

2020 Annual Report

Sweetwater Combined Communications
Joint Powers Board

Updated 2-24-2021



CONTENTS

Introduction.....	4
Contacts.....	4
Key Statistics.....	5
Phones and 911.....	5
Calls for Service.....	5
Radio Usage.....	6
Call Taking Protocols.....	6
Active Users in RMS, JMS, and CAD: by agency.....	7
Active Users in RMS, JMS, and CAD: By entity.....	7
Smart 911 Statistics.....	8
Other Statistics.....	8
Services Provided.....	9
to Agencies.....	9
to the Public.....	9
Completed Projects.....	10
Data Center Supplemental Cooling.....	10
Storage Upgrades.....	10
Additional monitors for dispatch workstations.....	11
Current and Upcoming Projects Remaining in FY21.....	11
Microwave Backhaul Reconfiguration.....	11
Conference Room AV System Upgrade.....	11
Replace GPS NetClocks.....	12
Implement Resilient Connectivity For Radio Consoles.....	12

CAPITAL Projects Planned for FY22 and Beyond 13

- Dispatch AV System Upgrade - FY22 13
- Mobile Repeater Trailer - FY22/23 13
- Repeater and Paging Upgrades in Farson - FY23..... 13
- Audio Logger System Upgrade - FY22 13
- Data Center UPS Systems – FY22-FY23 14
- 911 Phone System Hardware Refresh – FY22 14
- Firewall Replacement - FY23 14
- Server Upgrades - FY22-24 (Phased) 14
- Radio Console Replacement – FY26 14
- Consolette replacement – FY22-24 (Phased) 14
- Exalt Microwave system Replacement – FY24 15
- CAD Workstation Replacement – FY22 15
- Repeater and Paging Upgrades in Granger and Wamsutter - FY23-24 (Phased) 15
- LED Lighting and Controls - FY24..... 15

INTRODUCTION

This document covers projects that have been completed, are currently underway, coming this fiscal year, and planned for FY22. There are also some key statistics from 2020 and prior years, as well as the services we currently provide to our agencies and the public.

This report was written for members of the Rock Springs and Green River City Councils, the Sweetwater County Commission, and the Sweetwater Combined Communications Joint Powers Board. If you are interested in more information about dispatch operations in Sweetwater County, or would like a tour of our facilities, feel free to contact us using the information below.

CONTACTS

Email: Please use the contact form on our website: <https://sweetwater911.org/contact>

Rick Hawkins, Executive Director

David Halter, IT Director

Becca Thornock, Administrative Assistant

Cheryl Johnson, Communications Supervisor

KEY STATISTICS

PHONES AND 911

The numbers below are from our 911 phone system, Motorola CallWorks. We went live with this system in October 2016; therefore this table starts with the first full year of data from 2017.

	2017	2018	2019	2020
911 Voice Calls	15,089	14,011	15,588	15,948
% Wireless	85.73%	86.98%	88.97%	86.07%
911 Text Calls	43	46	39	30
Inbound Admin Calls	70,437	61,534	60,423	57,234
Outbound Admin Calls	33,841	31,867	31,624	27,264
<i>Total Calls</i>	<i>119,410</i>	<i>107,458</i>	<i>107,674</i>	<i>100,512</i>
<i>Change from prior year</i>		-11,952	216	-7,162
%		-10.01%	0.20%	-6.65%

CALLS FOR SERVICE

The numbers below are from our CAD system, Motorola Spillman Flex. We went live with this CAD system in August 2017; therefore this table starts with the first full year of data from 2018. In addition, we went live with Priority Dispatch near the end of 2018. This may affect how data was entered into our CAD system in 2019.

