



Mark Gordon
Governor

Wyoming Public Safety Communications Commission

5300 Bishop Boulevard, Cheyenne, Wyoming 82009-3340
Mark Harshman, Chairman | Telephone: 307-777-4015



Darin J. Westby, P.E.
Director

Meeting Minutes

I. Call to Order

The Public Safety Communications Commission (PSCC) met in the auditorium of the Wyoming Department of Transportation Headquarters on Wednesday, February 7, 2024. Vice Chairman Monte McClain presided, calling the meeting to order at 8:30 a.m.

II. Roll Call

The following members were present constituting a quorum:

Mark Harshman, Chairman (via Zoom)	Rick Kaysen, Commissioner
Monte McClain, Vice Chairman	Cindi Shank, Commissioner
Paul Bertoglio, Commissioner	Owen St. Clair, Commissioner (via Zoom)
Matt Carr, Commissioner	Matt Waldock, Commissioner
Mike Choma, Commissioner	John Wetzel, Commissioner
Karl Germain, Commissioner	Darin Westby, Ex Officio
Phillip Franklin, Commissioner	

Commissioner Dwane Pacheco was absent.

III. Introductions

The following attendees participated in the meeting:

Nathan Smolinski, Chief Technology Officer, WYDOT; Mark Kelly, Emergency Communications Manager, WYDOT; Neil Gardiner, WyoLink Support Manager, WYDOT; Aimee Binning, 911 Planning Coordinator, WYDOT; Jeff Winkleman, Wyoming Account Director, Lumen; Tim Kunkleman, Regional Director, Lumen; David Furth, Deputy Chief of the Public Safety and Homeland Security Bureau, Federal Communications Commission; Leela Parimisetty, Senior Engineer, T-Mobile; Tim Brandt, Lifecycle Consultant, Motorola; Kevin Parker, Wyoming Account Executive, Motorola; Jeremy Johnson, Emergency Communication Coordinator, Cybersecurity and Infrastructure Security Agency (CISA); and Kimberly Chapman, Commission Secretary, WYDOT. *Susan Elliott assisted with virtual meeting management.*

IV. Agenda Adjustments

Staff proposed to updated the agenda to include an additional WyoLink application, a presentation from T-Mobile, and to postpone the Compact Rapid Deployable (CRD)

messaging discussion. It was moved by Commissioner Bertoglio, seconded by Commissioner Carr, and unanimously carried to approve the updated agenda.

V. Action Items

1. Draft Meeting Minutes

It was moved by Commissioner Shank, seconded by Commissioner Bertoglio, and unanimously carried to approve the October 25, 2023, business meeting minutes and the October 24, 2023, education session minutes.

2. WyoLink Application

It was recommended by Mr. Gardiner, moved by Commissioner Choma, seconded by Commissioner Waldock, and unanimously carried to approve the applications from Dubois Police Department, South Lincoln Emergency Medical Services, and Sheridan County School District #1.

VI. Updates/Discussions

1. Director's Update

Mr. Smolinski presented a brief update from the director.

2024 Budget Session

Mr. Smolinski reported that the 2024 Budget Session will convene on February 12, 2024. The agency will closely monitor any bills concerning transportation topics, and Mr. Smolinski and his staff will track any bills pertaining to WyoLink, telecommunications, or 9-1-1. House Bill 100 (HB0100)—Critical Infrastructure Resiliency—is of particular interest as it seeks to create an initiative to strengthen and protect systems and assets vital to public health, safety, and security.

General Agency Updates

Mr. Smolinski reported that the agency has experienced a relatively mild winter, which is a relief after the previous challenging winter. While staffing levels are still lower than leadership would like, they are better than this time last year.

Space Efficiency Study

As mentioned in a previous meeting, WYDOT contracted HDR to conduct a space efficiency study to analyze the department's current use of available space and make suggestions for improving functionality and space optimization. The study will determine if a new facility is required or if off-site programs—the Transportation Management Center (TMC), Wyoming Highway Patrol (WHP) dispatch, Aeronautics, and Driver Services—can be moved into existing space on the Headquarters campus. Executive staff received the results from a preliminary review but an official report is still expected.

2. Chief Technology Officer's Report

Mr. Smolinski presented his update, with additional information provided by Ms. Binning.

General Updates

Mr. Smolinski, Mr. Kelly, and Mr. Gardiner met with the Sublette County Board of County Commissioners and the Sublette Interoperable Radio Systems (SIRS) group on February 2 to discuss interoperable communications between SIRS and WYDOT. He reported that it was a very productive discussion. The group also discussed colocalities and opportunities to leverage each organization's systems.

Mr. Smolinski reported that approximately \$400 million will be available to utility providers and telecommunications companies to expand the buildout of fiber optic networks over the next several years. WYDOT is working with the providers to utilize highway right-of-way for the buildout and Mr. Smolinski and his team are involved in the discussions. His goal is to seek opportunities to include connection points that could bring fiber optic connections to WyoLink tower sites, which could potentially represent significant cost savings to the program.

