



2021 Annual Report

Sweetwater Combined Communications
Joint Powers Board

Updated 1-24-2022

CONTENTS

Introduction.....	4
Contacts.....	4
Key Statistics.....	5
Phones and 911.....	5
Calls for Service.....	5
Radio Usage.....	6
Mobile Data Terminal (MDT) Usage vs Phone and Radio Usage.....	7
Call Taking Protocols.....	8
Active Users in RMS, JMS, and CAD: By agency.....	9
Active Users in RMS, JMS, and CAD: By entity.....	9
Smart 911 Statistics.....	10
Other Statistics.....	10
Services Provided.....	11
to Agencies.....	11
to the Public.....	11
Completed Projects.....	12
Microwave Backhaul Reconfiguration.....	12
Replace GPS NetClocks.....	12
Implement Resilient Connectivity For Radio Consoles.....	13
Audio Logger System Replacement.....	14
Data Center primary Cooling repairs.....	14
2021 FBI Procedural Audit.....	15
2021 Wyoming DCI Terminal Agency Audit.....	15
Current and Upcoming Projects Remaining in FY22.....	16
911 Phone System Hardware Refresh.....	16
Capital Projects Planned for FY23 and Beyond.....	16
Dispatch AV System Upgrade - FY23.....	16
Mobile Repeater Trailer - FY23/24.....	16
Repeater and Paging Upgrades in Farson - FY24.....	17
Data Center UPS Systems – FY23-FY24.....	17

Firewall Replacement - FY23 17

Server Upgrades - FY23-25 (Phased) 17

Storage Replacement – FY24..... 17

Radio Console Replacement – FY26 18

Consolette replacement – FY23-25 (Phased) 18

Exalt Microwave system Replacement – FY24 18

CAD Workstation Replacement – FY23 18

Repeater and Paging Upgrades in Granger and Wamsutter - FY24-25 (Phased) 18

LED Lighting and Controls - FY24..... 19

Roof Top HVAC Units – FY26-27 19

Re-Pave Parking And Fix Drainage Issues – FY24 19

INTRODUCTION

This document covers projects that have been completed, are currently underway, coming this fiscal year, and planned for FY23. There are also some key statistics from 2021 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	2021
911 Voice Calls	15,089	14,011	15,588	15,948	14,574
% Wireless	85.73%	86.98%	88.97%	86.07%	89.22%
911 Text Calls	43	46	39	30	43
Inbound Admin Calls	70,437	61,534	60,423	57,234	54,344
Outbound Admin Calls	33,841	31,867	31,624	27,264	22,520
Calls Transferred to WHP (Not included in total)	N/A	N/A	5,518	5,109	4,973
Total Calls	119,410	107,458	107,674	100,512	91,438
<i>Change from prior year</i>		-11,952	216	-7,162	-9,074
%		-10.01%	0.20%	-6.65%	-9.03%

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	%	2021	%
Rock Springs PD	39,457	42.60%	33,549	42.22%	30,375	40.03%	29,208	37.25%
Sweetwater County Sheriff	23,108	24.95%	20,363	25.63%	19,363	25.52%	23,181	29.56%
Green River PD	17,636	19.04%	15,723	19.79%	15,939	21.01%	15,197	19.38%
Sweetwater Medics	4,736	5.11%	3,557	4.48%	3,653	4.81%	3,994	5.09%
Rock Springs FD	3,597	3.88%	2,388	3.01%	2,224	2.93%	2,654	3.38%
Castle Rock Ambulance	1,861	2.01%	1,859	2.34%	2,131	2.81%	2,199	2.80%
Green River FD	935	1.01%	833	1.05%	877	1.16%	662	0.84%
Sweetwater Fire District #1	711	0.77%	495	0.62%	590	0.78%	702	0.90%
Farson Eden Fire/EMS	265	0.29%	360	0.45%	432	0.57%	342	0.44%
Sweetwater County FD	186	0.20%	186	0.23%	195	0.26%	155	0.20%
Wamsutter Fire Department	57	0.06%	83	0.10%	59	0.08%	81	0.10%
Superior Police Department	51	0.06%	27	0.03%	0	0.00%	0	0.00%
Granger Fire Department	12	0.01%	23	0.03%	29	0.04%	10	0.01%
Superior Fire Department	10	0.01%	16	0.02%	14	0.02%	26	0.03%
Total Calls for Service	92,622		79,462		75,881		78,411	
<i>Change From prior year</i>			-13,160		-3,581		2,530	
%			-14.21%		-4.51%		3.23%	

