



## Legislative Fiscal Bureau

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Joint Committee on Finance

Paper #551

### Statewide Interoperable Radio Network Replacement (Military Affairs)

[LFB 2023-25 Budget Summary: Page 415, #3]

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#### CURRENT LAW

The current Wisconsin Interoperability System for Communications (WISCOM) is a radio system that permits emergency responders from varying public safety disciplines to communicate across jurisdictions during major disasters and large-scale incidents. In addition, state and local agencies may elect to use WISCOM as their primary radio system. In total, WISCOM is used by 1,200 local, state, federal, tribal, and non-governmental agencies (18 federal agencies, 12 state agencies, 994 local and tribal agencies, and 176 non-governmental agencies). These agencies have over 44,000 registered subscriber radios connected to the network, with approximately 19,000 radios accessing the network each month. User agencies are responsible for purchasing their own radio equipment to connect to the statewide network; however, the network is designed to work with a variety of radio systems. State statute authorizes the Department of Military Affairs (DMA) to provide oversight of the development and operation of WISCOM.

The WISCOM network consists of communications equipment installed at 140 tower sites statewide. The system was built to support 95% mobile radio coverage statewide, while also allowing agencies the ability to join and enhance the coverage with additional sites. The State Patrol also has a mobile site on wheels that can provide or enhance WISCOM communications coverage in an emergency. The core system consists of five Very High Frequency (VHF) channels that permit emergency responders to carry on four simultaneous conversations in a given area utilizing a particular radio tower. Utilizing the VHF band for WISCOM has enabled the state to develop statewide coverage with fewer radio towers and lower infrastructure expense. However, the VHF band on which WISCOM primarily relies does not penetrate buildings as well as other radio bands and can be difficult to utilize in urban settings with increased radio traffic. In addition, portable radios have weaker antenna ranges and may not be able to gain access to the system from all locations.

The current network's technical specifications are unable to provide coverage and capacity concurrent with program demand and key network components have reached their end-of-life. In September, 2019, DMA signed a five-year maintenance contract with EF Johnson to ensure the current system remains viable as the state moves forward with a replacement system. Base funding for WISCOM maintenance is \$1,246,900 GPR annually.

## **DISCUSSION POINTS**

1. In response to events such as car accidents, natural disasters, terrorism events, or high-speed pursuits, public safety officials from different disciplines and jurisdictions need to rapidly communicate. Prior to the development of WISCOM, in February, 2008, two semitrailers collided on Interstate 90 near Janesville during a winter storm. Local agencies, the State Patrol, and the National Guard responded to the accident but were unable to communicate with each other, thereby delaying decisions about rerouting traffic and closing the highway. As a result, over 2,000 vehicles were stranded on the highway for 12 hours, in vehicles running out of gas in frigid temperatures. In 2016, WISCOM helped first responders from local and county agencies communicate in response to a windstorm in Bayfield and Douglas counties that disabled wireless and landline systems. The system has also been used to help first responders communicate during Wisconsin Badger football games, the Birkebeiner ski race, and other events involving large crowds and multiple public safety agencies.

2. The current system has reach its end-of-life and needs to be replaced. Under 2017 Act 59, DMA was required to upgrade or replace WISCOM. According to DMA, WISCOM must be upgraded or replaced to ensure the system can deliver public-safety grade communications to current users, expand to support other users at the state and local levels, and provide interoperability with other communications systems.

3. As directed under Act 59, DMA issued a request for proposals (RFP) to replace the WISCOM system in October, 2018. To support related costs, Act 59 provided \$464,000 GPR annually to purchase software, equipment, and services starting in 2018-19. However, the RFP was placed on hold because of a statewide moratorium on RFPs during the gubernatorial transition in November, 2018.

4. Under 2019 Act 9, the requirement that DMA issue a RFP for WISCOM was repealed. Instead, in May, 2020, DMA solicited a request for information (RFI) to develop requirements and specifications for the next iteration of WISCOM. According to DMA, the RFI was the first phase of a competitive procurement approach that sought to engage the vendor community and experts in public safety communications to collaborate on solutions for the design, construction, implementation, support, and maintenance of the interoperable communications system. Information gathered through the RFI informed the scope and objective of the subsequent RFP. The Department indicated that gathering information from vendors prior to re-soliciting a RFP reduced system costs and improved the quality and reliability of proposals.

5. According to the RFI, the next iteration of WISCOM must meet the following requirements: (a) deliver at least 95% service area reliability across the state, with higher levels in selected areas; (b) provide best performance for diverse daily users, given that VHF has been the

frequency band of choice in rural areas while 700/800MHz is prevalent in urban areas; (c) have the ability to improve coverage through future expansions; and (d) support statewide interoperability through interconnections to mutual-aid channels, external radio systems, and authorized broadband users. Additionally, the system must comply with industry standards that support multi-vendor interoperation (support for user radios from various companies without proprietary technologies) and best practices for the design and construction of the system.