Next Generation 9-1-1 (NG9-1-1) Update

Ms. Binning provided an update on recent activities of the NG9-1-1 working groups. The Geographic Information System (GIS) working group is creating educational information to support the commission-approved GIS data model, which focuses on how to gather and collect data for a community database. Ms. Binning and select working group members will present at the Wyoming Geospatial Organization's conference on May 8 and 9 in Saratoga.

A major goal of the GIS working group is to create a shared portal for the aggregation of statewide data. The University of Wyoming's Wyoming Geographic Information Science Center (WyGISC) has an existing portal of GIS data, which they maintain for extraction industry partners and the Wyoming Game and Fish Department. The working group will draft a schema document for Albany County's participation in WyGISC's portal. Depending on the outcome of Albany County's beta testing, the portal could be made available to the rest of the state.

The technology working group is currently drafting a concept of operations plan for the Emergency Services IP Network (ESInet). The plan will outline the purpose, vision, and logistics of ESInet for Wyoming stakeholders. In addition to the work already completed to prepare local agencies for ESInet, the Information Technology (IT) departments will need to know how to connect their equipment to the network.

Ms. Binning is conducting visits with each of the Wyoming public safety answering points (PSAP). The conversations have uncovered significant concerns over service and reliability from the telecommunication providers. Investigation into the service issues and outages showed a connection to the development of ESInet in surrounding states. The main impact to service in Wyoming was caused by Nebraska's buildout, but it only affected Torrington. Disruptions to service have increased in Torrington since Nebraska switched to ESInet in October 2023, so Ms. Binning is tracking the outages in a spreadsheet.

Ms. Binning reported that the FCC will present on outage notification requirements later in the meeting. The presenter will discuss actions local entities can take when outages occur and notifications are not received. A representative from T-Mobile will

also present on location-based routing, which is a service that the major telecommunications companies must have online by the end of 2024. T-Mobile is working with the state to acquire shapefiles—a format for storing the geometric location and attribute information of geographic features—for each PSAP and dispatch area in Wyoming. Vice Chairman McClain clarified that shapefiles define boundaries of the response area for each PSAP.

Ms. Binning is also working on gathering data from the PSAPs for the 9-1-1 Fee Report and the NG9-1-1 Report, which are both due later this year. The Public Service Commission provides data on 9-1-1 fees collected by the counties and distributed to the PSAPs.

Lumen Updates

Mr. Winkleman and Mr. Kunkleman updated the commission on Lumen's endeavors to address recent service issues in Wyoming. Mr. Winkleman reported that he instituted a bi-weekly call with Lumen's operations team to discuss, address, and resolve the ongoing issues and complaints.

Following a question from Commissioner Kaysen, Mr. Winkleman shared that communication is a major concern. Wyoming PSAPs have registered complaints on the lack of (detailed) communication or notification from Lumen regarding service outages. He is working with the operations team and management to rework the notifications to provide detailed and timely information to PSAPs. Mr. Winkleman has also heard concerns about the lack of communication from Lumen field operations to the PSAPs.

In response to a question from Commissioner Choma, Mr. Winkleman shared that other states are experiencing similar issues. Mr. Kunkleman reported that initial updates are sent, but subsequent notifications have not included enough details to keep the PSAPs well informed on service issues. He stated that Lumen is training field technicians to submit more detailed notes to the network operations center, which can then be used to create more thorough and informative updates.

Commissioner Shank shared her concern that the frequency of outages has significantly increased and questioned if Lumen was tracking the outages to identify and address common causes of service interruptions. Mr. Kunkleman maintains a list of events that triggered the transmission of notifications. He reported that he is working to set up an automatic, monthly report containing the same information.

Mr. Smolinski expressed his hope that Mr. Kunkleman will send the monthly report to him and Ms. Binning, who will in turn share it with the PSCC. WYDOT and the PSCC can review the list of incidents and identify areas where more data is needed. Following a request from the commission, Mr. Kunkleman will review past incidents to determine the number of outage events versus other notification-triggering events.

Following a question from Vice Chairman McClain, Mr. Winkleman shared that Lumen has no automated notification process for trunk line failures. Lumen is still investigating why automatic notifications are not occurring for certain outages/events.

Following a question from Commissioner Germain, Vice Chairman McClain reported that the state is still in the planning stages for the transition to ESInet. Mr. Smolinski explained that the state is working on securing funding for the ESInet transition.

Commissioner Carr shared his concerns with Mr. Winkleman and Mr. Kunkleman on Lumen's poor customer service. Mr. Winkleman stated his commitment to improving customer service by meeting with PSAPs to build relationships and directly gather their issues and concerns.