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.

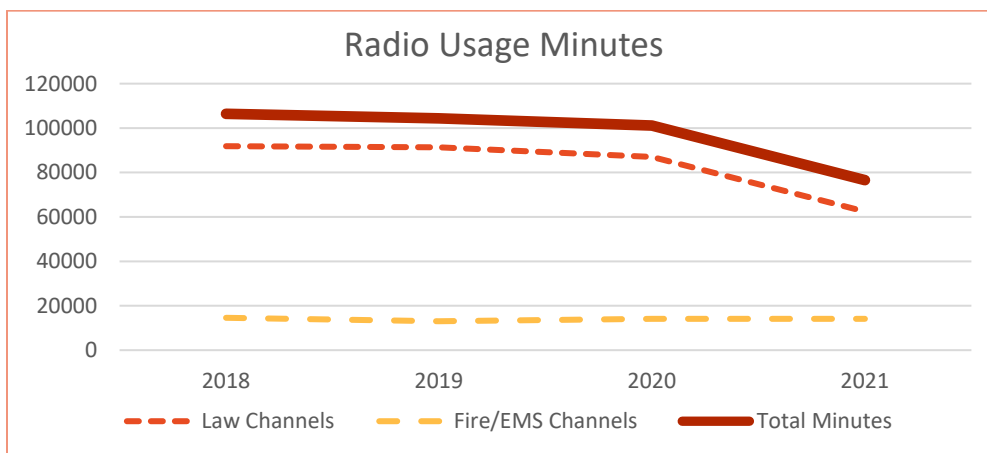
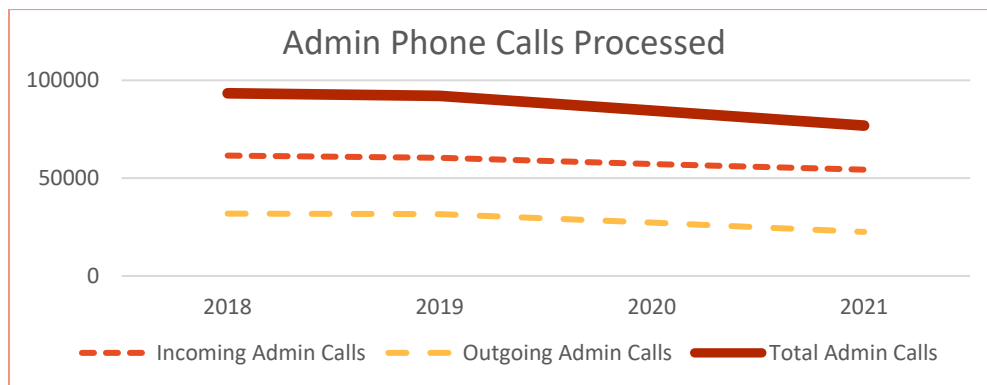
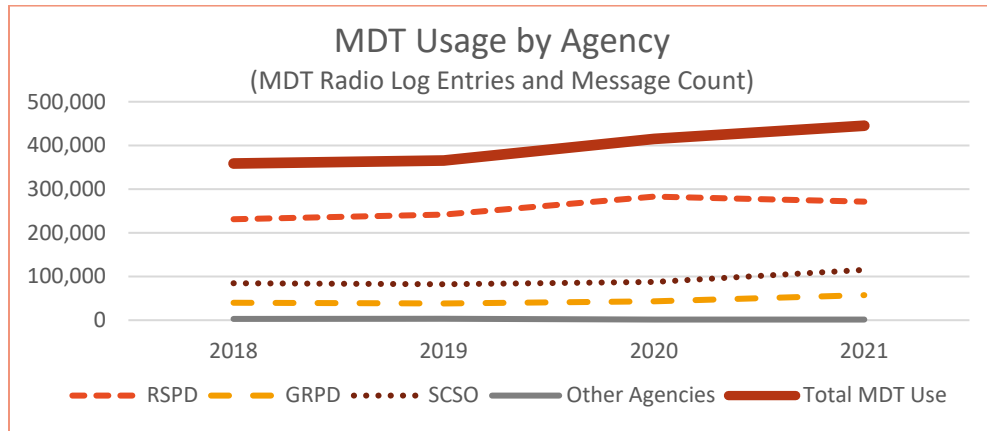
Primary Agency	Talkgroup	2018 PTTs	2018 Minutes	2019 PTTs	2019 Minutes	2020 PTTs	2020 Minutes	2021 PTTs	2021 Minutes
Rock Springs Police	04RSPD	530,021	40,398	529,904	38,906	455,923	35,173	337,812	25,797
Sweetwater Sheriff's Office	04SO1	359,189	28,443	373,352	29,660	358,609	29,226	265,074	21,418
Green River Police	04GRPD	309,135	22,996	313,688	22,739	301,456	22,598	199,999	14,981
Rock Springs FD*	04RSFD1	23,054	2,514	6,715	1,182	5,995	1,175	6,033	1,214
Green River FD	04GRFD	22,704	1,982	20,603	1,770	24,908	2,209	19,227	1,639
Sweetwater County FD	04FIRE **	7,579	834	9,846	1,010	9,801	1,005	7,953	808
Sweetwater Fire Dist. #1	04SCFD1	22,535	1,757	17,168	1,537	19,068	1,731	21,521	1920
Castle Rock/SW Medics	04EMS **	99,389	7,489	101,509	7,532	105,684	8,021	109,579	8,546
County-Wide Mutual Aid 1	04CAT1	21,120	1,959	20,256	1,607	2,778	251	4,424	396
County-Wide Mutual Aid 2	04CAT2	-	-	-	-	279	34	668	67
County-Wide Mutual Aid 3	04CAT3	-	-	-	-	19	1	16	1
County-Wide Mutual Aid 4	04CAT4	-	-	-	-	134	11	41	5
County-Wide Law 1	04LE1 **	-	-	-	-	1,694	124	2,826	227
County-Wide Law 2	04LE2 **	-	-	-	-	104	6	103	7