6. The 2021-23 biennial budget, 2021 Act 58, required DMA to: administer the current and future statewide public safety interoperable communication system; enter into agreements for maintenance and support of the current system; and enter into agreements for the maintenance and support of, upgrades to, and enhancements for the replacement system. Act 58 also directed DMA to issue a RFP for the replacement of WISCOM. Further, the Act provided DMA with \$500,000 GPR in 2022-23 for WISCOM management consulting services and placed \$6 million GPR in 2022-23 in the Joint Finance Committee's supplemental appropriation for potential release to DMA for initial WISCOM replacement costs. Funding for WISCOM has not been released in 2022-23. If the funding is not released from the Committee's supplemental appropriation by the end of 2022-23, it will lapse to the general fund.

7. The Department released the RFP on November 30, 2021. On August 22, 2022, the Department sent a notice of intent letter to the selected vendor, L3Harris Technologies, Inc. A protest to the intent letter was made, but in January, 2023, DMA's award decision was administratively upheld by the Department of Administration. The Department began contract negotiations on March 14, 2023. As of May, 2023, negotiations are ongoing. The Department indicates that it will take a phased approach to implementing the replacement WISCOM system. As a result, the first users could join the network within three to five years of the start of implementation, and the transition for the whole state could be completed within five to seven years. The Department estimates that the implementation of a replacement WISCOM system could take a total of seven years.

8. At the preliminary stage, the estimated total cost of implementing a replacement WISCOM system is \$100 to 150 million. The total cost of implementation consists of the following components:

- System sites, (approximately 53% of total project costs) including: (a) per tower, system control equipment, software, and licensing; (b) trunked radio system equipment, software, and licensing; (c) VHF conventional radio system equipment, software, and licensing; (d) antennae systems; (e) interoperable gateways, which provide interoperability between otherwise incompatible radio communications systems; and (f) site infrastructure equipment and improvements as needed.
- Implementation services, (38% of project costs) including: (a) migration services; (b) project management; (c) engineering services; and (b) technical, system management, and user training.
- Equipment, (9% of project costs) including: (a) site manager equipment; (b) switches; (c) amplifiers; and (d) portable and mobile test equipment. Note that, as contract negotiations are ongoing, these estimates may change.

Additionally, the total estimated cost of implementation does not include costs for subscriber units (portable and mobile radios), post-warranty services, and other optional items proposed by the vendor for which the state could contract.

9. The Department estimates that \$22,465,000 GPR in 2023-24 and \$22,600,000 in 2024-25 is needed to begin the design and implementation of a replacement WISCOM system in the 2023-25 biennium, specifically to support engineering for the design and site development, as well network equipment, tower equipment, and installation services.

10. The Department distinguishes the total cost of implementation from the total cost of the system. The total cost of implementation includes the design and build of the new system, after which DMA will enter into the manufacturer's warranty period for equipment and software. Once this warranty period expires, the system will enter into the post-warranty period, for which there could be additional equipment and software costs. Purchases that could occur once the manufacturer's warranty expires include: (a) replacement equipment after equipment reaches its end-of-life; (b) updates to software; (c) cybersecurity costs; (d) network operations center monitoring to identify any issues with the network and to monitor any alarms that may be triggered; and (e) on-site repair for tower and equipment failures or issues. Additionally, other items not related to the post-warranty period could be purchased, including asset management (tracking of what equipment is at different tower sites), test lab equipment (a miniature network used to test patches or equipment before they are incorporated into the system), or an additional site on wheels (a mobile tower site primarily used for interoperability purposes or when a tower is under significant repair).

11. Under Assembly Bill 43/Senate Bill 70 (AB 43/SB 70), a statewide public safety interoperable communication system continuing GPR appropriation would be created, and \$45,000,000 would be provided to the appropriation in 2023-24 for the development and operation of a replacement WISCOM system. This is approximately what DMA estimates is needed for the project in the 2023-25 biennium. The Administration indicates that it was difficult to determine the appropriate funding level for WISCOM in the 2023-25 budget because, when it was developing its recommendation, the RFP was still in the protest phase, resulting in uncertainty about how much funding would be needed and when. The Administration ultimately recommend one-time funding of \$45 million in 2023-24 with the intention of providing sufficient funding for the project in the 2023-25 biennium, while also providing flexibility given the uncertainty regarding the contract.