Ms. Binning shared that the greatest concern from the PSAPs is the lack of outage notification from Lumen. If the PSAP does not know there is an outage, then they cannot inform citizens and set up alternative systems to receive emergency calls. The PSAPs requested the PSCC's help with this issue and appreciate the commission's attention to this matter.

Following a suggestion from Commissioner Kaysen and Vice Chairman McClain, Mr. Smolinski stated that Lumen will be invited to provide updates at future business meetings.

FCC Outage Reporting Requirements

Mr. Furth reported on the FCC's 9-1-1 outage reporting procedures and requirements. He focused his presentation on the FCC's rules related to 9-1-1 network reliability and outage reporting.

Mr. Furth provided an overview of the FCC and his team. He is the Deputy Chief of the FCC's Public Safety and Homeland Security Bureau (PSHSB), which is responsible for promoting the safety of life and property through the use of communications. The bureau carries out a number of operations to further public safety including the regulation of the communications industry to ensure their support of critical public safety functions (i.e. 9-11, emergency alerts, and first responder communication). Regulation also ensures the reliability and resiliency of communications networks.

The PSHSB regulates the 9-1-1 obligations of the service providers that originate 9-1-1 calls and coverage service providers that aggregate emergency calls from the originating service providers. A coverage service provider is the entity that operates the selective router or the ESInet. The PSHSB does not regulate PSAPs.

Mr. Furth reported that the PSHSB has adopted rules that define the general obligations of all telecommunications carriers—including wireline and wireless carriers and VOIP providers—to support 9-1-1. The rules stipulate that carriers must deliver 9-1-1 calls to PSAPs, along with Automatic Number Identification (ANI) and Automatic Location Information (ALI). Wireless carriers must also provide accurate location information with the call.

The PSHSB is equally concerned with the reliability and resiliency of 9-1-1 networks. Outages, when they occur, should be quickly identified and remedied. Mr. Furth reported that the FCC's outage reporting rules require providers to report significant outages to the FCC and, in some cases, to the PSAPs.

Providers are required to report outages through two systems: the Network Outage Reporting System (NORS) and the Disaster Information Reporting System (DIRS). Communications providers are required to report network and 9-1-1 outages through NORS if the outage lasts 30 minutes and affects 900,000 user minutes—known as a reportable outage. Missing ANI/ALI data is also considered a reportable outage. This excludes outages that occur in the PSAPs due to a failure in its internal operations.

Mr. Furth shared that these are general requirements that have a disproportionate effect on rural states with small populations, like Wyoming. It would take a larger outage in Wyoming to trigger the outage notification thresholds than in a larger population center. Mr. Furth reported that nothing in the FCC's rules preclude Wyoming from setting its own outage notification rules that are better tailored to conditions within the state. For example, Wyoming could make rules with lower thresholds for outage reporting requirements.

For a reportable outage, a provider or carrier—for wireless and wireline service—must report it in NORS within 120 minutes of discovery of an outage. Providers of VOIP networks have up to 240 minutes to report outages to NORS.

Outage reports are not required to contain any additional information beyond a notification that an outage has occurred. The service providers are required to submit a supplemental report within 72 hours of the original outage notification. This report—known as the initial report—must contain all pertinent information about the outage. A final report must be submitted within 30 days reviewing the root cause of the outage and any action taken to mitigate or end the outage.

Mr. Furth reported that NORS receives dozens of outage reports nationwide, every day. Every year NORS receives between 100 and 200 outage reports that occurred in or included Wyoming. He cautioned that multiple entities will often submit reports on the same outage so the yearly total does not represent unique incidents.

Additional rules stipulate that service providers must notify PSAPs of reportable outages that impact their operations. Originating service providers are required to maintain up-to-date contact information for the PSAPs in their service areas to facilitate timely communication. The rules require that providers notify the PSAP's designated contact of an outage as soon as possible, but no later than 30 minutes after the discovery of an outage. Furthermore, the provider or carrier must provide the PSAP with all available information about the outage and contact information so that the PSAP can follow up with the provider. Mr. Furth reiterated that Wyoming could instate its own rules on outages that do not meet the FCC's thresholds for reportable outages.

Mr. Furth reported that DIRS is activated for a geographically specific area in response to a major emergency or natural disaster. DIRS has never been activated in Wyoming. Communications providers submit daily reports in DIRS on the status of communications infrastructure and networks in the designated area. Typically, DIRS is activated during a Federal Emergency Management Agency (FEMA)-designated, class two, Emergency Support Functions (ESF-2) event. When DIRS is activated, the PSHSB will define a geographic area and any carriers and providers operating in that

area must provide daily reports to DIRS. The aggregated data is occasionally made available to the public, but it is not carrier-specific.

Prior to 2021, only the FCC, FEMA, and the Department of Homeland Security had access to the information in the two systems. New rules adopted in 2021 allow the FCC to share NORS/DIRS information, in real time, with states and a broader array of federal agencies. States and federal agencies must apply for access to the systems and agree to adhere to confidentiality standards. The Wyoming Department of Transportation applied for and received access to the systems in 2023.

