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December 27, 2018

Dear Chief Clerks Fuller and Renk,

Please find enclosed the Interoperability Report requested of the Department of Military Affairs pursuant to 2017 Wisconsin Act 59, section 9132(1x). The responses were developed in consultation with the Wisconsin Interoperability Council and its 911 Subcommittee to provide recommendations for changing the statutory authority of the Interoperability Council, a description of the progress made toward creating a statewide public safety interoperable communication system, the obstacles that hinder progress toward interoperability, and recommendations for legislative or executive action to promote interoperability. The report was formally approved by a quorum of the Interoperability Council members on December 27, 2018.

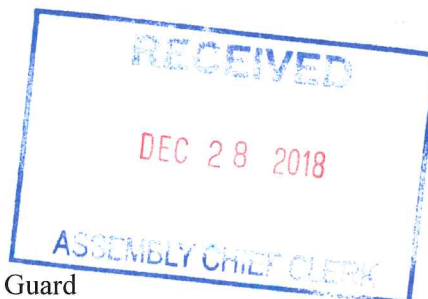
I would like to thank the legislature and Governor for the opportunity to submit this report on public safety communications interoperability in the state, as well as thank the other state agencies, public safety community and governance members for their partnership, support, and taking the time to provide invaluable input on the report.

DMA firmly believes the recommendations presented in this report portray the best options for success in the state, and should the legislature or Governor choose to move these programs to another state agency, the issues identified will remain.

Please feel free to contact me with any questions you may have.

Very respectfully,

Donald P. Dunbar
Major General, Wisconsin National Guard
The Adjutant General & Wisconsin Homeland Security Advisor



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December 27, 2018

Dear Chief Clerks Fuller and Renk,

Attached is the report requested of the Wisconsin Department of Military Affairs pursuant to the adoption of 2017 Wisconsin Act 59, section 9132(1x). The responses were developed in coordination of the Wisconsin Interoperability Council, 911 Subcommittee, Wisconsin Department of Military Affairs, and members of the public safety stakeholder community. This report was approved by the Wisconsin Interoperability Council and provides recommendations for legislative or executive action that are critical to the ongoing success of interoperability in the state.

Please feel free to contact me with any questions you may have.

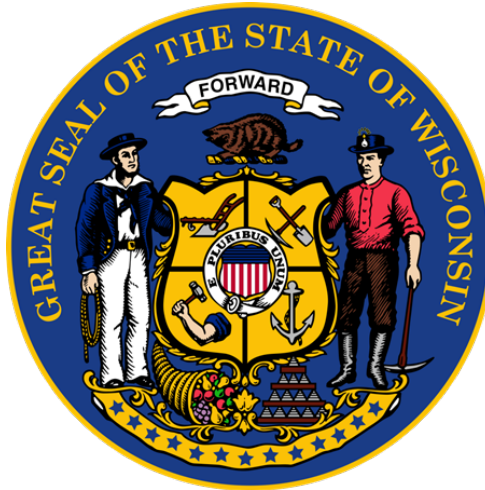
Respectfully,



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Interoperability Report

2017 Wisconsin Act 59



12/27/2018

Wisconsin Department of Military Affairs

In consultation with the State Interoperability Council and

9-1-1 Subcommittee

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EXECUTIVE SUMMARY

INTRODUCTION

Under 2017 Wisconsin Act 59, the Department of Military Affairs (DMA), in consultation with the Interoperability Council (IC) and the 911 Subcommittee, was tasked with submitting an interoperability report to the Wisconsin Legislature and Governor no later than January 1, 2019. This report requirement originated with the passage of Wisconsin Act 59 in September 2017. As a component of the report, DMA is required to provide a response to the following statements.

1. Recommendations for changing the statutory authority of the Interoperability Council.
2. A description of the progress made toward creating a statewide public safety interoperable communication system.
3. A description of the obstacles that hinder progress toward interoperability.
4. Recommendations for legislative or executive action to promote interoperability.

DMA compiled this report after receiving input from the public safety stakeholder community. A survey was created and distributed to all public safety disciplines, along with members of the IC and members of all four of its subcommittees. The survey responses were analyzed and ultimately influenced the direction of this report. The draft report was also discussed at an IC meeting to ensure the content represented the interests of the public safety stakeholders. Overall, this report describes the progress that has been made since 2017 Wisconsin Act 59 was passed, provides an analysis of interoperability in the state, and offers detailed recommendations for legislative or executive action as deemed appropriate.

DMA would like to thank the legislature and Governor for the opportunity to submit this report on public safety interoperability in the state, as well as thank the public safety community and governance members for taking the time to provide invaluable input on the report. Public safety communications and interoperability are critically important due to their impact on the lifesaving efforts of first responders across the entire state. These initiatives affect all citizens in the state, and thus DMA would also like to thank the other state agencies for their partnership and support in these interoperability efforts. DMA believes the recommendations presented in this report portray the best options for success in the state, and should the legislature or Governor choose to move these programs to another state agency, the issues identified will remain.

PROGRESS MADE

After the passage of 2017 Wisconsin Act 59, the Office of Emergency Communications (OEC) was created and former Fox Point Police Chief, Tom Czaja was appointed as Director. As part of the 2017-19 biennial budget, the Interoperability Unit housed at the Wisconsin Department of Justice (DOJ) was moved under DMA which included specific program areas. These areas include the Statewide Interoperability Coordinator position (SWIC), the Wisconsin Interoperable System for Communications (WISCOM), Next Generation 9-1-1 (NG9-1-1), Land Mobile Radio (LMR), and the Wisconsin Public Safety

Broadband Program for FirstNet planning. In addition, DMA is now responsible for providing staff support to the IC and its subcommittees.

