a viable staffing model going forward.
5. The Wamsutter community wants a reliable and sustainable EMS presence in Wamsutter.
6. Transitioning to a full-time or combination department would present significant challenges to Wamsutter EMS.
7. Part-time ambulance service supplemented by out-of-town ambulance response to calls in the Wamsutter service area has not resulted in any reported or documented deleterious effects.
8. Wamsutter EMS volunteers are unwilling to be first responders only.
9. High Desert Rural Healthcare District (HDRHCD) prioritizes healthcare clinic funding over EMS, a decision that appears to be supported by the community.
10. HDRHCD trustees currently are unwilling to increase the mill levy to generate additional funds for EMS beyond the budgeted \$185,000 in 2015-2016.
11. Sweetwater County and residents to Wamsutter would benefit from a single, integrated, countywide approach to the provision of EMS.

In summary, SafeTech Solutions recommends:

1. Wamsutter EMS must become compliant with its state EMS license or immediately suspend operations.
2. Wamsutter EMS should not attempt to become a full-time or combination department.
3. Wamsutter EMS should maximize billing revenues.
4. Wamsutter EMS should create adequate EMS crew quarters.

5. Wamsutter EMS should participate in a visioning and planning process to create a unified, integrated, countywide approach to EMS.

I. Organizational Overview

Located on the eastern edge of Sweetwater County, Wamsutter EMS covers some 1,500 residents and 2,076 square miles in and around the Town of Wamsutter. Its primary service area includes Interstate 80 from mile marker 150 to mile marker 187, including the very busy Love's Truck Stop at Exit 173. The service area is the second largest in the County (second only to Sweetwater Medics).



Ownership & Oversight

Currently owned and operated by the Town of Wamsutter, Wamsutter EMS is an Intermediate-level service staffed with a roster of six volunteers. Wamsutter EMS operates under an unpaid volunteer director appointed by the Town Council and Mayor.

History

Wamsutter EMS has been owned by the city for six years. Prior to that time, it was operated as a not-for-profit corporation called Wamsutter Health Center, Inc., which was formed in 1982. The Town of Wamsutter assumed responsibility for the service in 2009 based on a recommendation by SafeTech Solutions in its 2008 report on EMS in neighboring Carbon County.

Finance & Funding

Wamsutter EMS' current budget for FY July 1, 2015–June 30, 2016 is \$55,750. It includes stipends for volunteer coverage, supplies, vehicle maintenance, fuel, dispatch services from Carbon County, uniforms, billing service, training and vehicle replacement.

Wamsutter EMS is funded from several sources: the old not-for-profit (Wamsutter Health Center), which collects donations; a recently formed taxing district (High Desert Rural Healthcare District, or HDRHCD); the Town of Wamsutter; and patient billing. A modest amount of operational costs for Wamsutter EMS is absorbed into the Town of Wamsutter budget.

Wamsutter Health Center still accepts donations on behalf of the ambulance service. Money raised during an annual Valentine's Day fund drive is used to fund equipment for the ambulance and/or scholarships to train new field personnel. It is not used to offset daily operational costs.

HDRHCD is a special taxing district formed by election in November 2014. The taxing district includes Wamsutter, Bairoil and surrounding areas that account for

more than one-third of the area of Sweetwater County. One of the founders and director of Wamsutter EMS serves as an HDRHCD trustee. HDRHCD has budgeted \$185,000 to fund Wamsutter EMS operations in FY 2015-16.

Wamsutter EMS reports that it collected \$1,600 from patient transports in FY 2014. Effective in 2015, Wamsutter EMS outsourced its billing to Metro Billing Services in Mandan, North Dakota. In the first three months of operation, Metro Billing collected \$4,560 on behalf of Wamsutter EMS. Because Wamsutter EMS does not have a National Provider Identifier number issued by the Centers for Medicare and Medicaid Services, it does not bill Medicare patients.

Historically, Wamsutter EMS also has received donations from local oil and gas companies to purchase equipment and vehicles.

Facilities & Vehicles

Wamsutter EMS operates out of a city-owned building that is shared with other city-owned services. There is no crew quarters and no room in the existing facility to expand for this purpose.

Wamsutter EMS currently owns two ambulances, both of which were purchased with corporate donations and are kept in reliable working order. The 2010 Dodge 4x4 has 30,000 miles, and the 2004 Dodge 4x4 has 31,000 miles. Ambulances are outfitted with standard equipment, including Lucas device, two LifePak 15 monitors and two Stryker powerload cots.