Mr. Furth reported that the FCC and PSHSB routinely receive notifications of outages outside of NORS and DIRS, whether or not the events meet the FCC's outage thresholds. The FCC has dedicated resources that allow state and local public safety authorities to contact the PSHSB to report outages and seek potential technical support. The best method to contact the PSHSB is through their Operations Center, which can be reached at (202) 418-1122 or by email at fccops@fcc.gov. Mr. Furth stressed that only emergency situations, with an immediate impact to life and safety, should be reported to the Operations Center.

For less severe events, agencies can contact the Public Safety Support Center. It is an online portal, accessed on the PSHSB's website, that allows users to submit reports, ask questions, register complaints, and provide information (formally or informally) directly to bureau staff.

Mr. Furth expressed his bureau's interest in forming an ongoing, collaborative relationship with the PSCC—especially as Wyoming transitions to NG9-1-1. The FCC is currently making rules to help states with the transition and would welcome input from state and local authorities. The FCC also welcomes feedback on general issues because it helps the agency identify issues that should be addressed at the federal level.

Mr. Johnson commented that while the NORS and DIRS provide great data to agencies, he cautioned that some information can be up to 24 hours old. He encouraged agencies to maintain good relationships with the service providers because they can directly provide agencies with more up-to-date data. Mr. Furth confirmed that NORS was created to allow the FCC to study trends in network resiliency and outages over time, and while it has moved to providing real-time information, that was not its original purpose. DIRS does provide real-time data collection when activated, to some extent. The FCC works with federal and state partners to determine the best ways to use the data from NORS and DIRS to deal with outages, investigating outages, and to consider the need for additional regulatory action to improve network resiliency.

Mr. Johnson and Mr. Furth stated that the FCC and CISA work with state and local authorities to define the geographic areas for emergency/outage events in DIRS. The length of time that DIRS is activated depends on the magnitude of the event.

Mr. Smolinski expressed an interest in meeting with Mr. Furth to discuss outage thresholds and gain a better understanding of how Wyoming can proceed with setting its own rules. It could be a future item of consideration of the PSCC.

Location-Based Routing

Ms. Parimisetty provided an overview of location-based routing (LBR) requirements and availability. T-Mobile recently notified Wyoming that LBR is available and the company is reaching out to PSAPs to enable the feature and update contact information. LBR is the act of routing 9-1-1 calls based on call location and by detecting the precise device location.

Traditionally, 9-1-1 calls were routed through the serving cell site/sector of the call within the carrier's network to the appropriate PSAP. Call routing spreadsheets—that defined PSAP boundaries—were used to determine the PSAP to which a call should be routed. T-Mobile conducted quarterly audits of the PSAP-provided routing spreadsheets to ensure location and boundary accuracy. While cell sector-based routing has proven to be fast and reliable, it did have limitations—it was time consuming for PSAPS to create and maintain spreadsheets, sub-optimal routing occurred when jurisdictions were unclear, et cetera.

Ms. Parimisetty reported that T-Mobile has refined the LBR capability on its internal 9-1-1 platform, but a few conditions must be met for full use of LBR. First, the feature must be activated at the PSAP level and activation requires coordination with the PSAP. To use the feature, a phone must have device-based hybrid location and operate on Apple iOS 13 and above or Android OS version 4.0 and above. T-Mobile uses location qualification checks to successfully implement LBR. If LBR fails, the platform is able to revert to sector-based routing.

Ms. Parimisetty stated that the PSAPs will not see any changes for LBR, but they will need to provide a current shapefile to T-Mobile and submit any updates or changes quarterly. T-Mobile will update the PSAP in their database to allow LBR and monitor service internally.

Following a question from Vice Chairman McClain, Ms. Parimisetty clarified that PSAPs do not need to contact T-Mobile to activate LBR. The PSAP simply needs to submit a current shapefile so that T-Mobile can upload it to the system to enable LBR. Ms. Binning can help the PSAPs contact T-Mobile to submit shapefiles and activate LBR.

Following a question from Commissioner Choma, Vice Chairman McClain shared that AT&T and FirstNet have been providing LBR since July 2022. The other major carriers are working to enable LBR before the end-of-year deadline. Ms. Binning shared that the GIS working group is trying to create a statewide portal to share the boundary/jurisdiction information, but currently the carriers are contacting PSAPs individually to collect the information.

In response to a question from a member of the public, Ms. Parimisetty stated that the PSAP will still receive the number, ANI/ALI, and Phase I or II indicators with LBR calls. The only difference is that the latitude and longitude will come directly from the device or handset placing the call. The ANI/ALI feed will not indicate if it was an LBR call.