WISCOM & Development of the New Statewide Radio System

In February of 2018, DMA successfully negotiated a two-year maintenance agreement with EF Johnson. The agreement is for both software and hardware for the current WISCOM system. It provides for a cost savings of \$47,000 and will expire June 30, 2019.

One of the major projects currently underway involves the development of a Request for Proposal (RFP) for a statewide public safety interoperable radio communications system which must be completed by June 30, 2019. Due to the end of the maintenance agreement during that time frame, a successful RFP will be essential. The OEC staff and the DMA State Budget and Finance Manager collaborated with an IT Acquisitions Consultant at the Wisconsin Department of Administration to complete the RFP. The RFP was released officially on October 2, 2018 and responses are due December 4, 2018. The total estimated cost for the new system will be identified through the RFP process and described in a separate whitepaper that will be submitted to the Legislature and Governor by the end of 2018¹.

Wisconsin Public Safety Broadband/FirstNet

On December 15, 2017, Governor Walker sent a letter to FirstNet which stated the State of Wisconsin decided to participate in the deployment of the nationwide, interoperable broadband network as proposed in the FirstNet State Plan. This decision was made following a recommendation by the Interoperability Council (IC) to opt-in to the FirstNet offering, along with additional recommendations for the Governor to consider in his discussions and negotiations with FirstNet and AT&T. Since that announcement, OEC staff have been meeting with FirstNet and AT&T officials regularly to ensure the project is kept on schedule. AT&T has reported that they are ahead of schedule with network build out and have installed additional cellular tower sites throughout the state to improve coverage, especially in the rural communities and on Tribal Land.

Next Generation 9-1-1

The State of Wisconsin is also moving forward with the development of an Emergency Services IP network (ESInet) to support NG9-1-1 services. The ESInet will provide the capability of delivering voice, text and multimedia calls to public safety answering points (PSAPs) which includes dispatch and 9-1-1 call centers. In June of 2018, a Request for Information (RFI) was issued to gather information from potential suppliers to identify solutions for building and managing an ESInet. The RFI will also assist the state in identifying budget estimates and creating an RFP.

In addition to the RFI, the state has issued an RFP for consulting services. The selected contractor will be involved with the development of requirements and specifications related to the creation, operation

¹ Effective November 27, 2018, all RFP solicitations from Wisconsin State agencies that had not yet been awarded have been suspended. No additional whitepaper will be produced related to the potential cost for the system.

and maintenance of the ESInet. The contractor will also be involved with project management and quality assurance services for building the ESInet, as well as post-implementation assessment and recommendations. Both the RFI for the ESInet system and the RFP for consulting services closed in August 2018. Following review of the RFI and evaluation of the RFP, DMA has begun the necessary planning for contracting and implementing the ESInet in Wisconsin. In accordance with Wis. Stat. § 256.35(3s)(b), DMA will be inviting bids to be submitted for the creation, operation, and maintenance of an ESInet that to the greatest extent feasible relies on industry standards and existing infrastructure to provide all public safety answering points with the network necessary to implement NG9-1-1. In a separate whitepaper, DMA will also provide additional information for consideration regarding the three foundational elements that are required to enable the implementation of NG9-1-1: an ESInet system, PSAP Connection and Equipment, and GIS Data. Each foundational element will require funding and guidance from the State regarding design and implementation. These elements can occur simultaneously or staggered; however, all three foundational elements need to be developed and implemented for NG9-1-1 services to be available throughout the state.

Additional progress has been made to advance 9-1-1 services in the state due to the establishment of the 911 Subcommittee in 2017 Wisconsin Act 59. The 19 members were appointed by Governor Walker and represent both private and public sectors. The Subcommittee is led by Bob Frank, a retired lieutenant with the Richland County Sheriff's Department and current representative of the Wisconsin Chapter of the National Emergency Number Association (NENA).

In September of 2018, DMA also applied for the 911 Grant Program issued by the National Telecommunications and Information Administration (NTIA) and National Highway Traffic Safety Administration (NHTSA). States, territories, and tribal organizations were eligible to apply for a total of \$109.2 million worth of federal grants.² Eligible uses of the funding include:

- The implementation and operation of 9-1-1 services, E9-1-1 services, migration to an IP-enabled emergency network, and adoption and operation of Next Generation 9-1-1 services and applications;
- The implementation of IP-enabled emergency services and applications enabled by Next Generation 9-1-1 services, including the establishment of IP backbone networks and application layer software infrastructure needed to interconnect the multitude of emergency response organizations; and
- 9-1-1-related training of public safety personnel, including call-takers, first responders, and other individuals and organizations who are part of the emergency response chain in 9-1-1 services.

Wisconsin was eligible for a minimum estimated funding level of \$2.3 million, with a 40% non-federal match requirement over a four-year grant period. Ninety percent (90%) of funding received must be

² The Notice of Funding Opportunity for the 911 Grant Program was posted on August 9, 2018 with the initial application being due September 10, 2018. 911.gov, 911 Grant Program, https://www.911.gov/project_911grantprogram.html (2018).

used for the direct benefit of local PSAPs. It is anticipated that the grants may be awarded by the end of 2018.