	2018	%	2019	%	2020	%
Rock Springs Police Department	39,457	42.60%	33,549	42.22%	30,375	40.03%
Sweetwater County Sheriff	23,108	24.95%	20,363	25.63%	19,363	25.52%
Green River Police Department	17,636	19.04%	15,723	19.79%	15,939	21.01%
Sweetwater Medics	4736	5.11%	3557	4.48%	3653	4.81%
Rock Springs Fire Department	3597	3.88%	2388	3.01%	2224	2.93%
Castle Rock Ambulance Service	1861	2.01%	1859	2.34%	2131	2.81%
Green River Fire Department	935	1.01%	833	1.05%	877	1.16%
Sweetwater Fire District #1	711	0.77%	495	0.62%	590	0.78%
Farson Eden Fire/EMS	265	0.29%	360	0.45%	432	0.57%
Sweetwater County Fire Dept	186	0.20%	186	0.23%	195	0.26%
Wamsutter Fire Department	57	0.06%	83	0.10%	59	0.08%
Superior Police Department	51	0.06%	27	0.03%	0	0.00%
Granger Fire Department	12	0.01%	23	0.03%	29	0.04%
Superior Fire Department	10	0.01%	16	0.02%	14	0.02%
<i>Total Calls for Service</i>	<i>92,622</i>		<i>79,462</i>		<i>75,881</i>	
<i>Change From prior year</i>			-13,160		-3,581	
%			-14.21%		-4.51%	

RADIO USAGE

The radio usage numbers below are from the State-wide P25 radio system, WyoLink. These are just a handful for the channels we communicate on, and are not a complete picture of radio usage in our dispatch center. These numbers also only count digital channels, as we do not have a good way to measure analog radio usage (yet). The columns labeled “PTTs” are the push to talks, which are the number of times a user “keys up” the radio channel. The columns labeled “Minutes” are the actual amount of talk time users speak on their radios.

Primary Agency	Talkgroup	2018 PTTs	2018 Minutes	2019 PTTs	2019 Minutes	2020 PTTs	2020 Minutes
Rock Springs Police	04RSPD	530,021	40,398	529,904	38,906	455,923	35,173
Sweetwater Sheriff's Office	04SO1	359,189	28,443	373,352	29,660	358,609	29,226
Green River Police	04GRPD	309,135	22,996	313,688	22,739	301,456	22,598
Rock Springs Fire Department *	04RSFD1	23,054	2,514	6,715	1,182	5,995	1,175
Green River Fire Department *	04GRFD	22,704	1,982	20,603	1,770	24,908	2,209
Sweetwater County Fire Dept	04FIRE **	7,579	834	9,846	1,010	9,801	1,005
Sweetwater Fire District #1	04SCFD1	22,535	1,757	17,168	1,537	19,068	1,731
Castle Rock / Sweetwater Medics	04EMS **	99,389	7,489	101,509	7,532	105,684	8,021
County-Wide Mutual Aid 1	04CAT1	21,120	1,959	20,256	1,607	2,778	251
County-Wide Mutual Aid 2	04CAT2	-	-	-	-	279	34
County-Wide Mutual Aid 3	04CAT3	-	-	-	-	19	1
County-Wide Mutual Aid 4	04CAT4	-	-	-	-	134	11
County-Wide Law Enforcement 1	04LE1	-	-	-	-	1,694	124
County-Wide Law Enforcement 2	04LE2	-	-	-	-	104	6

* These agencies also operate on analog conventional channels for dispatch radio traffic.

** These talk groups are used to dispatch multiple agencies.

CALL TAKING PROTOCOLS

Below is a table showing the number of calls protocolled in 2020. The determinate codes, which dictate the level of response, are indicated in each column. While each discipline is different in how it handles determinate codes, Delta and Echo level responses are emergent response (sometimes referred to lights and sirens), while the other levels are less emergent.

	Omega	Alpha	Bravo	Charlie	Delta	Echo	Total
EPD (Police) Cases	49	2977	4859	2975	3491	2	14353
EMD (Medical) Cases	14	522	324	516	648	50	2074
EFD (Fire) Cases	20	119	216	227	92	8	682

Call takers also have the ability to provide lifesaving services prior to the arrival of public safety personnel. Included in the cases above, our communicators have successfully given instructions to callers over the phone for the following in 2020: (These are the pre-arrival instructions that we track in-house.)