WyoLink Funding/American Rescue Plan Act (ARPA)

Mr. Smolinski reported on WYDOT's initial expenditures of the \$35 million in ARPA funds allocated to WYDOT for eight approved WyoLink projects. One of the projects

was the Quantar and GTR radio repeater site expansion. This project was originally scheduled to take up to six years, but the ARPA funds accelerated the buildout and decreased the project time by half.

A second project was WyoLink site expansions and upgrades at selected sites experiencing a large amount of “busies”. Technicians added channels and upgraded equipment to improve site performance. In total, six sites were upgraded.

A third ARPA-funded project enabled WYDOT to build two additional tower sites in northern Sheridan County and Saratoga. The northern Sheridan County site is at the Kearns Elk Refuge. Mr. Smolinski thanked Commissioner Choma for his help during the discussions with the Wyoming Game and Fish Department to increase access to the site. All of the pre-planning for the site is complete and the contractors are ready to begin construction as soon as the site is accessible in the spring.

The new Saratoga site will be a collocate with Union Wireless and WYDOT is working through agreements with Union and the Bureau of Land Management. Mr. Smolinski is confident that the necessary agreements will be in place in time for the construction season.

ARPA funds were also used for the Inter RF Subsystem Interface (ISSI) connection gateway. This will help WYDOT in connecting network cores to the WyoLink system for greater interoperability with LTE networks using Critical Connect.

Mr. Smolinski also updated the commission on the project to replace local partners' outdated WyoLink equipment and radios. The first batch of radios have been ordered and the department is paying invoices as the orders are received.

An additional project would address “dynamic system resilience” but Mr. Smolinski is unsure of the timeline for this project. There are other upgrades that must occur before this project can begin, so Mr. Smolinski is not certain that this project will use ARPA funds.

The microwave backhaul project is dedicated to upgrading the microwave network. Work is ongoing at 27 WyoLink sites and more sites will be included as funds become available.

ARPA funds were also used to purchase “maintenance” radios for WYDOT. Currently, \$15 million of the total \$35 million ARPA allocation have been expended on the approved projects.

Mr. Smolinski reported that there is a possibility to obtain additional ARPA funds. The federal government directed that funds must be obligated by December 31, 2024, and fully expended by December 31, 2026. If other state agencies that have received ARPA funds cannot meet these deadlines the money would be returned to the state. WYDOT is prepared to offer projects for any remaining funds, should they become available. The department's list of potential projects includes additional WyoLink tower sites/collocates in southeast Uinta County, northern Sheridan County, the Mule Creek Rest Area on Highway 85, Laramie County, and southeast Sublette County. An expansion of the microwave backhaul project is also on the list.

If a substantial amount of ARPA funds were returned to the state, WYDOT could also consider more equipment replacement requests from local entities. WyoLink has purchasing contracts with certain vendors that local entities could use to purchase new equipment at better rates than the National Association of State Procurement Officials' ValuePoint pricing.

3. Emergency Communications Program Manager's Report

Mr. Kelly provided an update on the Emergency Communications Program. The update also included information presented by Mr. Gardiner regarding WyoLink operations.

General Update

Mr. Kelly reported that the installation of new equipment into WYDOT's non-snowplow maintenance vehicles is almost complete. The program is anticipating the imminent delivery of an equipment order that was placed before Christmas. Once the orders are received, Mr. Kelly will be able to donate the old equipment to local entities.

Mr. Kelly stated that one-third of the requests for used radios have been processed and are awaiting delivery. All of the requests for 50-watt radios have been allocated to different entities, but more will become available as more WYDOT radios are replaced. Mr. Kelly estimates that about 80 50-watt radios will soon be available in Casper and 50 to 60 in Cheyenne. South Dakota has requested the old radios and Mr. Kelly asked for the commission's approval to send 100 to 150 of the 50-watt radios to South Dakota.

Action: It was moved by Commissioner Shank, seconded by Commissioner Germain, and unanimously carried to give South Dakota 150 of WYDOT's old 50-watt radios.

Mr. Kelly tracks the donations of old equipment in a spreadsheet, which he would be happy to share with any interested commissioners. He will continue to report on donations at the quarterly business meetings.

Following a question from Vice Chairman McClain, Mr. Kelly shared that many different public safety entities in South Dakota will use the donated radios. In response to a question from Commissioner Choma, Mr. Kelly shared that as the vast majority of Wyoming requests have been for 100- or 110-watt radios, he has reserved those radios for in-state entities. There are not been many requests for the 50-watt radios, so he feels comfortable donating them to a neighboring state in need.

16 Tower Buildout Report

Mr. Smolinski reported that all of the sites are online and operational. There are only a few remaining items to complete at a few of the sites including the completion of outstanding paperwork and other small tasks by subcontractors. The team is currently completing coverage testing to document coverage gaps.