Overall, the projects under the management of the OEC rely heavily on stakeholder engagement to ensure success. Since its creation, OEC has intentionally communicated project updates to stakeholders through various avenues to maintain awareness and gather the input necessary to properly plan for these important initiatives. These communications include Interoperability Update emails from the public information office that stakeholders can subscribe to on the DMA website, in-person and teleconference governance meetings, governance meeting email summaries, online surveys, and presentations at conferences when requested. OEC will continue to utilize these methods of communicating important information to public safety stakeholders to ensure the success of these initiatives.

KEY POINTS OF THE REPORT

- In June 2018, the Office of Emergency Communications issued a Request for Information (RFI) for an Emergency Services IP Network (ESInet) and NG9-1-1 Services and responses were received in August 2018. The information received from the RFI was used to produce budgetary estimates for the costs to implement and maintain a statewide ESInet system and costs to locals.
- In July 2018, the Office of Emergency Communications issued a Request for Proposal (RFP) for a consultant to assist with the development of an RFP and project management services for the implementation of an ESInet system in Wisconsin.
- In September 2018, the Office of Emergency Communications submitted Step 1 of the application process for the Federal 911 Grant Program. If the grant is awarded, funds will be made available to local Public Safety Answering Points (PSAPs) to help prepare for NG9-1-1 services.
- In October 2018, the Office of Emergency Communications issued a Request for Proposal (RFP) for a statewide public safety interoperable radio communications system which will replace or enhance the current Wisconsin Interoperable System for Communications (WISCOM). Responses to the RFP are due December 4, 2018 and will be used to provide budget estimates to the legislature and Governor.
- Recommendations for changing the statutory authority of the Interoperability Council (IC) include defining “statewide public safety interoperable communications system”, updating the IC membership requirements, adding the responsibility to advise DMA on the management of frequencies, and revising the statutory language regarding goals of the IC.
- DMA has identified four main recommendations for legislative and executive action to promote interoperability in the state. The recommendations include the consolidation of state staff working on the statewide system, new position authority, additional funding, and addressing current OEC budgetary issues.

RECOMMENDATIONS FOR CHANGING THE STATUTORY AUTHORITY OF THE INTEROPERABILITY COUNCIL

In 2017 Wisconsin Act 59, DMA was tasked with identifying recommendations for changes to the statutory authority of the IC, specifically Wis. Stat. § 15.315 and 323.29. Upon reviewing these statutes and based upon feedback from the IC, its subcommittees, and stakeholders across the state, the following changes are recommended for improving the governance structure of the IC and fostering improved interoperable communications in Wisconsin:

- Define “statewide public safety interoperable communication system(s)” in Wis. Stat. § 323.29(1), as referenced throughout Wis. Stat. § 323.29(2) par. (a) through (f);
- Revise the IC’s statutory membership to improve stakeholder representation; and
- Revise the language of the IC authority given under Wis. Stat. § 323.29(2)(b) to clarify intent.

The above changes are further explained below with DMA’s recommended statutory language included in Appendix A of this report. The recommended changes are based on SAFECOM/NCSWIC’s *2015 Emergency Communications Governance Guide for State, Local, Tribal, and Territorial Officials* (“Governance Guide”), feedback from the IC, its subcommittees and stakeholders, and information gathered from other state programs.³

DEFINE “STATEWIDE PUBLIC SAFETY INTEROPERABLE COMMUNICATION SYSTEM(S)” UNDER § 323.29(1) OF THE WISCONSIN STATUTES

Traditionally, interoperable communications and interoperability across the nation has focused on Land Mobile Radio (LMR) technology and the ability for different first responder agencies and disciplines to communicate with each other in times of crisis. The IC was originally established to serve as the governance body for statewide interoperable radio communications and to provide recommendations for improving interoperability in Wisconsin. Since then, the technology used by public safety for daily and emergency communications has expanded beyond radio communications.

As presented in the current statutory language from Wis. Stat. § 323.29(2), there is an assumption that a “statewide public safety interoperable communication system” was intended only to reference the WISCOM system. This has limited the scope of responsibility of the IC and has generally excluded the IC from having advisory authority over any statewide interoperable communications systems that may be implemented in the future, regardless of the technology platform.

Today, the U.S. Department of Homeland Security, Office of Emergency Communications (U.S. DHS/OEC) has expanded the role of interoperable communications to include program areas such as NG9-1-1 and

³ “Emergency Communications Governance Guide for State, Local, Tribal, and Territorial Officials”, SAFECOM and NCSWIC, https://www.dhs.gov/sites/default/files/publications/2015%20Governance%20Guide_Master_508c%20Final.pdf

public safety broadband. Successful implementation of data and voice communications technology is supported by governance and is dependent on effective collaboration and training among participating agencies and jurisdictions. The National Emergency Communications Plan (NECP) was initially developed by the U.S. DHS to improve public safety communications nationwide. The NECP published in 2014 recommends updating governance structures based on the evolution of technologies used by public safety.⁴

Based on the guidance from the 2014 NECP, the 2015 Governance Guide, and in reviewing the statutory language in Wis. Stat. § 323.29(2), there is a need to define “statewide public safety interoperable communication system(s)” as mentioned throughout the IC’s statutory duties in par. (a) through (f).⁵ It is recommended that the State make plural, all references to a “statewide public safety interoperable communications system” and establish a definition for “statewide public safety interoperable communications systems” in Wis. Stat. § 323.29(1). The revised language would clearly expand the scope of responsibility of the IC and its subcommittees to include not only WISCOM or any future iterations, but any new statewide interoperable systems such as the Emergency Services IP Network (ESInet) necessary for NG9-1-1 services, as defined in Wis. Stat. § 256.35(3s)2.