Ambulance Operations

Wamsutter EMS is dispatched by the Carbon County Communications Center in Rawlins. Volunteers respond from home to the ambulance garage or directly to the scene. Currently, there is no first response in the Wamsutter area. The Wamsutter Fire Department responds when called by the ambulance to assist with rescue, extrication and lifting, etc. Wamsutter EMS transports most of its patients to Memorial Hospital in Rawlins.

Wamsutter EMS is simultaneously dispatched with Carbon County EMS. The reason for simultaneous dispatch is because in the past two years, Wamsutter EMS has had difficulty staffing ambulances and, as a result, has not been able to respond to all calls. When Wamsutter EMS personnel are available and respond and Carbon County EMS is not needed, Wamsutter EMS cancels the Carbon County response.

Air medical helicopters from Rock Springs and other locations are occasionally used for scene response. Helicopter response is often limited, however, because of weather, unavailability and time.

Wamsutter EMS operates on no fixed schedule and has an all-call scheduling system.

Staffing

Wamsutter EMS has six volunteers. Four are EMT-Intermediates, and two are EMTs. Length of service spans from seven to 32 years. All six volunteers have full-time day jobs (two with the local school, one with BP, and three with energy-related employers). Because of these jobs, it is difficult if not impossible for volunteers to take day coverage. Employers are increasingly unwilling to allow ambulance volunteers to respond to calls during work hours. Volunteers are not paid when they go out on calls. Rather, they receive a stipend of \$25 to cover 12-hour shifts on weekends (6 PM Friday to 6 AM Monday). Volunteers receive no compensation for covering shifts during the week. Volunteers who are on-call must respond from work or home; there is no formal call schedule.

Call Volume

Between November 5, 2014 and November 5, 2015, Carbon County dispatched ambulances to 72 calls in the Wamsutter EMS service area. Wamsutter EMS responded to 36 of those calls, resulting in 36 patient transports. Carbon County EMS responded to 51 of those calls, and was cancelled on 15, for a total of 36 transports.

The following call data was obtained from the Wyoming Ambulance Trip Reporting System (WATRS):

Wamsutter EMS 2014 Run Volume

Total calls: 60

911 responses: 59

Flagdown/walk-in/non-emergent: 1

Intercept: 0

Interfacility transfers (scheduled): 0

Interfacility transfer (unscheduled): 0

Medical transport: 0

Mutual aid: 0

Standby: 0

It is interesting to note that even though its overall call volume is low, Wamsutter EMS appears to serve transients as much as or more than local residents. Of 48 calls recorded by WATRS from January to November 2015, 35 (72 percent) occurred on streets and highways. Thirty-two (66 percent) were dispatched as Traffic/Transportation Accidents. Motor Vehicle Incidents accounted for close to 50 percent of calls to Wamsutter EMS in the five previous years, as well. As a point of comparison, only 12 percent of calls to Sweetwater Medics in January-November 2015 were for Traffic/Transportation Accidents.

Wamsutter EMS reports that some additional call volume is related to long-distance

drivers who stop at Love's Truck Stop on Interstate 80 in Wamsutter. These calls, although they are few, are reportedly some of the most critical and often are cardiac related.

Medical Direction & Quality Assurance

Wamsutter EMS contracts for its medical direction from Dwayne Ables, DO. An emergency medical physician, Ables is based at Memorial Hospital in Rawlins. Wamsutter EMS reports that Ables is very engaged with the EMS service and provides feedback on all aspects of EMS operations. Online medical control is provided to Wamsutter EMS by Memorial Hospital in Rawlins.

Wamsutter EMS does not have a formal quality assurance program. Service members informally review calls and consult the medical director with questions as needed. According to hospital staff at Memorial Hospital in Rawlins, clinical care provided by Wamsutter medics is acceptable; however, they note that providers have limited opportunity to practice their skills because of low call volume.

Community Perception

Conversations with local residents in a Town Hall meeting of approximately 75 people revealed that they are supportive of the ambulance service. They overwhelmingly stressed that there is a vital need to have an ambulance service in the town because waiting for an EMS response from Rock Springs or Carbon County is unacceptable.

The fact that the local community wants to keep its ambulance service is evidenced by the fact that it voted to create the High Desert Rural Health Care District specifically to fund local healthcare needs. Since its formation, HDRHCD has prioritized healthcare clinic operations over EMS. In its most recent budget, HDRHCD earmarked \$185,000 for Wamsutter EMS.

II. Key Observations

Wamsutter EMS is out of compliance with its state EMS license.

