

MONTANA
EMERGENCY COMMUNICATIONS

Montana Statewide Public Safety Communications Act

In 2017, HB 604 established the Statewide Public Safety Communications Act to be administered by the Department of Justice. While HB 604 established the program, there was no funding allocated to the Department for ongoing operations.

In 2019, SB 352 created an annual appropriation of \$3.75M, which had a sunset date of 2029. The appropriation was to both cover annual payments to vendors to fulfill contract obligations as well as establish an operating budget. That bill passed and is now codified at § 44-4-1607, MCA. With that funding, DOJ set forth a plan to replace outdated, unsupported, and locally owned radio and microwave network infrastructure.

In order to accomplish its objectives, DOJ entered into a contract with Motorola to replace the outdated radio equipment at every radio tower site and dispatch center that was on the statewide system.

- This contract was essentially a loan of \$17.5M for equipment and for the support agreements (SUA) to keep that new equipment up to date with software and hardware as needed for the length of the contract.
- This contract is to be paid over 10 years in annual payments for 1) equipment of \$817,128 per year and 2) SUA of between \$886,897 and \$1,058,861, depending on the year.

A second contract with Aviat Networks was also entered into to upgrade all the microwave network equipment that was out of support across the state.

- This contract was also a loan for all the equipment and installation and resulted in annual payments of \$553,466 per year from July 2021 through June 2029.

Once the microwave network was upgraded, a third contract was entered into to provide multiprotocol label switching (MPLS) routing equipment for the network. This upgrade was essentially another loan from Motorola for the equipment and the installation, which resulted in annual loan payments of \$367,034.

Annual payment obligations on the contracts are approximately \$2.7M. Given the \$3.75M in annual appropriation, this gave the radio program approximately \$1M to operate on per year, which paid the cost of employees and allowed the DOJ to expand slightly with the addition of local law enforcement agencies that have needed to upgrade and join the statewide system.

In the 2023 legislative session, HB 251 canceled the \$3.75 annual fund transfer and moved \$18.6M into the radio program budget without the authority to spend more than the previous annual appropriation amount of \$3.75M, which would only fund the program at its current rate through fiscal year 2026 after paying its existing debts. The radio program has continued to operate under a \$3.75M annual budget for the last two years.

Today, \$13.5M is left in that account. The total of debt owed, combined with outstanding invoices, is approximately \$11.5M, leaving a balance of \$2M for program operations. The radio program can only continue to operate until that balance is depleted by operating expenses. Without any expansion or major equipment failures, the radio program will only be funded for approximately two years, or until July 1, 2027. That time will be shortened if major equipment failures occur.

DOJ needs restoration of the annual appropriation for the statewide radio program to continue to operate and expand as needed, which must include authority to pay off the debt as HB 251 intended.

Montana Statewide Public Safety Radio System Expansion Proposal

Law enforcement, fire, EMS, and other agencies need to communicate over a radio system to execute their daily operations in responding to 911 calls from citizens. To facilitate interoperability, statewide networks enable Local agencies to leverage existing statewide assets. States across the US have taken a leadership role deploying and managing these systems to enable the highest level of interoperability for local Public Safety agencies and the citizens they protect. This shared model improves State and Federal interoperability with local agencies and can reduce local costs. Lack of coverage, cost or other reasons sometimes prohibit local agencies from the interoperability of a shared, statewide system.

Without a reliable radio communications system, the ability for Public Safety to respond to a 911 call is significantly reduced. Reliable communication becomes even more critical during emergencies and mutual aid situations. The need for interoperability escalates with larger scope or less common situations. The Department of Homeland Security has published guidelines and objectives for achieving interoperability.

Like nearly every state in the USA, Montana currently has a radio system that provides statewide interoperability for Federal, State and Local users. The importance of these networks to Public Safety requires a high level of reliability and fast restoration should an outage occur. Montana's current Statewide Radio System delivers the highest level of interoperability as defined by the Department of Homeland Security.

Unlike other states, Montana's statewide system has grown out of initiatives by locals and the Montana Highway Patrol. As a result, there is no formal statewide coordination of this critical Public Safety asset. HB 604 was intended to evolve that approach for a variety of reasons, including:

1. Alignment with the Governor's executive order 09-2016, which promotes the sustainment of existing state systems/infrastructure and encourages the convergence of systems for cost-effectiveness and operational efficiency; and
2. Statewide coordination of an efficient, implementable plan for sustainment and evolution of the system to benefit all public safety agencies

Current Status:

When the Department of Justice inherited the statewide radio system, the infrastructure that was in place was identified as Phase I. Phase II was planned to include a smaller expansion of sites that were identified as those sites that are easier for buildout to occur, for example towers were already existing and state equipment just needed to be installed. The Phase III expansion plan would require new construction and acquisition of tower sites to provide the most possible coverage throughout the state.