The definition of these systems would establish certain requirements that each system must meet in order to be considered a statewide interoperable communications system under the purview of the IC’s statutory responsibilities, similar to the statutory definition of NG9-1-1 in Wis. Stat. § 256.35(3s)(3). “Statewide public safety interoperable communications systems” would be defined as statewide communications systems, regardless of technology platform, that are utilized by public safety agencies to do one or more of the following:

- Provide emergency communications for the purposes of interoperability as defined in Wis. Stat. § 323.29(1)(c);
- Establish statewide communications systems for use by public safety agencies to communicate with each other and agencies and entities identified in Wis. Stat. § 323.29(2)(a);
- Establish shared statewide communications systems across multiple jurisdictions and public safety disciplines;
- Provide voice, data, or video communications on demand and in real time as needed for coordinated incident response and management;
- Establish a statewide emergency number system which automatically connects a person dialing the digits “911” to a public safety answering point or dispatch center.

INTEROPERABILITY COUNCIL STATUTORY CHANGES

The current membership requirements of the IC are defined in Wis. Stat. § 15.315(1)(b) and the authority of the IC is defined in Wis. Stat. §323.29(2). Based on the direct guidance from current IC

⁴ “National Emergency Communications Plan of 2014”, U.S. Department of Homeland Security, <https://www.dhs.gov/publication/2014-national-emergency-communications-plan>

⁵ “Emergency Communications Governance Guide for State, Local, Tribal, and Territorial Officials”, SAFECOM and NCSWIC, https://www.dhs.gov/sites/default/files/publications/2015%20Governance%20Guide_Master_508c%20Final.pdf

membership, stakeholder input, and a review of the history of the IC, it is recommended that statutory revisions are made to the IC membership requirements to improve stakeholder representation and revising the language of the IC authority given under Wis. Stat. § 323.29(2)(b) to clarify intent.

The local health department representative and local government elected official positions on the IC have remained vacant for several years, despite numerous attempts to recruit replacement members. Additionally, there are already two health officials represented on the IC, filling the positions of Hospital Representative and Director of EMS. Since 9-1-1 is the central hub of emergency communications and is not specifically represented on the IC, it is recommended that the local health department representative position be replaced with a “representative of a public safety answering point.” It has also been difficult to find local government elected officials with the background knowledge and interest to participate in the interoperability initiatives. Therefore, it is recommended that the local government elected official be replaced with a “state government elected official or designee.” This change would help foster the connection between the IC and the state legislature. The recommended changes to the statutory membership of the IC can be found in Appendix A – Recommended Statutory Changes.

Another recommendation for changes to be made to the IC membership involves the considerations that should be made when the Governor makes appointments. A majority of the stakeholder input suggested that the IC makeup be more representative of rural or smaller communities. Similar to Wis. Stat. § 15.315(2)(b), it is recommended that when making appointments, the Governor shall consider the geographical diversity of, and the representation of urban and rural interests by, the membership of the IC. To encourage reporting between the IC and the various Wisconsin public safety associations (e.g. Wisconsin Chiefs of Police, Badger State Sheriffs Association, Wisconsin Emergency Management Association, etc.) it is also recommended that the Governor consider recommendations from these associations when making appointments.

Based on stakeholder input and discussions with the IC members, it is also recommended that the statutory language be revised regarding the responsibility of the IC to recommend short-term and long-term goals to achieve a statewide public safety interoperable communication system (§ 323.29(2)(b)). As detailed in Appendix A, it is recommended that this language be revised to state the IC shall “recommend and support cooperative strategies to achieve statewide public safety communications interoperability.” The revised language will allow the IC to recommend strategies for achieving interoperability across all systems rather than focusing on one statewide system.

In conclusion, DMA believes that defining “statewide public safety interoperable communications system”, updating the IC membership requirements, and revising the statutory language regarding goals of the IC will all positively impact the interoperability initiatives throughout the state. These recommended changes were generated by stakeholder input and have received approval from the current IC membership.

Section 2 RESPONSE TO 9132(1X)(B)

A DESCRIPTION OF THE PROGRESS MADE TOWARD CREATING A STATEWIDE PUBLIC SAFETY INTEROPERABLE COMMUNICATION SYSTEM

BRIEF HISTORY OF WISCOM

The current interpretation of “Statewide Public Safety Interoperable Communication System” is applied to the Wisconsin Interoperable System for Communications (WISCOM), which was commissioned in 2012. The system is a shared network that first responders in communities across the state may use to communicate for their daily missions, during a major disaster, or large-scale incidents. The initial system was installed by Wisconsin State Patrol (WSP) technicians and assembled with equipment competitively procured from EF Johnson. While home rule in Wisconsin promotes local control of communications networks, WISCOM allows for an overlay and connectivity to those local networks when local resources are exceeded. WISCOM is a VHF (Very High Frequency), trunked, P25 (Project 25) digital radio network, which currently supports over 23,000 radios registered on the network. The network was initially designed to provide 95% mobile radio coverage across the state, while also allowing other agencies the ability to join and enhance the portable radio coverage with additional sites. The WISCOM system currently operates successfully based on the original design specifications. However, problems have arisen because the state did not establish installation standards or create a plan for maintenance during initial system design and implementation.