12. Additionally, the Administration indicates that the industry standard for projects of this nature is to pay 5% to 20% of the total cost of the project at contract signature for the design of the network, the project plan, and necessary equipment. This amount would be \$5 to \$20 million if the total cost of implementing a replacement WISCOM system is \$100 million, and \$7.5 to \$30 million if the total cost is \$150 million.

13. Given that the replacement of WISCOM is anticipated to take multiple biennia to complete, creation of a continuing appropriation may be appropriate. Further, first responders depend on WISCOM for communication and the current WISCOM system has reached its end-of-life. Therefore, the Committee could create a statewide public safety interoperable communication system continuing GPR appropriation and provide \$45,000,000 in 2023-24 for the development and operation of a replacement WISCOM system. [Alternative 1] As a continuing appropriation, DMA

could spend appropriated funding at any time until the funds are exhausted or the appropriation is repealed. Because this alternative would provide one-time funding of \$45 million, and the estimated cost of implementation is \$100 to \$150 million, DMA would be required to seek additional funding for the project in future biennia.

14. Alternatively, the Committee could create a statewide public safety interoperable communication system continuing GPR appropriation and provide \$22,465,000 GPR in 2023-24 and \$22,600,000 in 2024-25 for a replacement WISCOM system. [Alternative 2] This is the level of funding that DMA estimated would be necessary for initial implementation of a replacement WISCOM system in the 2023-25 biennium. Additionally, it would create base funding for the project, which is anticipated to take seven years for full implementation. Providing base funding would lessen DMA's need to seek additional funding for the project in future biennia. As a continuing appropriation, DMA could spend the amounts provided for a replacement WISCOM system at any time until the funds are exhausted or the appropriation is repealed.

15. Given that the total estimated cost of implementation for a replacement WISCOM is \$100 to \$150 million, the Committee could create a statewide public safety interoperable communication system continuing GPR appropriation and provide \$100 million in 2023-24. [Alternative 3] The provided funding would be at the lower end of DMA's total project implementation cost estimate. As a continuing appropriation, DMA could spend the amount provided for a replacement WISCOM system at any time until the funds are exhausted or the appropriation is repealed. Providing funding during the 2023-25 biennium, instead of over a period of biennia, could provide DMA the estimated cost for the implementation of a replacement WISCOM sooner, and provide sufficient resources to make significant progress on the project without needing to seek additional funding, unless and until it is determined that additional funding is required.

16. On the other hand, given that the industry standard for projects of this nature is to provide 5% to 20% of the total cost of the project at contract signature, the Committee could provide funding in the range of \$5 million and \$30 million in 2023-24. As DMA's expenditures for the replacement WISCOM system in the 2023-25 biennium are estimated at \$22,465,000 GPR in 2023-24 and \$22,600,000 in 2024-25, for a total of \$45,065,000, the Committee could choose to provide \$15,065,000 million in 2023-24 to meet the industry standard for payment at contract signature and reserve the remaining \$30 million in the Committee's supplemental GPR appropriation. The Department could submit a plan to the Committee for the release of funds once the contract is signed and costs of a replacement WISCOM system are further defined. [Alternative 4]

17. Alternatively, the Committee could take no action. [Alternative 5] The state contract to maintain the current system expires on June 30, 2024, with an option to extend the contract until June 30, 2026. If funds are not provided during the 2023-25 biennium, the replacement of WISCOM would be postponed. According to DMA, such delays could, under certain circumstances, hinder the ability of law enforcement and public safety individuals to communicate and coordinate during large-scale events.

## ALTERNATIVES

1. Create a statewide public safety interoperable communication system continuing GPR appropriation and provide a one-time funding amount of \$45,000,000 GPR in 2023-24 for a replacement WISCOM system.

<b>ALT 1</b>	<b>Change to Base</b>
GPR	\$45,000,000

2. Create a statewide public safety interoperable communication system continuing GPR appropriation and provide \$22,465,000 GPR in 2023-24 and \$22,600,000 in 2024-25 for a replacement WISCOM system.

<b>ALT 2</b>	<b>Change to Base</b>
GPR	\$45,065,000

3. Create a statewide public safety interoperable communication system continuing GPR appropriation and provide a one-time funding amount of \$100,000,000 GPR in 2023-24 for a replacement WISCOM system.

<b>ALT 3</b>	<b>Change to Base</b>
GPR	\$100,000,000

4. Create a statewide public safety interoperable communication system continuing GPR appropriation and provide one-time funding of \$15,065,000 in 2023-24 for a replacement WISCOM system to reflect industry standards of providing funding at contract signature. Reserve \$30 million in the Committee's supplemental GPR appropriation for potential release to DMA.

<b>ALT 4</b>	<b>Change to Base</b>
GPR	\$45,065,000

5. Take no action.

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