WyoLink Operational Updates

WyoLink System Reports

Mr. Gardiner shared WyoLink usage data from the fourth quarter (Q4) of 2023. There was an average of about 1.5 million push-to-talks (PTT) and 131,328 minutes of

airtime for the quarter, which is typical for the time of year. The top 20 talkgroups for Q4 were law enforcement agencies from 12 counties and eight state agencies.

WyoLink Staffing Updates

Mr. Gardiner recognized Mark Coler, who recently retired after 23 years with Emergency Communications program and 18 years with the WyoLink office. He was crucial in maintaining the system servers and equipment at Headquarters. Adam Martin—an internal transfer—will fill the vacancy.

WyoLink System Upgrades

Mr. Gardiner reported that he and his team are setting up and programming the new equipment that was purchased with ARPA funds. The team is also working on the Ethernet upgrade. He shared a map of WYDOT's microwave network and reminded the commission that the network is divided into two zones—in the northern and southern halves of the state—with master sites in Casper Port-of-Entry and Cheyenne. The team focused on expanding Ethernet in Zone 2 and it now runs as far as Windy Ridge in Fremont County, Cody, Sheridan, and Gillette.

Mr. Gardiner reported that the department ordered two new NFM-P servers to maintain, monitor, and manage the (Ethernet) network and service aggregation routers (SAR). The servers should be delivered by March 2024 and will help the team monitor the circuits. With the expanded Ethernet, the team is also installing Nokia SARs to ensure the state has a robust network with greater redundancy. Mr. Gardiner reported that the Ethernet in Zone 2—and other parts of the state—is currently running on microwave network equipment that is almost 18 years old and getting to the end of its useful service life.

In Phase II of the SARs and MLPS Project, the program hopes to use ARPA funds for the 2027 Microwave Path Project to replace the microwave equipment, install SARs, and upgrade to Ethernet at all of the sites along Interstate 80. The team is conducting a structural analysis of the towers to ensure that the existing structures can hold the new equipment.

As reported at the last meeting, 65 radio sites were upgraded with new GTR fixed station repeaters last year. Mr. Gardiner thanked Motorola and their subcontractors for helping WYDOT complete this project. Their assistance allowed Mr. Gardiner and his team to begin focusing on the system software upgrade. The system is currently running on a 2017 version (7.17) of the ASTRO 25 software. The team will upgrade the system software to the 2022 version in May. The system is limited to 2022 software because newer versions require all of the sites to have Ethernet. The upgrade will include new firmware and software at the cores, new routers at the Cheyenne and Casper master sites, and new routers at sites that have Ethernet.

Mr. Smolinski clarified that the projects that Mr. Gardiner and Motorola are working on all aim to create greater redundancy and resiliency in the network to avoid single points of failure and larger outage events.

Motorola Upgrades

Mr. Parker and Mr. Brandt presented information on the upcoming software upgrade. Mr. Parker reported that the 7.17 version of the ASTRO 25 software that the WyoLink

system uses is based on Windows Operating System 2012 and is therefore outdated. Using an outdated software system is risky because users no longer receive software updates or security patches. This is driving the urgency for the upgrade.

The last upgrade was completed in 2019, but the equipment upgrades allow Wyoming to upgrade the software. Under the software update agreement, Motorola will replace all of the hardware and software in the PSAPs and master sites.

Mr. Parker reported the software maintenance agreement also includes updates for any call logger that is a NICE Logging Solutions product. Motorola has a corporate partnership with NICE that allows the company to be a part of Motorola's radio network. PSAPs with third-party loggers will have to pay their vendor to update their logger so that it is compatible with Motorola's software.

With the swift completion of the GTR upgrades, and the software upgrade moving ahead of schedule, some PSAPs are not prepared for the cost to upgrade their call loggers. Mr. Parker reported that the average quote for the upgrades to the third-party loggers is around \$16,000. Motorola charges third-party vending \$7,500 for software licensing, but then each vendor calculates their cost based on the additional engineering necessary to make the software work with their product and the installation of the software on the logger.

Third-party vendors are required to tell the PSAPs about the extra cost at the time of sale and Mr. Parker also informs Motorola customers of this issue as well. Additionally, Mr. Parker shared that upgrades happen every two to three years in response to changes in technology and equipment, and the evolving nature of cybersecurity threats.

Mr. Brandt presented information on future platform migrations for Motorola's dispatch consoles. A migration is a replacement of an obsolete platform with a currently supported platform. The current platform is the MCC 7500 IP Dispatch Console, but PSAPs will need to migrate to the AXS Command Central platform in the next few years.

Mr. Brandt shared that Motorola typically announces the end-of-sale for a current platform several years in advance of system releases in order to give ample time for migration to the next generation platform. Sales of the MCC7500 Dispatch Consoles are have been discontinued and the last supported system releases will occur in 2028. Motorola is recommending that users migrate to new platforms by 2027 and no later than 2032.