All state ambulance services are regulated by the Wyoming Department of Health and must have a license issued by the same. To hold and keep its license, Wamsutter EMS must staff an ambulance with at least one driver and one licensed EMT (W.S. 33-36-101 Chapter 4, section 2, a). It must have an ambulance in route within 10 minutes of a call, and its ambulance must be available for calls 24 hours a day, seven days a week without exception (W.S. 33-36-101 Chapter 2, Section 11,a & b). It is not permitted to operate on a part-time basis or only when volunteers are available.

Wamsutter EMS, as currently operating, is not sustainable.

SafeTech Solutions assesses the sustainability of volunteer ambulance services by considering: the number of active volunteers on a service's roster, multi-year trends regarding total numbers of active volunteers, and the ability of an ambulance service to fully schedule call time. In more than a decade of studying volunteer ambulance services, SafeTech Solutions has determined that:

- Fourteen active volunteers are needed to safely and humanely staff one 24/7 ambulance unit;
- When a service dips below 10 active volunteers, it is nearly impossible to increase those numbers because the call-time load on volunteers is too great and the organizational culture becomes one focused simply on survival;
- A five-year trend of declining roster size suggests that volunteerism will most likely continue to decline; and
- The stress on volunteers dramatically increases and makes it more likely volunteers will quit when a service is incapable of regularly and consistently creating a call schedule with at least two volunteers to cover call time 24/7. An "all-call" system suggests that all volunteers are responsible 24/7 and increases stress because no one is ever really not on call.

Wamsutter EMS currently responds to only 50 percent of its requests for service. From November 1, 2014 to November 1, 2015, there were 72 requests for service in the Wamsutter EMS service area.⁴¹ Wamsutter EMS responded to 36 of those requests for service.

Wamsutter EMS does not have a regular schedule of field personnel who are available to volunteer. There are times of the day and days of the week when volunteers simply are not available, and the service operates in hope that someone will respond if services are needed.

⁴¹ Dispatch information provided by Carbon County EMS, which dispatches for Wamsutter EMS

Wamsutter EMS currently has six people on its roster, not all of whom are available to take calls. The service has a five-year trend of declining roster numbers and has not been able to rebuild its roster to a sustainable level.

These factors suggest that, as operating today, Wamsutter EMS is in jeopardy of losing its license and is not sustainable long-term. The current situation is not only unhealthy for the community, the ambulance service's failure to respond as required by its license may make its owner, the Town of Wamsutter, liable for damages.

The historic use of volunteers to staff the ambulance in Wamsutter has obscured the full cost of proving EMS in this rural area.

Ambulance services in Wamsutter have always been heavily subsidized by a variety of sources, including donated labor, taxes, industry grants and gifts, and individual donations. By far the largest subsidy of EMS in Wamsutter has been donated labor. The value of a volunteer hour in Wyoming is been calculated to be \$23.46.⁴² The value of having two EMTs available on an ambulance 24/7 is \$411,019 per year. As the community has considered replacing volunteers, residents have expressed surprise at the costs associated with hiring paid staff.

Volunteerism is not a viable staffing model going forward.

For more than three decades, ambulance service in Wamsutter has been staffed with volunteers.⁴³ Volunteerism in Wamsutter and Sweetwater County is no longer a reliable means for subsidizing ambulance operations and should not be considered as a long-term staffing option. These findings are based on SafeTech Solutions' extensive study of EMS volunteerism, including work in other Wyoming communities.

The decline in volunteerism is the result of a perfect storm of economic, social and demographic changes. Economic survival in rural communities is forcing many rural residents to work more hours and travel farther to work. With the decline of Main Street and the growing regionalization of shopping, education, worship, recreation and healthcare, people's loyalty and dedication to the local community is changing. The average age of populations in many rural communities is increasing. Rural young people often leave their communities for education and employment, and many do not return. Those who stay may not share the previous generations' commitments to local causes.

⁴² The value of donated labor is calculated using the value of a volunteer hour, which in Wyoming is \$23.46/hour, as determined by the Independent Sector, a not-for-profit organization that calculates value of volunteer hours for all 50 states using Bureau of Labor Statistics data. The \$23.46/hour rate includes the cost to replace a volunteer with a full-time, benefitted employee.

⁴³ For purposes of this report, volunteers are workers who are not paid or who are paid other than regular wages and benefits.

Adding to this situation are increasing demands and expectations placed on volunteer EMTs and paramedics. The level of clinical care provided and the accountability for this care continues to increase. Public and government expectations for emergency services preparedness also have increased.