- 1 pre-hospital baby delivery
- 4 pre-hospital CPR saves

ACTIVE USERS IN RMS, JMS, AND CAD: BY AGENCY

The table below shows the number of active user accounts in our Spillman software by agency. These users have access to our records management, jail management, and computer aided dispatch systems.

Agency Name	# of users	%
Castle Rock Ambulance Service	7	1.74%
Wyoming DCI	1	0.25%
DUI Supervised Probation	1	0.25%
Farson Eden Ambulance Service	3	0.75%
Farson Eden Fire Department	4	1.00%
Green River Fire Department	15	3.73%
Green River Police Department	50	12.44%
Juvenile Probation and Parole	7	1.74%
Adult Probation and Parole	9	2.24%
Rock Springs Fire Department	10	2.49%
Rock Springs Municipal Court	1	0.25%
Rock Springs Police Department	60	14.93%
Sweetwater Search and Rescue	14	3.48%
Sweetwater Combined Communications	30	7.46%
Sweetwater County Fire Dept	6	1.49%
Sweetwater County Sheriff	129	32.09%
Sweetwater Fire District #1	17	4.23%
Sweetwater County Attorney	28	6.97%
Sweetwater Medics	10	2.49%
Total:	402	

ACTIVE USERS IN RMS, JMS, AND CAD: BY ENTITY

The table below shows the number of active user accounts in our Spillman software by entity.

Entity Name	# of users	%
City of Rock Springs	71	17.66%
City of Green River	66	16.42%
Sweetwater County	177	44.03%
Other Entities	88	21.89%
Total:	402	

SMART 911 STATISTICS

Smart 911 is a service that the public can sign up for to provide additional information to our communicators and first responders. When someone calls 911 with a Smart911 profile, our call taker will automatically see information in the caller's safety profile. This information could be medical alerts, floor plans, family member information, emergency contacts, etc. The table below shows usage statistics for Smart 911 in our County.

Note: Safety profiles can contain multiple people and addresses. Our dispatch center will also receive safety profile data from travelers calling 911 in our County who have signed up for the service in their home town.

	2017	2018	2019	2020	All Time
Total Safety Profiles Created	15	57	114	47	421
Facility Profiles Created	0	0	1	1	2
911 Calls with Safety Profile	61	42	120	167	N/A
Text Conversations	4	5	6	9	N/A

OTHER STATISTICS

- Over 700 devices communicating with our network (includes servers, desktops, laptops, phones, tablets, etc.)
- Over 241TB of data transmitted in and out of our network in 2020
- 117,879 users accessed the sweetwater911.org website with 2,253,734 hits.
 - 96% of these hits were users accessing the Jail Roster
 - 3% of these hits were users accessing the 311 website
- Over 79,600 emails sent and received

SERVICES PROVIDED

TO AGENCIES

- 911 Dispatch
- Spillman FLEX: Records management system, jail management system, mobile computer aided dispatch, evidence management, automatic vehicle location, asset management, NCIC access, etc.
- Warrant entry and validation
- Protection order entry and validation
- Terminal agency coordinator (CJIS compliance)
- Priority Dispatch: Call taking protocols
- 911 telephone and radio logging
- Conventional radio system and paging infrastructure
- Microwave network backhaul
- IT support for dispatch related software and hardware
- Basic radio programming and support of agency radios
- RapidSOS location, medical, and connected car data
- Smart911 safety and facility profiles
- 3SI asset tracking: Track stolen merchandise
- TipManager: Monitor public submitted tips from TipSubmit
- RAVE Alert: Emergency and non-emergency notifications to the public and personnel
- TLO: Background check software
- HipLink: Text paging software
- Mobile communications and dispatch equipment (mobile command post)
- Training for services we provide, as well as cooperative training, sit-a-longs