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

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

MOBILE DATA TERMINAL (MDT) USAGE VS PHONE AND RADIO USAGE

In an effort to streamline operations and dispatch agencies more efficiently, we have been asking agencies to utilize their mobile data terminals (MDTs) more. Lower priority calls are dispatched “silently.” These calls are assigned to the unit through our Spillman software, and they are alerted through the Spillman application on their MDT or through a text message on their phone. This helps keep radio traffic available for more emergent calls. In addition, units and dispatch are able to instant message each other through the software rather than tying up phone lines in dispatch. To visualize this transition to a more efficient process, the graphs below show a picture of MDT, phone, and radio use. Note the MDT usage trending up, and the phone and radio usage trending down.



CALL TAKING PROTOCOLS

Below is a table showing the number of calls protocolled in 2021. Protocolled calls from 2020 are in parentheses. 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. Call takers also have the ability to provide lifesaving services prior to the arrival of public safety personnel.

	Omega	Alpha	Bravo	Charlie	Delta	Echo	Total
EPD-Police Cases	29 (49)	6,673 (2,977)	5,401 (4,859)	3,059 (2,975)	3,762 (3,491)	1 (2)	18,925 (14,353)
EMD-Medical Cases	23 (14)	566 (522)	351 (324)	563 (516)	763 (648)	71 (50)	2,337 (2,074)
EFD-Fire Cases	7 (20)	119 (119)	195 (216)	197 (227)	63 (92)	22 (8)	603 (682)

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	9	2.24%
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	16	3.98%
Green River Police Department	55	13.68%
Juvenile Probation and Parole	7	1.74%
Adult Probation and Parole	10	2.49%
Rock Springs Fire Department	10	2.49%
Rock Springs Municipal Court	1	0.25%
Rock Springs Police Department	53	13.18%
Sweetwater Search and Rescue	14	3.48%
Sweetwater Combined Communications	30	7.46%
Sweetwater County Fire Dept	6	1.49%
Sweetwater County Sheriff	126	31.34%
Sweetwater Fire District #1	17	4.23%
Sweetwater County Attorney	29	7.21%
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	64	15.92%
City of Green River	71	17.66%
Sweetwater County	175	43.53%
Other Entities	92	22.89%
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.

Starting in 2021, we started asking local businesses to create facility profiles to provide our center with relevant information about their business and facilities. This information can include business contacts, floor plans, hazmat locations, utility shut offs, AED locations, 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	2021	All Time
Total Safety Profiles Created	15	57	114	47	86	511
Facility Profiles Created	0	0	1	1	8	10
911 Calls with Safety Profile	61	42	120	167	143	-
Text Conversations	4	5	6	9	27	-

OTHER STATISTICS

- Over 700 devices communicating with our network (includes servers, desktops, laptops, phones, tablets, etc.)
- Over 238TB of data transmitted in and out of our network in 2021
- 112,574 users accessed the sweetwater911.org website with 2,510,462 hits.
 - 98% of these hits were users accessing the Jail Roster
- Over 90,200 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
- 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
- digiTicket: Electronic citations
- 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)
- RAVE 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

MICROWAVE BACKHAUL RECONFIGURATION

With the move of our EOC dispatch in 2019, and the addition of a new WyoLink site in Rock Springs in October 2021, our microwave network needed reconfigured to maintain resilient network connectivity and provide data communications to our radio equipment. This reconfiguration involved replacing one microwave link and adding two additional links.



REPLACE GPS NETCLOCKS

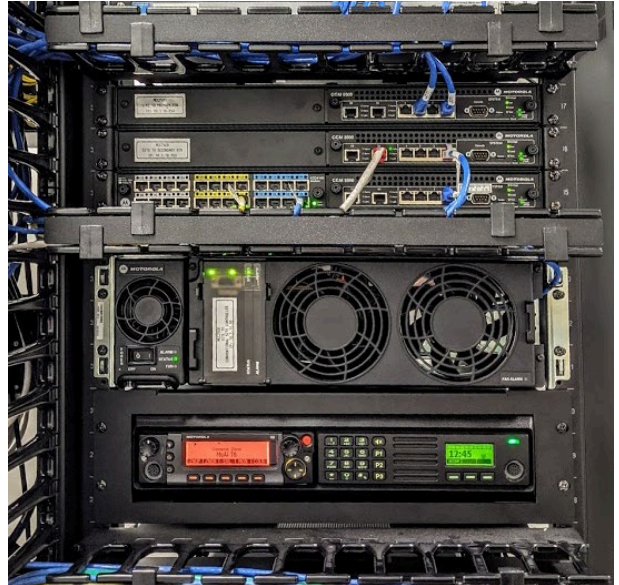
Our older GPS NetClocks were no longer supported by SpectraCom. Those NetClocks were in service since 2009, even before combining communications centers. There was an inherent flaw that would cause issues with maintaining accurate time. All of our equipment in the dispatch center, as well as our backup 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. Our new NetClocks were deployed in Spring 2021, and are keeping time on all of our IT systems in synch.