Following a question from Vice Chairman McClain, Mr. Parker stated that recently purchased consoles have the necessary capabilities for the new platform. When the transition comes, the PSAPs will only have to upgrade the system software on those consoles. He is also preparing quotes that local entities can use in budget hearings or for internal planning. If a PSAP has a maintenance agreement with Motorola, it can start pre-paying for the upgrade through the SUA Software Update Agreement Plus. Other financing options are available to the PSAPs.

Vice Chairman McClain requested that Motorola continuously work with the PSAPs to ensure that they understand support agreements and how to handle the platform migration to minimize impacts to interoperable communications. Some communities may not be ready to migrate to new platforms for several years and in that time changes in local leadership, retirements, and position changes may result in lost knowledge.

Mr. Brandt shared a little of the history of the MCC 7500 Dispatch Console, but his main conclusion was that technology is always evolving. He shared that the company wants customers to be proactive in order to avoid potential blockages to upgrades that would “park” an entire system. Mr. Parker is happy to have conversations with PSAPs and decision makers to help them effectively plan for the migration.

Following a question from a member of the public, Mr. Parker stated that the AXS consoles cost approximately \$125,000 per console. Equipment costs are due in part to the Project 25 (P25) standards, which ensures that land mobile radios (LMR) systems and equipment can interoperate with equipment produced by a different manufacturer. The P25 standards necessitates the use of third-party software, operating systems, and equipment, which increases a manufacturer’s product development costs.

In response to a question from a member of the public on the frequency of WyoLink upgrades, Mr. Parker recommended that PSAPs plan for upgrades to occur every two to three years and to budget accordingly for upgrades to third-party call loggers. Mr. Smolinski shared that the WyoLink system has essentially been “parked” since the appropriate upgrades have not happened the past few years. Once the system is upgraded, the expectation is that the system will be kept current. Mr. Smolinski stated that he, Mr. Kelly, and Mr. Gardiner will do their best to assist communities with questions and concerns about the upgrades.

Following a question from Mr. Gardiner, Mr. Brandt shared that a part of their outreach during the planning process will include education on the new features of the AXS equipment. The AXS Command Central platform will be more user-friendly and intuitive because it has a more modern graphic user interface. Mr. Parker offered to set up a virtual product demonstration for the PSAPs, the WyoLink office, and other local entities.

Following a question from the Commissioner Germain, a representative from Motorola confirmed that there are 175 dispatch consoles in Wyoming, of which 40 are spare units. Mr. Smolinski confirmed that other manufacturers produce dispatch consoles, but the different products come with limitations given that WyoLink operates on a Motorola core.

Statewide Interoperability Coordination (SWIC) Updates

Mr. Smolinski and Mr. Kelly provided the SWIC updates.

Critical Connect

Mr. Kelly reported that a memorandum of understanding (MOU) has been sent to Montana for signature. Once it has been signed, the WyoLink system can be

connected to Montana's system through Critical Connect. Mr. Gardiner has created the WyoLink talkgroups that can be used once the systems are connected.

Mr. Kelly met with South Dakota on January 31, 2024, but unfortunately the meeting did not lead to any significant outcomes as their systems technician had to attend to an outage. The meeting will be rescheduled.

General Updates

Mr. Smolinski reported that he and Mr. Kelly attended the National Council of Statewide Interoperability Coordinators (NCSWIC) conference in Fort Meyers, Florida, on December 4-7, 2023. They attended a session with a working group on NG9-1-1. The working group provided good information on lessons learned and resources that will help Wyoming through the transition to NG9-1-1.

The main topics at the conference were cybersecurity, artificial intelligence, and mental health of telecommunicators. Mr. Smolinski and Mr. Kelly will continue to participate in the Planning, Training, and Exercise (PTE) Committee and the NG9-1-1 working group.

Mr. Smolinski discussed bi-directional amplifiers (BDA), also known as Emergency Radio Communications Enhancement Systems (ERCES), which are devices that extend the coverage of the WyoLink system into buildings and subterranean spaces. The BDAs have great utility to emergency communications, but the devices also have drawbacks. If not used or maintained correctly, BDAs can take down WyoLink sites. This has become an issue in Laramie, especially on the University of Wyoming campus.

Mr. Smolinski reported that the state fire marshal is aware of the issue and is keen to collaborate on finding solutions. A meeting will be held in early April with fire marshals statewide to develop standards and suggest policies. The goal is greater familiarization with BDAs—their correct usage and maintenance.

Mr. Smolinski and his team will also collect information on which agencies across the state own BDAs so that they can track usage. It will help technicians troubleshoot when there is an issue at a WyoLink site.

CISA Update

Mr. Johnson presented information on CISA and the services he provides as an emergency communications coordinator (ECC).