TO THE PUBLIC

- 911 (Voice and Text)
- Smart 911:
 - Safety profiles with data provided by the public (medical conditions, pet descriptions, emergency contacts, house floor plans and utility shut off locations, etc.)
 - Weather and emergency alerts
 - Facility profiles with data provided by businesses and organizations (floor plans, emergency plans, hazards, emergency contacts, etc.)
- RapidSOS: Ability to receive accurate GPS location of 911 wireless callers (iOS and Android smartphones)
- Education about 911 and dispatch
- Answer calls for service, and dispatch appropriate resources for fire, medical, and law enforcement
- Online Jail Roster
- TipSubmit: Provide the ability for the public to submit anonymous crime tips

COMPLETED PROJECTS

DATA CENTER SUPPLEMENTAL COOLING



Our data center in Green River had a single cooling unit, which was reaching eight years old at the time. This unit is in great shape, and we can probably get another eight years out of it. However, if it were to fail, the room would have been without cooling. Many critical systems are housed in this data center. In 2020, we installed two 3-ton split systems to take over if the main unit fails. This will also allow us to take the main unit offline for an extended period of time for maintenance/replace in the future.

STORAGE UPGRADES

Our backup and video storage servers were end of life, and were running unsupported operating systems. In addition, our primary storage servers were running near capacity. To fix these issues, we installed a new backup appliance that is subscription based, meaning that hardware and software will continually be upgraded into the future. Also, we expanded our existing storage arrays to compensate for capacity and video storage issues.



ADDITIONAL MONITORS FOR DISPATCH WORKSTATIONS

We added an additional monitor at each workstation at our primary dispatch center. This allows our communicators to have more information displayed at all times. Most notably, the mapping component of our CAD software is now easier to utilize with having an additional monitor.



CURRENT AND UPCOMING PROJECTS REMAINING IN FY21

MICROWAVE BACKHAUL RECONFIGURATION

With the move of our EOC dispatch, and the addition of a new WyoLink site in Rock Springs, our microwave network will need reconfigured to maintain resilient network connectivity and provide data communications to our radio equipment. This project is budgeted in fiscal year 20. However, the construction of the WyoLink site in Rock Springs must be completed before we can proceed. This project may be carried over into fiscal year 22.

CONFERENCE ROOM AV SYSTEM UPGRADE

Our conference room audio/visual equipment has been showing its age for a few years, and some of it has started to fail. When the system was originally installed eight years ago, it was designed with aging equipment at the time. The control system can only be programmed and modified by a certified vendor, which costs a significant amount to bring someone from Salt Lake City. In looking for a new system, we have found a product that can be programmed in-house, and is future proof. The equipment operates over our IP network, and can be upgraded one component at a time moving forward rather than fork-lifting the entire system. This project is nearly complete, and should be finished in a couple months.