In recent decades, there has been a dramatic and continuing regionalization of rural healthcare resources and specialties, such as cardiac care, stroke care and trauma care. In many rural areas, this regionalization has meant the availability of fewer local resources, longer transport times and more ambulance transfers of patients among healthcare facilities. For many rural EMS providers, the demands of rural EMS have become simply too much and have grown beyond what a volunteer should be expected to provide. Former volunteers in Sweetwater County talked about the increasing demands of education, certification and training as factors in their decision to stop volunteering.⁴⁴

In recent years, the decline in volunteerism has become critical in many rural communities. Leaders of rural ambulance services across Wyoming report shrinking rosters and dramatic decreases in the availability of EMS personnel remaining on their rosters. Efforts to recruit new volunteers have not kept pace with the departure of volunteers and those donating less time.⁴⁵

The decline of volunteerism in EMS is a national trend. A 2008 national study of the EMS workforce concluded that the decline in volunteerism will continue and is not likely to be reversed.⁴⁶ A return to the days when Wamsutter EMS was able to staff its ambulance services with willing and eager volunteers is unlikely.

The Wamsutter community wants a reliable and sustainable EMS presence in Wamsutter.

Wamsutter's distance from other healthcare resources makes the prospect of a medical emergency particularly concerning to those who live and work in the area. Ambulance service volunteers, members of the Town Council, residents, industry leaders, and the High Desert Rural Healthcare District Board of Trustees all expressed a desire to have ambulance service readily available in Wamsutter.

⁴⁴ Confidential informant interviews with SafeTech Solutions

⁴⁵ *The Future of Rural Ambulance Services in South Dakota: A Case Study of the Murdo Ambulance Service*. SafeTech Solutions, LLP. 2013.

A Crisis and Crossroad in Rural North Dakota Emergency Medical Services. The North Dakota Rural EMS Improvement Project. SafeTech Solutions, LLP. 2011.

Future of Emergency Care: Emergency Medical Services at the Crossroads. Institutes of Medicine of the National Academies. 2006.

A Quiet Crisis: Minnesota's Rural Ambulance Services at Risk. Minnesota Department of Health. 2002.

⁴⁶ *EMS Workforce for the 21st Century: A National Assessment*. National Highway Traffic Safety Administration: Office of Emergency Medical Services. 2008.

Informants made the following points concerning the desire and need for ambulance service in Wamsutter:

- While EMS is seldom used, when an ambulance is called, it is usually for a significant, life-endangering problem;
- The approximately 40-minute wait for an ambulance from Rawlins is too long;
- Frequent bad weather in winter has the potential to significantly extend wait time for an out-of-town ambulance service;
- Having an ambulance stationed in Wamsutter gives the community a sense of security;
- The local ambulance has been instrumental in saving lives;
- Local mineral extraction and support industries expect and count on reliable, local ambulance service; and
- During the work day, the population of Wamsutter increases, creating a heightened potential need for ambulance service.

Transitioning to a full-time or combination department would present significant challenges to Wamsutter EMS.

As operating today, Wamsutter EMS is a department of the Town of Wamsutter. The Town of Wamsutter has limited infrastructure and operates with minimal staff. It does not have significant infrastructure in terms of administration, human resources and facilities. The ambulance shares a small building with the fire department and the Town's administrative offices. There are no crew quarters for 24/7 operations.

Transitioning a small volunteer ambulance service into a full-time paid or combination ambulance department demands significant planning, investment and structure. Such an endeavor would also require leadership/management, budgeting, a facility, human resource planning (a wage and benefit package), a dynamic recruitment and retention program, and a plan and resources to deal with overtime, as well as the difficulties associated with fielding a 24/7 staff in Wamsutter.

Some of significant challenges would include:

- Recruiting an experienced manager;
- Developing human resource capabilities;
- Recruiting staff to work in an ambulance service that only responds to 70 calls per year;
- Retaining staff;
- Backfilling staffing shortages and paying overtime for staffing shortages; and
- Subsidizing the full cost of a paid and/or combination service, which could be as much as \$718,000/year.

Part-time ambulance service supplemented by out-of-town ambulance response to calls in the Wamsutter service area has not resulted in any reported or documented deleterious effects.

In 2015, half of the requests for ambulance service in the Wamsutter EMS response area were met by ambulances responding from Rawlins or Rock Springs. Informants in Wamsutter and at the hospital in Rawlins were asked about known negative outcomes from waiting for an ambulance from Rawlins or Rock Springs. None were reported.

Wamsutter EMS volunteers are unwilling to be first responders only.

One option for the Wamsutter EMS is to stop operating as an ambulance service and operate solely as a first-responder agency.

In Wyoming, first responder agencies respond to emergencies when available and provide care and stabilization of the patient while waiting for an ambulance to respond. First responder agencies do not transport patients and are not required to respond 24/7.