Most of the WISCOM tower sites are located at existing state tower sites owned by other state agencies including the Department of Transportation (DOT), Department of Natural Resources (DNR), Department of Corrections, Department of Health Services, the University of Wisconsin, and the Educational Communications Board (ECB). The initial partners of WISCOM (WSP and the now defunct Office of Justice Assistance (OJA)) also solicited local agencies to use WISCOM as their primary communications system. This user type is commonly referred to as a “daily user.” Numerous sites were added to the system to address coverage needs of those local agencies. Some of these sites were installed and paid for by the county or local municipality. These additional sites were built using the best information the locals had at the time, but the state has observed slight differences at each site because installation standards were not enforced by the state at that time.

Much of the funding for the initial implementation of WISCOM was through federal grants originally managed by OJA and later by Wisconsin Emergency Management. The management of the WISCOM program was transferred to Department of Justice (DOJ) in 2013 after the dissolution of OJA, and subsequently transferred to DMA in accordance with 2017 Wisconsin Act 59. The system is currently maintained by WSP technicians through a Memorandum of Understanding (MOU) and under program management by the OEC.

WISCOM has faced challenges in the past, many of which are typical of large-scale network implementations. Many of the adverse experiences encountered by users have been addressed, but some negative perceptions remain. WISCOM continues to face challenges, including that the state did

not plan for proper funding or staffing the way other states have for their radio projects. WISCOM has also been a catalyst for many success stories throughout the state. The network supported public safety during the Democratic debates held at the University of Wisconsin – Milwaukee on February 11, 2016. It was also instrumental to providing lifesaving interoperable communications when a windstorm affected wireless and landline 9-1-1 networks in Bayfield and Douglas Counties in 2016.

Though the current WISCOM system has experienced adversity, significant progress has been made toward creating a successful statewide public safety interoperable communication system, which includes the completion of the WISCOM Report, the development of the OEC, an extended service agreement with EF Johnson, consultation with DOT, ongoing outreach to stakeholders, and the development of a RFP for a statewide public safety interoperable radio communications system.

WISCOM REPORT AND RECOMMENDATIONS

Prior to 2017 Wisconsin Act 59, TUSA Consulting Services II, LLC (TUSA), along with their partner Carr, Riggs & Ingram, LLC (CRI), was contracted by the DOJ to provide professional consulting and planning services for the development of a sustainable plan that assesses, quantifies, and provides prioritized recommendations regarding all essential aspects of the current WISCOM system. The project also developed recommendations to resolve the technical issues experienced by some daily users of the WISCOM system.

The final WISCOM Report published in 2017 (prior to 2017 Wisconsin Act 59) found that industry best practices were not taken into consideration when tower sites were originally built or expanded to support the current WISCOM network.⁶ Important infrastructure issues including tower loading, power loading, HVAC loading, and improper grounding were observed. After the report was published WSP technical leadership have made improvements by adopting a single set of installation and lightning protection standards, and the technical staff have been working on the state sites to bring them into conformance with the approved methods. These improvements are being made by WSP even though this issue is not covered by the existing MOU between DMA and DOT.

Some of the local agency daily WISCOM users added local sites to provide adequate coverage in their service area. Due to a lack of standards being enforced at that time, the installation and continued maintenance of the local sites are inconsistent due to different contractors installing and maintaining different sites. The compliance with best practices for implementation and maintenance is dependent on the quality of the individual contractors and the oversight provided by the local agencies. After the legislature and Governor decide how to proceed with the statewide radio system, the State will work with all stakeholders to establish implementation and maintenance standards for both State and local sites. Money will not be spent to get the existing local sites up to standard until after these decisions

⁶ “WISCOM Report: Technical Issues Report, WISCOM Analysis, and Sustainability Plan”, State of Wisconsin Department of Justice, TUSA Consulting Services, LLC, and Carr, Riggs & Ingram, LLC, https://dma.wi.gov/DMA/divisions/oec/programs/wiscom/docs/WISCOM_Report_Final.pdf

have been made. It should be noted there are some counties and municipalities that are currently operating well-installed sites that also include arrangements for preventative and emergency maintenance with a contractor. OEC is also working to develop a standard user agreement requiring users to follow an established set of standards for installation and maintenance of new local sites. Additionally, the adoption of a New User Policy for the onboarding of a new agency as a daily user is well underway by the WISCOM Subcommittee and will need to be approved by the IC before being implemented.

In their report, TUSA was also very concerned with the State not having a programmatic approach to VHF frequency planning. VHF planning is complicated in Wisconsin by the fact that the VHF spectrum is congested as it is used by the majority of the first responder systems in the state. This high usage results in channels getting reassigned and causing harmful interference due to their geographic proximity. Advanced planning methods that factor in complex interference analysis including considerations such as channel reuse and terrain data can reduce the likelihood of interference. This is an issue that will persist even with the replacement of equipment. These interference issues will need to be resolved prior to the installation of a new statewide interoperable communication system. This will require some planning work by a frequency firm along with financial resources to accomplish this task.

Another area of concern that was identified in the WISCOM Report involved the EF Johnson base stations. Some base stations in use by the system were identified to either be end-of-life or were causing compatibility issues with certain radios. Since the WISCOM Report was produced, WSP has made progress with EF Johnson to address this issue and has performed system acceptance testing of EF Johnson's recent base station and has reported the product to be an acceptable replacement to the base stations currently installed that are no longer factory supported. The state plans to maintain the system with the existing base stations until a decision is made by the legislature and Governor regarding how to proceed.