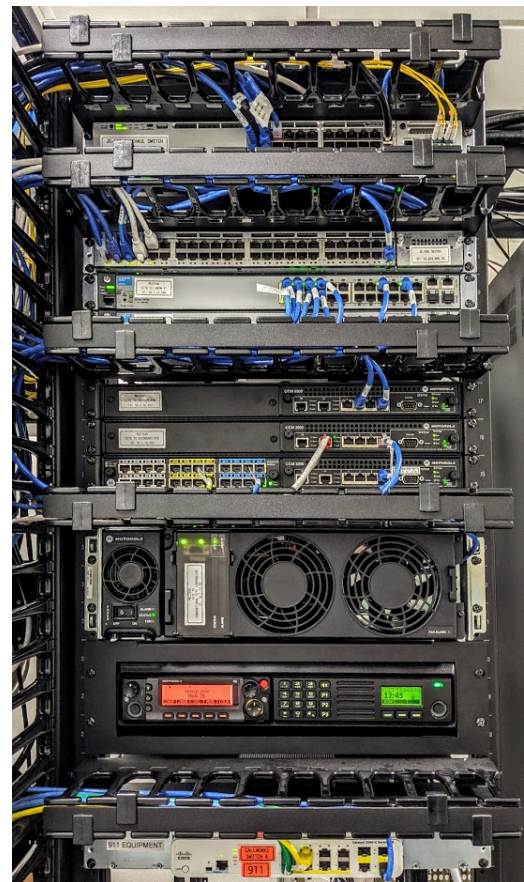
REPLACE GPS NETCLOCKS

The GPS NetClocks we currently utilize are no longer supported by SpectraCom. These NetClocks have been in service since 2009, even before combining communications centers. While they still function today, there is an inherent flaw that will cause issues with maintaining accurate time. All of our equipment in the dispatch center, as well as our backup location and communications sites sync their clocks with our GPS NetClocks. This ensures our records management systems, CAD, phone and radio recordings, access logs, etc, all record accurate times. New NetClocks will be installed before the end of FY21.

IMPLEMENT RESILIENT CONNECTIVITY FOR RADIO CONSOLES

Now that our radio consoles at our primary and backup dispatch centers are communicating with the WyoLink system over Ethernet, we have the opportunity to take advantage of adding some resiliency. In the past, we relied on a single T1 to connect our radio consoles into the WyoLink system in Cheyenne. When this link failed, we would not be able to communicate with anyone using a WyoLink radio. This link used a T1 circuit provided by CenturyLink. Now, we use Ethernet connectivity. This connection used our fiber optics to connect back to Cheyenne through the Wyoming Unified Network (WUN). The problem with this is, the WUN was not designed for public safety use. We frequently lose connectivity to WyoLink on weekends when maintenance is performed on the WUN.

Our solution to this problem is utilize our existing microwave infrastructure to connect into WyoLink's microwave network. With the help of WyDOT and WyoLink, we have already added a second connection to our backup dispatch center. Our primary dispatch center's second connection is slated to be completed in the near future.



CAPITAL PROJECTS PLANNED FOR FY22 AND BEYOND

DISPATCH AV SYSTEM UPGRADE - FY22

Our dispatch room's audio-visual system is identical to our conference room's old equipment. We are experiencing the same issues with the dispatch AV equipment, and it needs to be replaced as soon as possible. The AV system in dispatch allows our communicators to monitor cameras in our building, schools, and other agencies. In addition, they can display important information about a current incident. The new AV system will be tied into the conference room's equipment, which will allow for a much better user and administrative experience.

MOBILE REPEATER TRAILER - FY22/23

One of the biggest challenges for public safety in Sweetwater County and much of Wyoming is having reliable portable radio coverage. A majority of the time, radio coverage in certain areas of the County are only needed for a few days. Incidents like search and rescue, and wildland fires are great examples. In these cases, on-scene communications are handled by talk-around channels. However, without a repeater, these radios won't be able to talk to dispatch, or talk to another radio outside of portable range. A mobile repeater trailer can solve these issues in pockets of little to no radio coverage.

We are working on different funding sources for this project outside of our normal budget. This project is a great fit for grants and impact assistance funds. In 2020, Sweetwater County was awarded impact assistance funds from two industrial expansion projects. These funds included two mobile repeater trailers.

REPEATER AND PAGING UPGRADES IN FARSON - FY23

In 2018, we implemented a new paging system that we are licensed to use County-wide. We have transmitter sites in Rock Springs and Green River, and they cover those cities very well. For our rural communities, we rely on a single radio on Wilkins Peak to relay paging tones to repeaters in those communities. This is a point of failure that could result in losing our ability to page multiple agencies.

Starting with Farson, we will add a paging radio to the existing tower at the fire station, and a voice gateway to operate the repeater remotely using 4-wire audio. This configuration will be much more reliable, as well as provide a secondary means of paging Farson EMS and Fire.