The Department of Justice does not currently have any planned funding requests for future buildout.

In 2023, House Bill 251 reorganized how radio is funded.

<https://archive.legmt.gov/bills/2023/BillPdf/HB0251.pdf>

The \$3.75M annual appropriation prior to HB 251 was ended and replaced with a one-time appropriation. This one-time appropriation has allowed MTDOJ to maintain the system "as is," but does not allow for significant system maintenance or expansion. Since this funding is a fixed amount, there is no ongoing funding source for continued system support, let alone growth, once funds are depleted.

Local Adoption and Investments:

Since January 1, 2022, the following agencies have either joined the State of Montana's ASTRO 25 trunked radios system or have contracted with Motorola for products and services and will be joining the system in the coming months:

- MTDOJ: Radio Site added at Little Wolf (Big Horn Co), Radio site VC Pass (Madison Co), Radio Site Dunn Mountain (Yellowstone Co)
- Roosevelt County - 800MHz Radio site (Wolf Point), 911 center radio dispatch consoles, + multiband radios
- City of Billings - 3-site simulcast cell 800MHz, 911 center radio dispatch consoles, + multiband radios
- Glacier County Sheriff's Office - 911 center radio dispatch consoles + multiband radios

- Liberty County Sheriff's Office - 911 center radio dispatch consoles
- Daniels County Sheriff's Office - 911 center radio dispatch consoles, + multiband radios
- Valley County Sheriff's Office - 911 center radio dispatch
- Big Horn County - 911 center radio dispatch consoles, + multiband radios
- Madison County Sheriff's Office- Connected 911 center radio consoles to Statewide system
- City of Lewistown - 800 MHz radio site, + multiband radios
- Carbon County - adding three VHF radio sites
- Yellowstone County Sheriff's Office - adding infrastructure at Dunn Mountain

The state and local investments in the growing and shared system have enhanced and will continue to enhance coverage, capacity, and interoperability of critical communications system to the benefit of all first responder agencies equipped to utilize the network.

Although there has been meaningful state investment and local agency adoption over the last biennium, there still remains much of the state that is not covered by modern technology and which still relies on legacy technology from the 1970s for public safety radio communications.

System Overview

Montana's Statewide Public Safety Radio system consists of 5 main elements:

1. "Core" computer equipment that operates the network
2. 75 Radio Repeater Tower sites
3. Consoles for dispatchers, including 16 sites across the state, with over 60+ total console positions
4. 16,000+ State, Local & Federal Radio Users
5. Backhaul network that consists of 175 Wireless Microwave Radios that connect all sites and dispatch consoles to the Core

Over the last 20 years, state and local agencies have invested over \$45M in the five elements of the system defined above. Beyond those items, investments in the steel towers, concrete equipment shelters, and other construction elements bring that total to over \$90M. This proposal covers the next phase of expansion.

Phase II: Future Expansion Needs to Incorporate Portable Coverage and Additional Rural Counties

Ideally, DOJ would like to expand the statewide network so that non-greenfield (i.e., preexisting) local mobile radio (LMR) sites can provide portable level coverage, such as via LTE (i.e., cell phone), in strategic areas and also to enable additional local agencies in remote areas that are currently without statewide coverage to join the statewide system. The proposal includes:

- Total of a 36 site expansion to the current Montana Statewide Public Safety Radio System. These expanded sites would utilize existing resources and essentially only require installation of additional equipment to existing tower sites.
- An additional 5 years of microwave, MPLS, and incremental add-on support and maintenance services (5 years)

- Construction of a microwave backhaul (i.e., wireless data connection) for Clark Peak, Thompson Falls Sheriff's Office and Thompson Peak. These sites will require design collaboration with the State of Montana to provide backhaul access.
- Microwave topology design studies to determine specific tower height requirements for dish mounts.