It is DMA's observation that in order to implement the recommendations highlighted in the report completed by TUSA, much work remains to be completed. The expense and staffing needed to implement all the improvements are beyond the funding and staff level currently allocated to WISCOM. It should also be noted that if the current WISCOM system is to be replaced, similar work would need to be completed to ensure optimal performance and reliability of the new system. It is anticipated there will be cost variations depending upon how the legislature and Governor decide to proceed with the statewide public safety interoperable radio communications system. Emergency communications systems are complex and cannot survive with a one-time investment. For first responders to be able to rely on an emergency communications system, the installed technology must be well maintained with a long-term commitment to maintenance and the replacement of equipment.

CREATION OF THE OFFICE OF EMERGENCY COMMUNICATIONS (OEC)

After the passage of 2017 Wisconsin Act 59, one of the first steps taken was the creation of the OEC, which is directed by former Fox Point Police Chief, Tom Czaja. As part of the 2017-19 biennial budget,

the Interoperability Unit housed at DOJ was moved under DMA which included specific program areas. These areas include the Statewide Interoperability Coordinator position (SWIC), the Wisconsin Interoperable System for Communications (WISCOM), NG9-1-1, Land Mobile Radio (LMR), and the Wisconsin Public Safety Broadband Program for FirstNet planning. In addition, OEC is now responsible for providing staff support to the IC and its subcommittees. In April of 2018, DMA also received approval to transfer a position from the DOT to DMA as part of a § 13.10, Wis. Stat. action by the Joint Committee on Finance. This position will assist with the statewide public safety interoperable communications system. In total, the OEC has six full-time staff, including the Director and executive staff secretary of the Office, along with one part-time position, to support all emergency communications program areas. In addition to the positions within OEC, the Adjutant General appointed the Administrator for the Division of Emergency Management as the DMA designee on the Interoperability Council based on his many years of experience in emergency management and interoperable communications.

The Director of the OEC reports directly to the Adjutant General. This allows for swift action to be taken when necessary. One of the obstacles previously experienced by the Interoperability Unit included the requirement to go through several layers of administrative approvals before any action could be taken. The new organizational structure allows for an expedited approval process which is ideal when working with emergency communications systems that are mission critical to daily public safety operations.

One of the major accomplishments of OEC thus far includes the extended maintenance agreement with EF Johnson for the current WISCOM system. In February of 2018, DMA successfully negotiated a two-year maintenance agreement for both software and hardware. It was negotiated at a substantial cost savings and the contract has already been utilized to replace two servers. This maintenance agreement will expire June 30, 2019 and will need to be renegotiated to cover the existing system during the implementation of a new system.

DISCUSSIONS ABOUT INFRASTRUCTURE MAINTENANCE

Additional progress has been made since 2017 Wisconsin Act 59 in the discussions between DMA and DOT regarding the maintenance of the WISCOM system. At this time, an inter-agency agreement has been executed to cover short-term system roles through fiscal year 2019, and a Memorandum of Understanding is also underway to govern the long-term roles.

Historically, the capital funding for WISCOM and the supporting infrastructure has been a mix of federal grants, along with funding sources internal to DOT. Prior to 2017 Wisconsin Act 59, funding for WISCOM was one of many priorities. The state has recently become aware of problems with deferred infrastructure maintenance and is now working to resolve those issues. Progress has already been made to rectify the deferred tower maintenance after discussions occurred at the Executive level, but a strong and dedicated ongoing financial commitment is needed for the success of the WISCOM system going forward.

As a requirement of 2017 Wisconsin Act 59, OEC has further consulted with WSP regarding the effective use of staff for the ongoing maintenance of the statewide public safety interoperable communication system. WSP does not currently utilize a formal service request ticketing approach typically seen in other IT systems, but rather utilizes email distribution as the primary form of communications. While email is a reliable method for distribution, it lacks the capacity to establish the metrics needed to manage a network. DMA has been advised that WSP is currently considering a system to be used for trouble ticketing. Conversations will be ongoing to ensure the chosen ticketing system will be effective for all agencies involved.

ONGOING OUTREACH TO STAKEHOLDERS

After the move from DOJ to DMA in accordance with 2017 Wisconsin Act 59, the OEC has continued to make outreach to stakeholders a priority. Gathering input from the public safety stakeholder community will be integral to the success of both a statewide public safety interoperable communications system and to the adoption of Next Generation 9-1-1 and a statewide ESInet system. An attempt to gather as much stakeholder input as possible was initiated prior to the development of a RFP. The OEC distributed a survey to over 2,000 public safety stakeholders and held user interviews and listening sessions. Over a span of six days in June 2018, OEC staff conducted interviews with seven state agencies and held 11 regional listening sessions to collect adequate information regarding coverage and operational requirements for the new system. OEC plans to hold similar meetings prior to the development of the RFP for a statewide ESInet system.

OEC has also continued outreach to stakeholder groups at conferences and association meetings such as the Wisconsin Counties Association, Badger State Sheriffs Association, MABAS Wisconsin, Wisconsin Emergency Management Association, Wisconsin EMS Association, Wisconsin NENA/APCO, Wisconsin Chiefs of Police Association, and several others. The outreach provided at these conferences and meetings typically focus on the roles and responsibilities of the Office and the systems that are managed (WISCOM, NG9-1-1, public safety broadband), along with the interoperability initiatives around the state. The continued outreach by OEC has resulted in the onboarding of new agencies to the WISCOM system, the identification and planning of agencies that are interested in joining in the near future, and maintaining important relationships with the stakeholder community.