When asked about this option, current Wamsutter EMS volunteers strongly expressed an unwillingness to operate solely as first responders. Reasons mentioned include the stress associated with having to wait for an ambulance and the risk involved with responding alone (as might occur in a first-responder situation). Current volunteers indicated they would stop volunteering if they were forbidden from transporting patients on the ambulance.

High Desert Rural Healthcare District (HDRHCD) prioritizes healthcare clinic funding over EMS, a decision that appears to be supported by the community.

HDRHCD was formed by taxpayers in November 2014 to provide:

- Financial support for and operation and maintenance of the Wamsutter Community Health Center (a local healthcare clinic);
- Health service support for the community of Bairoil; and
- Financial support for EMS in Wamsutter.

The District budgeted to receive mill levy revenues of \$1,045,760 in 2015. The 2015-16 budget allocates \$352,000 of that revenue to the community health center in keeping with HDRHCD's priorities. The HDRHCD Board strongly expressed an unwillingness to bear the full cost of paid ambulance service in Wamsutter. For 2016, HDRHCD has budgeted \$185,000 for EMS. A majority of trustees report that they do not foresee expanding support of EMS significantly beyond the \$185,000, and they noted that they expect a decline in tax revenues over the next three to five years.

HDRHCD trustees currently are unwilling to increase the mill levy to generate additional funds for EMS beyond the budgeted \$185,000 in 2015-16.

While there appears to be strong community support for having a local ambulance, how much local residents and industry are willing to pay to maintain local services is not clear. Residents have demonstrated their interest in providing additional tax support for EMS, as evidenced by the approval of the special taxing district in November 2014. However, with HDRHCD prioritizing the healthcare clinic over EMS, residents would have to make up the shortfall in order to sustain a local EMS service that was in compliance with state licensing requirements. Wamsutter area residents have not been surveyed to determine if they are willing to make up the shortfall or if they want to reallocate funds collected by the tax levy to redirect a greater proportion of funds to EMS. However, when asked in the town meeting if they agreed with the priorities set by HDRHCD, residents said yes.

Sweetwater County and residents to Wamsutter would benefit from a single, integrated, countywide approach to the provision of EMS.

Creating a full-time, paid EMS organization in Wamsutter would be expensive and likely unsustainable; however, a unified, countywide approach to EMS that would benefit all Sweetwater residents could at the same time provide Wamsutter with the reliable EMS resources it needs at a reasonable cost.

Sweetwater County presents unique EMS challenges because of its size, distances between towns, weather issues, limited workforce and long distances required to transport patients to a hospital. The County has four population areas where EMS is needed: Rock Springs, Green River, Wamsutter and Eden-Farson. Both Wamsutter and Eden-Farson are struggling to maintain their own ambulance services.

The current EMS system in Sweetwater County is inefficient. To handle approximately 4,000 ground ambulance requests annually, the system utilizes four distinct organizations, 76 EMS personnel, six staffed ambulance units, and 14 vehicles. The full cost of the current EMS system, including the value of volunteer labor, is more than \$4 million. The subsidy of this system provided by donated labor (valued at \$1.2 million) is going away. Continuing to operate as four separate organizations will result in ongoing inefficiencies and insufficient EMS service to the County residents.

The current EMS system has potential revenues of nearly \$3 million. If resources were consolidated and channeled toward a single, integrated, countywide EMS delivery system, there would likely be enough resources in the system for Wamsutter to have adequate EMS coverage.

In recent years, Sweetwater County has begun to set up the structures to create a single, integrated, countywide EMS delivery system. These structures include the establishment of an Ambulance Service Board and performance-based contracting.

III. Recommendations

Wamsutter EMS must become compliant with its state EMS license or immediately suspend operations.

As operating today, Wamsutter EMS is at risk of losing its license to provide ambulance services. Wamsutter EMS should seek to remedy this situation as quickly as possible by taking one or more of the following actions:

- *Create a real and binding schedule of volunteers to ensure 24/7 coverage.* This means ensuring that the ambulance is available to respond 24/7 using locally available volunteer staffing. However, success seems unlikely given the small roster size and current availability of some volunteers;
- *Suspend service and cede service area to Carbon County EMS and/or Sweetwater Medics.* This action would bring appropriate attention to today's operational reality and reduce the stress on current volunteers;
- *Contract with another ambulance service to cover hours in which Wamsutter staff cannot volunteer.* If the community believes that it is essential that there be an ambulance stationed in Wamsutter, contract with a neighboring EMS organization to station an ambulance in Wamsutter when there are no volunteers scheduled. Volunteers report that they need coverage help approximately 12 hours per day, Monday through Saturday. Based on 72 hours per week and a unit hour cost of \$82/hour, the cost for such services could be as much as \$23,616/month, or \$283,392/year; and/or
- *Become a part-time satellite station to another EMS organization.* This is a model in which Wamsutter EMS would surrender its ambulance license and become part of a neighboring ambulance service. It then would operate as a satellite or substation of the parent ambulance service. When there is a request for service in the satellite area, both the parent ambulance station and the satellite station would be started. If the satellite station has personnel and can respond, it would cancel the parent's response. This situation would allow Wamsutter EMS to operate when it is able. The downside of this model is the loss of local ownership and license.

Wamsutter EMS should not attempt to become a full-time or combination department.

SafeTech Solutions recommends that Wamsutter EMS does not seek to transition its volunteer service to a fully paid or combination service. The lack of local resources, the expense, and the challenge of recruiting and retaining a workforce make success unlikely.

Wamsutter EMS should maximize billing revenues.

While seeking to become compliant and participating in countywide EMS planning, Wamsutter EMS should seek to maximize revenues from transporting patients. This means ensuring that it is able to collect revenue from Medicare, Medicaid, private insurance and private payers. An average BLS charge for service with mileage could be \$800. Sixty calls per year could generate \$48,000. In order to do this, Wamsutter EMS would have to obtain a National Provider Identifier number issued by Medicare.

Wamsutter EMS should create adequate EMS crew quarters.

The future of EMS in Wamsutter will, in all likelihood, include full-time ambulance crews who are on duty for 12- to 24-hour periods. Such an arrangement calls for a place for ambulance crews to be stationed. The current ambulance location within the Town Hall building does not have sufficient space for a full-time ambulance crew. Creating appropriate ambulance quarters will necessitate planning and funding. The space should include:

- Day room;
- Kitchen;
- Sleeping quarters (for men and women);
- Bathroom/shower;
- Garage; and
- Storage space.

Wamsutter EMS should participate in a visioning and planning process to create a unified, integrated, countywide approach to EMS.

The most sustainable and efficient means of ensuring that Wamsutter has reliable and high-quality EMS will be a single, integrated, countywide delivery model that maximizes resources and returns value to Sweetwater County residents.

SafeTech Solutions is recommending to the County Commissioners that a single, integrated, countywide EMS delivery model be created that is appropriately funded and overseen by an independent board. Such a model will make the most of resources and be held to performance standards that meet the desires, needs and funding provided. SafeTech Solutions is recommending that the current Ambulance Service Board lead a process of visioning and planning that includes all stakeholders.

Wamsutter EMS should engage and participate in the visioning and planning process. This means its leadership should participate by candidly considering opportunities, risks and challenges and ensure that local concerns are addressed. Local services like Wamsutter EMS will naturally be concerned about the loss of

local identify and control and should represent their concerns throughout the process.

SafeTechSolutions

Final Report

**HIGH DESERT RURAL
HEALTHCARE DISTRICT**
December 2015



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I. Project Scope

High Desert Rural Healthcare District (HDRHCD) is a rural health special taxing district approved by vote in 2014 and formed for the purpose of providing financial support for operating and maintaining the Wamsutter Community Health Center, as well as providing health service support for Bairoil and financial support for emergency medical services (EMS) in Wamsutter.

Because of its role in funding EMS, HDRHCD requested SafeTech Solutions include recommendations to HDRHCD as part of its assessment of EMS in Sweetwater County. This report is not a complete assessment of HDRHCD, its financials or its operations. The scope of the recommendations to HDRHCD is limited to its financial support of EMS in Wamsutter.

II. Key Observations

HDRHCD views EMS as an important element of the local healthcare delivery system.

HDRHCD believes EMS is an integral part of ensuring that residents, workers and visitors to the Wamsutter area have access to necessary healthcare resources. While the local clinic is HDRHCD's primary focus, it has only limited daytime and weekday hours. After hours, EMS is the community's only local access point to healthcare system. EMS also is necessary for emergent medical events 24/7.

HDRHCD prioritizes healthcare clinic operations over EMS.

HDRHCD's primary goal in 2015-2016 is to ensure that the local healthcare clinic is open, operating appropriately and sustainable. To this end, HDRHCD approved a FY 2015-16 budget that directs 71 percent (\$456,510) of its operational budget toward clinic and non-EMS operations. In contrast, 29 percent (\$185,000) is earmarked for EMS. HDRHCD is putting aside 31 percent of its total budget (\$332,000) in reserves as a hedge against future revenue losses. Tax revenues for 2016, 2017 and 2018 are projected to decline sharply as a result of a decline in oil and gas prices. (See the following table for details.)