Estimated 2025 Cost: **\$40,000,000.**

Summary Scope of Expansion Project:

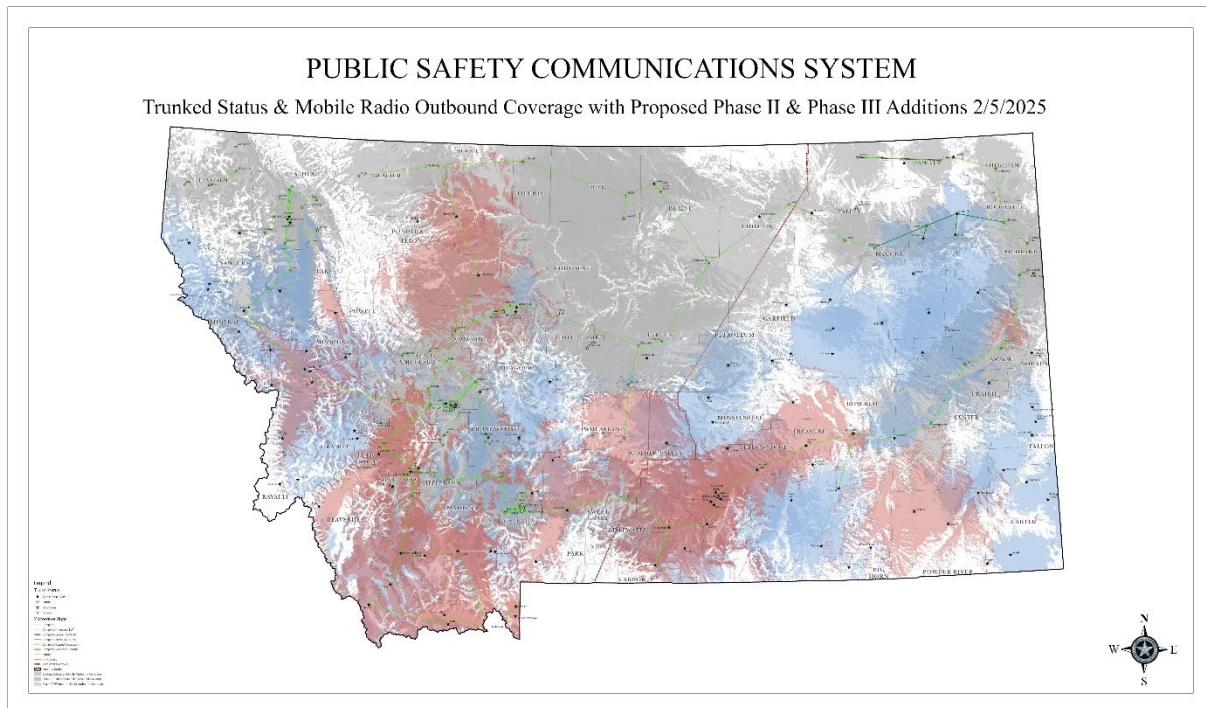
The expansion would consist of network installation of additional equipment at 36 radio sites, which would necessarily include microwave network integration, system technical support and monitoring, and 5 years of software upgrades for the expanded network.

The table below is the list of the 36 proposed radio sites:

Site	County
Anaconda Fire Hall (LEC)	Deer Lodge
Antelope Peak	Beaverhead
Beaverhead EOC (Dillon)	Beaverhead
Bell Prairie	Dawson
Big Sheep Mountain	Prairie
Clark Peak (Thompson Falls)	Sanders
Coburn	Yellowstone
Cooney	Wheatland
Downing Mountain	Ravalli
Duck Creek	Gallatin
Ellis Peak	Beaverhead
Fleecer	Silver Bow
Hathaway	Meagher
Hysham Hills	Treasure
Jette	Lake
Lost Creek	Deer Lodge
Markuson	Carter
Mauer	Beaverhead
Meyer's Flat	Park
Miller Peak	Missoula
Radio Hill	Big Horn
North Forsyth	Rosebud
North Repeater (Overton)	Fallon

*Green represents current coverage and purple the added coverage

Planned Coverage with Phase II and Phase III Future Expansion*



- *Gray area is current coverage
- *Red area is Phase II coverage
- *Blue area is Phase III coverage

Key takeaways:

- The Statewide Public Safety Communications Program will run out of funding July 1, 2027, unless the annual fund transfer that was eliminated from HB 251, 2023, is restored.
- The Phase II expansion proposal would add additional coverage to areas as indicated in red above, which are not currently covered by the statewide system. These expanded sites would utilize existing resources and essentially only require installation of equipment to existing tower sites. The estimated cost for this expansion coverage in 2025 is \$40M.
- A Phase III expansion, which is shown in blue in the above map, would provide additional expansion to cover the remaining, unserved areas of Montana, which would require new construction and acquisition of tower sites. Estimated pricing can be provided upon request.