STATEWIDE INTEROPERABLE COMMUNICATIONS SYSTEM RFP DEVELOPMENT⁷

As required in 2017 Wisconsin Act 59, DMA has collaborated with the Department of Administration to conduct a RFP regarding a statewide public safety interoperable communication system. Due to the background knowledge previously acquired through the WISCOM Report, a sole source contract was executed with TUSA for additional data gathering and assistance with the development and evaluation of the RFP. DMA has also collaborated with other state agency representatives and locals who have extensive experience with radio communications systems to compile the requirements for the RFP. A

⁷ Effective November 27, 2018, all RFP solicitations from Wisconsin State agencies that had not yet been awarded were suspended; therefore, the RFP was not completed for the public safety interoperable communication system.

large amount of work has been completed on this project on an expedited timeline in order to provide budgetary estimates to be considered for the next state budget. The RFP was released on October 2, 2018 and responses are due from vendors on December 4, 2018. Based on the results of the RFP, it is anticipated that there may be several options available for the legislature and Governor to decide the best route for the statewide radio system moving forward. DMA believes there will be two main courses of action: update and maintain the current WISCOM system, or build a new and improved system that may or may not use existing WISCOM infrastructure. In addition to working on the RFP, OEC continues to work diligently to manage the current WISCOM system which includes bringing new users onboard.

In conclusion, though the WISCOM system has experienced both successes and failures, significant progress has been made toward creating or enhancing a statewide public safety interoperable communication system. This progress includes the completion of the WISCOM Report, the creation of the OEC, an extended service agreement with EF Johnson, consultation and continued collaboration with DOT, ongoing outreach to stakeholders, and the development of a RFP for a statewide public safety interoperable radio communications system. Despite efforts to improve the statewide radio system used by public safety, obstacles to accomplishing true interoperability remain.

SECTION 3 RESPONSE TO 9132(1X)(C)

A DESCRIPTION OF THE OBSTACLES THAT HINDER PROGRESS TOWARD INTEROPERABILITY

The ability of public safety first responders to effectively communicate during a critical incident has been a long-standing problem throughout the nation. There are some regions that are more advanced than others due to the frequency of large-scale weather events such as hurricanes and F5 tornados, or natural disasters such as wild fires and earthquakes. Other regions have advanced communications capabilities due to their location such as Washington D.C. and New York City, as well as periodic and annual events such as the Boston Marathon, the Super Bowl, festivals, and parades.

After the tragic events of September 11, 2001, President George W. Bush proposed creating a U.S. Department of Homeland Security (U.S. DHS) and soon thereafter the Homeland Security Act of 2002 was passed by Congress. This led to the first National Emergency Communications Plan (NECP) which was released in 2008. The primary focus of the NECP was land mobile radio communications and interoperability. The evolution of various communications technologies into the digital and data arenas led to an updated version of the plan several years later. The National Emergency Communications Plan of 2014 defined interoperability as the “ability of emergency responders to communicate among jurisdictions, disciplines, frequency bands, and levels of government as needed and as authorized. System operability is required for system interoperability.”⁸

The NECP uses the SAFECOM Interoperability Continuum as guiding principles “to assist emergency response agencies and policy makers to plan and implement interoperability solutions for data and voice communications. This tool identifies five critical success elements that must be addressed to achieve a sophisticated interoperability solution: governance, standard operating procedures (SOPs), technology, training and exercises, and usage of interoperable communications.”⁹

Wisconsin has implemented its own strategic planning document, the Wisconsin Statewide Communications Interoperability Plan (SCIP), as the roadmap to improve interoperability among the state’s first responder community.¹⁰ The first SCIP was adopted in 2007 and revised in 2015. The plan is currently undergoing another update to reflect the rapidly evolving technology changes. It is expected to be approved by the IC in 2019. The Wisconsin plan relies upon the same SAFECOM Interoperability Continuum guidance as the national plan.

In evaluating the obstacles that hinder progress toward interoperability in Wisconsin, the problems revolve around a blend of technological, funding, and cultural challenges. Against the backdrop of the Interoperability Continuum, the following issues have been identified as inhibiting the progress toward a

⁸ “National Emergency Communications Plan of 2014”, U.S. Department of Homeland Security, <https://www.dhs.gov/publication/2014-national-emergency-communications-plan>

⁹ “Interoperability Continuum: A tool for improving emergency response communications and interoperability”, U.S. Department of Homeland Security, https://www.dhs.gov/sites/default/files/publications/interoperability_continuum_brochure_2_1.pdf

¹⁰ Wisconsin Interoperability Council, *Wisconsin Statewide Communication Interoperability Plan*, February 23, 2015

highly effective and capable interoperable communications ecosystem for the state's first responder community. These obstacles have been organized to reflect what can and cannot be easily changed with legislative or executive action.

OBSTACLES THAT CAN BE ADDRESSED WITH LEGISLATIVE/EXECUTIVE ACTION

There are several obstacles that hinder progress toward interoperability that can be addressed with legislative or executive action. These obstacles include not having a single office overseeing the statewide radio system, inadequate staffing levels, and a lack of financial resources. Suggestions for overcoming these obstacles are provided in Section 4 of this report.