According to HDRHCD trustees, prioritizing clinic operations is consistent with the creation of the taxing district, in which the primary focus and goal was on opening and sustaining a healthcare clinic. The clinic is seen as integral to address the needs of local industry and business, as well as meeting the needs of local senior residents and people with limited ability to travel to Rawlins or Rock Springs for healthcare services. The clinic is viewed as vital to long-term illness and injury prevention and quality of life issues.

High Desert Rural Health Care District Budget, 2015-2016	
Revenues	
Tax Revenue (mill levy)	\$1,045,760
Grant	\$27,000
TOTAL REVENUE	\$1,072,760
Expenditures	
Administrative	\$106,250
Wamsutter Clinic, Bairoil support, marketing	\$465,510
EMS	\$185,000
Indirect	\$3,000
Reserves	\$322,000
TOTAL EXPENDITURES	\$1,072,760

According to the business consultant to HDRHCD, trustees earmarked \$185,000 to cover the estimated cost of paying several EMTs wages to staff the ambulance during daytime hours, plus cover funding for volunteer recruitment activities. No specific Wamsutter EMS budget is associated with the \$185,000.

HDRHCD is unwilling to substantially expand its financial support for Wamsutter EMS.

A majority of HDRHCD trustees report that they are unwilling to substantially increase funds beyond those that are currently budgeted for EMS in the future. Trustees believe that they will need all of their resources, including reserves, in coming years. Much of HDRHCD’s tax revenue comes from companies involved in mineral extraction, and trustees anticipate significant declines in future revenues.

HDRHCD trustees and current ambulance staff disagree on how much money is required to fund Wamsutter EMS and how funds should be spent.

HDRHCD trustees and Wamsutter EMS personnel disagree over the amount of funding needed to sustain EMS operations and how existing resources should be spent. In 2015, Wamsutter EMS submitted a proposal to HDRHC requesting from \$228,000 to \$334,500 to fund hiring of four full-time EMTs or to contract for comparable services. The proposal was not approved.

Wamsutter EMS staff expressed frustration with not being able to access funding resources. They said that HDRHCD does not trust Wamsutter EMS’ planning and budgeting processes and that HDRHCD is attempting to control how Wamsutter EMS operates.

A majority of HDRHCD trustees expressed concern that Wamsutter EMS does not have a realistic plan for operational fidelity and sustainability. Some trustees are concerned that HDRHCD funds will simply be used to fund salaries of the current

volunteers, and the service will not progress toward reliability and sustainability. At the same time, trustees were emphatic that HDRHCD does not want to be involved in the delivery and management of local EMS operations.

HDRHCD may stipulate how funds are used.

According to Wyoming Statute 35-2-703, rural healthcare districts are empowered to decide how revenues will be used and to enter into contracts and agreements with other entities for the use of funds according to conditions set by the funding entity.

Wamsutter EMS, as currently operating, is not sustainable.

SafeTech Solutions assesses the sustainability of volunteer ambulance services by considering: the number of active volunteers on a service's roster, multi-year trends regarding total numbers of active volunteers and the ability of an ambulance service to fully schedule call time. In more than a decade of studying volunteer ambulance services, SafeTech Solutions has determined that:

- Fourteen active volunteers are needed to safely and humanely staff one 24/7 ambulance unit;
- When a service dips below 10 active volunteers, it is nearly impossible to increase those numbers because the call-time load on volunteers is too great and the organizational culture becomes one focused simply on survival;
- A five-year trend of declining roster size suggests that volunteerism will most likely continue to decline; and
- The stress on volunteers dramatically increases and makes it more likely volunteers will quit when a service is incapable of regularly and consistently creating a call schedule with at least two volunteers to cover call time 24/7. An "all-call" system suggests that all volunteers are responsible 24/7 and increases stress because no one is ever really not on call.

Wamsutter EMS currently responds to only 50 percent of its requests for service. From November 1, 2014 to November 1, 2015, there were 72 requests for service in the Wamsutter EMS service area.⁴⁷ Wamsutter EMS responded to 36 of those requests for service.

Wamsutter EMS does not have a regular schedule of field personnel who are available to volunteer. There are times of the day and days of the week when volunteers simply are not available, and the service operates in hope that someone will respond if services are needed.

Wamsutter EMS currently has six people on its roster, not all of whom are available to take calls. The service has a five-year trend of declining roster numbers and has not been able to rebuild its roster to a sustainable level.