AUDIO LOGGER SYSTEM UPGRADE - FY22

Our current audio logging equipment is running on outdated hardware and unsupported operating systems. This equipment will be replaced with new hardware and software. We will also gain additional functionality in reporting, quality assurance integration, and CAD data.

DATA CENTER UPS SYSTEMS – FY22-FY23

As with our cooling system at our Green River data center, we also only have one leg of UPS battery power. While the UPS keeps everything running until the generator starts during a power outage, if it were to fail, all of our critical systems would go offline for minutes or even hours. Much of our equipment has dual power supplies, which means that they can be powered from two power sources. With a second leg of UPS power, we can continue to operate regardless if the primary unit fails or not. Also, we will be able to take down the primary unit for extended periods of time for maintenance or replacement. After installation of the secondary UPS system, we plan on replacing the primary UPS system in the next fiscal year.

911 PHONE SYSTEM HARDWARE REFRESH – FY22

Our maintenance agreement on our 911 phone system ends October 2021. To receive the latest software releases and support, our phone system required a hardware refresh. This refresh will include new desk phones, PCs, servers, networking equipment, and voice gateways.

FIREWALL REPLACEMENT - FY23

Our firewalls at both the primary and backup centers are reaching end of life on support. We will be required to replace them to continue receiving software and intrusion protection updates.

SERVER UPGRADES - FY22-24 (PHASED)

Two of our servers at the primary data center are no longer supported by the latest versions of VMWare. They will need to be replaced soon.

RADIO CONSOLE REPLACEMENT – FY26

Motorola announced the end of life on the MC7500 radio console. Both of our dispatch centers use this system, and they will need to be replaced in 5-7 years.

CONSOLETTA REPLACEMENT – FY22-24 (PHASED)

We have nine Motorola Astro consolettes in service. While they work great today, they are no longer supported by Motorola. In addition, they are not P25 phase 2 compliant. They will need replaced in the near future.

EXALT MICROWAVE SYSTEM REPLACEMENT – FY24

In 2014, we installed our microwave backhaul between the Cities. In 2020, we started the reconfiguration of this system to include the Justice Center and HHS buildings in Rock Springs. We replaced one of the three links powered by Exalt radios. Exalt is no longer in business, and we will not be able to replace this equipment directly. Fortunately, we do have two spare radios from the link we decommissioned last year. However, looking forward, the two remaining links should be replaced with new and supported equipment.

CAD WORKSTATION REPLACEMENT – FY22

The PCs running our CAD software, as well as most other applications, are ten years old. They have been upgraded over the years, but they have reached their limit. The power supplies and motherboards in these PCs have out-lived their expected lifespan. It is time to purchase new PCs to continue supporting software upgrades into the future.

REPEATER AND PAGING UPGRADES IN GRANGER AND WAMSUTTER - FY23-24 (PHASED)

In 2018, we implemented a new paging system that we are licensed to use County-wide. We have transmitter sites in Rock Springs and Green River, and they cover those cities very well. For our rural communities, we rely on a single radio on Wilkins Peak to relay paging tones to repeaters in those communities. This is a point of failure that could result in losing our ability to page multiple agencies.

Adding Granger and Wamsutter will allow us to page agencies in these locations more effectively.

LED LIGHTING AND CONTROLS - FY24

Most of the lighting in our dispatch center uses fluorescent light fixtures. Fluorescent lighting causes fatigue and eye strain, and our communicators work 12-hour shifts. While the lights can be shut off, they are not dimmable, which is not ideal if someone needs light at their workstation. Replacing the fixtures with LED lighting and modern controls, we can solve this problem. LED lighting is dimmable and controllable at the fixture level. This means each workstation will have the ability to control its own lighting. In addition to the health benefits, LEDs use less power than fluorescent which will save on electricity costs.