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 had 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 existing 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 lost connectivity to WyoLink on weekends when maintenance is performed on the WUN.

Our solution to this problem is to utilize our existing microwave infrastructure to connect into WyoLink's microwave network. With the help of WyDOT and WyoLink, we have added a second connection to both our primary and backup dispatch centers. The transition from our Ethernet to microwave and vice versa is seamless, and our communicators don't experience any loss of radio traffic.



AUDIO LOGGER SYSTEM REPLACEMENT

Our old audio logging equipment ran on outdated hardware and unsupported operating systems. Our new logging hardware and software was purchased as a subscription, which is roughly the same cost as the maintenance agreement of our old logging system. In addition to saving up-front costs, we also have the added value of recording phone audio with multiple servers for additional resiliency.



DATA CENTER PRIMARY COOLING REPAIRS



Within the first year after installing our supplemental data center cooling, our primary cooling system failed. The 10-year-old glycol lines lost pressure, and needed replaced. While waiting for parts to arrive, we operated the secondary cooling system for approximately 30 days without issue. In-fact, we discovered the secondary units operate more efficiently and use considerably less electricity than the main unit. To save on energy costs, we will be utilizing the secondary units during the warmer months, and the main cooling system during the winter. This situation proves the need for resilient systems to operate public safety infrastructure.

2021 FBI PROCEDURAL AUDIT

The Federal Bureau of Investigation (FBI) performed an audit of the Sweetwater County Sheriff's Office National Crime Information Center (NCIC) record keeping procedures in June 2021. Since our communications center handles NCIC records for the law enforcement agencies in Sweetwater County, our agency was also involved in the audit process. Our staff provided information to the FBI to complete the audit remotely, and the *FBI found our agencies in compliance with NCIC standards.*

2021 WYOMING DCI TERMINAL AGENCY AUDIT

The Wyoming Division of Criminal Investigation (DCI) performed an audit of our Criminal Justice Information (CJI) technology systems, procedures, and security agreements with agency staff and contractors in April 2021. Our staff provided information to Wyoming DCI to complete the audit remotely. *Wyoming DCI found our communications center and its partner agencies in compliance with State and Federal CJIS policies.*

CURRENT AND UPCOMING PROJECTS REMAINING IN FY22

911 PHONE SYSTEM HARDWARE REFRESH

Our maintenance agreement on our current 911 phone system ended October 2021. To receive the latest software releases and support, our phone system requires a hardware refresh. This refresh will include new desk phones, PCs, servers, networking equipment, and voice gateways. An agreement to purchase the hardware refresh and extend our maintenance was approved during Summer 2021. With delays in shipping, chip shortages, and scheduling issues, the tentative installation has been pushed into 2022. Since the delay is out of our control, the vendor has agreed to cover maintenance and support of our existing hardware at no cost until the project is complete. In addition, our warranty period will not start until the new hardware is installed and operational to our satisfaction.

CAPITAL PROJECTS PLANNED FOR FY23 AND BEYOND

DISPATCH AV SYSTEM UPGRADE - FY23

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 - FY23/24

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 - FY24

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.

DATA CENTER UPS SYSTEMS – FY23-FY24

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.

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 - FY23-25 (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.

STORAGE REPLACEMENT – FY24

Our two SAN storage systems will need replaced near the beginning of fiscal year 2024. Support for these systems expires in April 2024.

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 4-6 years.

CONSOLETTA REPLACEMENT – FY23-25 (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 – FY23

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 - FY24-25 (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.

ROOF TOP HVAC UNITS – FY26-27

The roof top HVAC units at our primary dispatch center are now 10 years old, and parts are becoming difficult to find. These units should be replaced in the coming years.

RE-PAVE PARKING AND FIX DRAINAGE ISSUES – FY24

The staff parking lot on the North side of the building needs re-paved. In addition, there are drainage issues on the South side of the building where water pools up in the parking areas.