⁴⁷ Dispatch information provided by Carbon County EMS, which dispatches for Wamsutter EMS

These factors suggest that, as operating today, Wamsutter EMS is in jeopardy of losing its license and is not sustainable long-term. The current situation is not only unhealthy for the community, the ambulance service's failure to respond as required by its license may make its owner, the Town of Wamsutter, liable for damages.

There is currently insufficient data to support combining clinic and EMS operations in Wamsutter.

Some communities are exploring the use of community paramedics to help meet staffing shortages in rural primary healthcare (see <https://www.naemt.org/Files/MobileIntegratedHC/CP%20Policy%20Brief.pdf>).

While this concept may be plausible for Sweetwater County, the need for primary healthcare services provided by EMS staff has not been established at this time, and insurance reimbursement for such services is not yet well developed. EMS staff in Wamsutter could potentially be used to supplement clinic staff while not on calls; however, the clinic contractor does not appear open to the idea at this time because it presents staffing challenges at the clinic when EMS staff is out on an ambulance call. The potential for EMS personnel to meet other healthcare needs in the Wamsutter area (industrial healthcare, site visits and post-discharge follow-up) also is unclear.

III. Recommendations

Make 2016 funding of Wamsutter EMS contingent upon the creation of a reasonable plan to become compliant with state EMS licensing requirements.

Wamsutter EMS currently is operating in a precarious position in which its license is at risk and the Town of Wamsutter may be liable for the failures of its EMS operation to respond to all calls for service. HDRHCD should withhold financial resources until Wamsutter EMS presents an acceptable plan to become compliant that is reasonable and has a high probability of success. Compliant means that Wamsutter EMS is operating within the requirements of its license or is granted an exemption in writing by the Wyoming Office of EMS.

A “reasonable plan” would include the following:

- A call schedule that documents at least two staff members available to respond 24 hours a day;
- Billing and collection for services at appropriate levels;
- Obtaining a National Provider Identifier Number issued by Medicare;
- Responding to 100 percent of requests for service; and
- Meeting a 10-minute chute time (from time of dispatch to wheels rolling).

HDRHCD should provide short-term funding for Wamsutter EMS that would allow it to contract for coverage by another EMS organization.

Wamsutter EMS likely will need to contract for coverage from another ambulance service to become compliant with its state EMS license. HDRHCD should require that contracting for coverage be accomplished through a request-for-proposals process and the development of a performance-based contract with the vendor. HDRHCD should expand its financial commitment as needed to assist Wamsutter EMS in meeting coverage demands for 2016.

HDRHCD should not fund the creation of a Wamsutter-based paid or combination EMS organization.

Investing in the creation of a paid or combination EMS organization in Wamsutter would be a poor business decision. Wamsutter does not possess the resources to sustain its own EMS paid or combination department, in terms of call volume, workforce and finances. While it is conceivable that such an organization could be successfully launched, it is unlikely such an organization could be sustainable long-term.

HRDHCD should fund the development of ambulance crew quarters to include: day room, kitchen, sleeping quarters and garage.

The future of EMS in Wamsutter will, in all likelihood, include full-time ambulance crews who are on duty for 12- to 24-hour periods. Such an arrangement calls for a place for ambulance crews to be stationed. The current ambulance location within the Town Hall building does not have sufficient space for a full-time ambulance crew. Creating appropriate ambulance quarter will necessitate planning and funding. The space should include:

- Day room;
- Kitchen;
- Sleeping quarters (for men and women);
- Bathroom/shower;
- Garage; and
- Storage space.

HDRHCD should assist the Town of Wamsutter to create crew quarters as part of an effort to prepare for the future of EMS in Wamsutter.

HDRHCD should participate in a visioning and planning process to create a single, unified, countywide approach to EMS.

As a potential funder of EMS operations in the County, HDRHCD should engage and participate in the visioning and planning process. The District should seek to have representation on planning bodies and seek to understand how its resources may support the creation of a countywide EMS system that meets the needs of residents who live in the taxing district.

HDRHCD should explore the need for EMS staff within healthcare clinic operations and/or the public health setting in the Wamsutter area.

In collaboration with the clinic contractor, HDRHCD should vigorously explore opportunities to utilize EMS personnel to supplement healthcare in the Wamsutter region. Such an exploration should consider opportunities to use EMS personnel:

- In out-of-hospital public health roles;
- For occupational health support, screening or testing;
- For public health roles, such and home visits and immunization; and
- To supplement clinic staff or clinic hours.

HDRHCD may seek to fund a study of needs that EMS may fulfill as part of both HDRHCD and countywide planning for the development of an efficient and integrated EMS system.