Mr. Johnson provides special coordination in a few specific cases. He can assist the state with an ESF-2 event, which is some form of natural disaster. He can also aid the state during National Security Special Events (NSSE), which is an event of national or international significance (e.g. the United Nations General Assembly or the State of the Union Address). Finally, he can also provide help with Special Event Assessment Ranking (SEAR), which are major events that require coordination between many different agencies (e.g. the Super Bowl or the Kentucky Derby).

As an ECC, Mr. Johnson is a part of CISA's Integrated Operations Division (IOD). This is to ensure better communication and coordination between different divisions within

the agency and with external partners. The ECCs are subject matter experts that provide support to all levels of government while enhancing interoperable communications technologies, plans, and governance among state, local, and tribal emergency responders and public safety officials.

The ECCs partner with the state and tribal governments to ensure good governance, effective planning through the Statewide Communication Interoperability Plan (SCIP), the receipt of technical assistance, and proper assessment. CISA maintains an online catalog of all its technical assistance offerings and resources for those who need planning support.

Mr. Johnson and other ECCs partner with the SWICs to assess the state's needs and progress, engage with interoperability boards, engage with stakeholders, provide a tactical disaster response, and offer emergency communications training opportunities.

Mr. Johnson measures each state's progress by having the state complete a self-assessment, which includes 30 interoperability markers. The markers allow the ECC and the SWIC to gauge progress using standard metrics and uncover areas where more work—and technical assistance—is needed. The state marker assessment process helps states better understand the impacts of interoperability efforts, serves as justification for grant or state budget requests, improves coordination with stakeholders and decision makers, improves implementation, and enhances the SCIP planning process.

Mr. Johnson shared a map that detailed the staffing assignments in each of the three ECC sectors—divided into the West, Central, and East regions. Each sector has a section chief and several ECCs responsible for specific states and territories. Mr. Johnson can call upon any of his colleagues, who have diverse backgrounds and skill sets, for assistance in emergency events. He can also utilize the Emergency Response Operations Branch (EROB) of the IOD in an ESF-2 or emergency event. EROB is comprised of 25 Army reservists—at pay grades O-5 and O-6—that are available to assist the ECCs.

Mr. Johnson reported that CISA provides a variety of technical assistance opportunities and resources to the states. Offerings of interest include 9-1-1 and PSAP cyber awareness, grant funding for emergency communications, communications unit planning and policies workshop, alerts and warnings, and rural emergency medical communications programs. The catalog detailing all offerings may be located on CISA's website. Mr. Johnson recommended that local entities work with Mr. Smolinski and Mr. Kelly to submit technical assistance requests.

Mr. Johnson also shared a list of CISA's 9-1-1 cyber resiliency programs. Most of the programs are virtual, but a few are in-person and take more time to coordinate and customize to the state.

The ECCs are deployed in two cases: when there is a federal disaster declaration and at the state's request. In an ESF-2 event, FEMA may request support from the IOD and the activation of the ECC. The ECCs cannot self-deploy. In the absence of a federal declaration, states may make support requests directly to the IOD Regional

Director for ECC assistance. The primary duties of the ECCs in an emergency event are to reinstate communications, provide technical assistance, and liaise with federal, state, and local agencies.

Mr. Johnson also covered CISA's priority telecommunications services: Telecommunications Service Priority (TSP), Government Emergency Telecommunications Service (GETS), and Wireless Priority Service (WPS). GETS is for priority service over wireline commercial networks (landline), WPS is priority over wireless networks, and TSP is the priority installation and restoration of voice and data circuits.

Mr. Kelly shared that CISA is offering a free Alerts and Warning Webinar on February 27, 2024. Mr. Johnson announced that CISA will be hosting a week-long ESF-2 training exercise in Denver in late April. They will offer a series of webinars in advance of the exercise to familiarize public safety entities with CISA operations and request processes.

PSCC Working Groups Update

Mr. Smolinski reported that the team is using the SCIP to guide the formation, purpose, and goals of the working groups. He met with Mr. Johnson in early January to match technical assistance options to the goals outlined in the SCIP. The next step is to recruit stakeholders to work on initial goals. Mr. Smolinski expects that these early groups will evolve into the PSCC working groups.

Commercial Emergency Communications Services Update

Mr. Kelly reported that he has recently met or will soon meet with different entities that have recently subscribed to AT&T FirstNet to discuss costs, responsibilities, and expectations.

VII. Public Comment

There was no public comment.

IX. Announcements

Ms. Chapman announced that the next meeting will be held in Cheyenne on May 7-8, 2024. The commission will tour FirstNet Technical Headquarters in Boulder, Colorado on May 7. The business meeting will be held on the morning of May 8.

Ms. Chapman also discussed the possible need to reschedule the November meeting as it overlaps with the Wyoming Association of Public Safety Communication Officials' conference. She will send out an electronic poll to the commission to determine the best date.

X. Adjournment

It was moved by Commissioner Wetzel, seconded by Commissioner Carr, and unanimously carried to adjourn the February 7, 2024, business meeting at 12:28 p.m.