Not Having a Single Office Overseeing the Statewide Radio System

The lack of a single state entity that is responsible for the management and maintenance of the complex interoperable public safety radio communications system has resulted in a lack of efficiency and effectiveness, as well as confusion and distrust from local stakeholders. Over the course of its history, responsibility for the development and oversight of WISCOM has transitioned from the defunct Office of Justice Assistance (OJA), to the Department of Justice (DOJ), and now resides within DMA. Maintenance of the system is currently performed by technicians who are employed by the DOT. Most of the initial funding for WISCOM was obtained through federal grants administered by OJA, and then by Wisconsin Emergency Management (WEM). Currently, the direct funding for the WISCOM system is managed by DMA with payments made to DOT when allowable costs are expended.

OEC has observed that the efficiency of operations becomes an issue when more than one state agency is responsible for managing and operating a statewide system without clearly defined roles and established responsibilities. With this ineffective structure there is an increased need for coordination and communication between the personnel at each agency. It has proven to be difficult to ensure that the same message is being delivered to stakeholders and that important information is being distributed to all necessary parties.

Effectiveness of operations also comes into question because each state agency has their own policies, procedures, and funding priorities. For example, the confusion regarding what state agency is responsible for different aspects of the WISCOM system often inhibits the operation and maintenance of a mission critical system because final decision-making authority and ownership is ambiguous.

Additionally, some public safety stakeholders have argued that the WISCOM system should be managed by an agency that does not have an affiliation with any particular discipline or user group.¹¹ There is some concern from the stakeholder community that certain disciplines or users may be favored over others when determining training schedules, assisting with issues, or implementing system upgrades.

¹¹ "Wisconsin Public Safety Communications Governance Assessment", The Interoperability Group and Televate, April 2017, <https://dma.wi.gov/DMA/divisions/oec/library/2017/WI%20Gov%20Rpt%20FINAL%204-6-2017.pdf>

This may adversely affect stakeholder interest in utilizing WISCOM for their daily operations or interoperable purposes.

2017 Wisconsin Act 59 required DMA to consult with DOT regarding the effective use of staff at DOT and other state agencies for the ongoing maintenance of a statewide public safety interoperable communication system. It is now DMA's recommendation that all state staff working on the statewide radio system reside under the same state agency with the potential for outsourcing certain duties. DMA would gladly accept all responsibilities for the statewide radio system, but this recommendation would not change if the legislature and Governor decide that another state agency is better suited to handle these responsibilities. DMA will work with the Joint Committee on Finance to determine staffing requirements if action is taken by the legislative and Governor to overcome this obstacle.

Inadequate Staffing Levels

Another major obstacle that currently hinders progress toward interoperability involves inadequate staffing levels. With the results of the RFP for a statewide public safety interoperable communications system still pending, it is premature to offer suggestions for the staff increases necessary to support the new system. After a contract has been signed, any staffing requirements will be better understood, and adjustments may be necessary. The following paragraphs describe staff increases that are necessary regardless of the status of the new radio system implementation.

One area where deficiencies have been suggested is in the number of personnel dedicated to the WISCOM system. As part of the WISCOM Report published in 2017, TUSA and CRI provided an analysis of the staff levels assigned to WISCOM management, technical support, and administrative support.¹² In the report, TUSA suggested that the WISCOM management staff and technical staff were considerably under staffed. The report also identified different business models that are used throughout the country that may be utilized to determine the best route forward for Wisconsin.

Additionally, OEC has been understaffed due to insufficient position authority and funding. Three (3.0) FTE staff positions and one 0.2 FTE staff positions were transferred from DOJ to DMA as a result of the 2017-19 biennial budget. The 0.2 FTE position was funded by grant funds which expired in February 2018. Previously, this was a 1.0 FTE position with 0.8 FTE position authority funded by other DOJ appropriations. Essentially, 0.8 FTE positions were lost during the transition to DMA, and DMA has been unable to fill the 0.2 FTE position due to state hiring requirements and a lack of funding source. The DMA requested through a Wis. Stat. § 13.10 hearing a 1.0 FTE funded through the Justice Information Surcharge appropriation but was denied due to funding concerns within that appropriation. The agency has submitted a request in their agency biennial budget request to fund the 1.0 FTE with general purpose revenue (DMA Agency Budget Request, Decision Item Narrative 5001). 2017 Wisconsin Act 59 created two new positions within the OEC: a director of emergency communications and an

¹² "WISCOM Report: Technical Issues Report, WISCOM Analysis, and Sustainability Plan", State of Wisconsin Department of Justice, TUSA Consulting Services, LLC, and Carr, Riggs & Ingram, LLC, https://dma.wi.gov/DMA/divisions/oec/programs/wiscom/docs/WISCOM_Report_Final.pdf

administrative support position. Along with providing staff support to the IC and four subcommittees, the OEC oversees four program areas with only six FTE positions and one LTE position.

Due to the lack of staff, OEC is currently unable to properly assist and provide local and regional support to stakeholders faced with the rapidly changing public safety communications ecosystem. In 2009, the IC created six Regional SCIP Implementation Councils (RSICs) for the purpose of advancing various statewide interoperable communications strategies to improve public safety voice and data communications across all public safety disciplines, levels of government, and tribal nations. To facilitate the establishment of the regional councils, federal grant funds were awarded to several counties and regional planning commissions to initially create six regional interoperability coordinator (RIC) positions. The coordinator program began in 2010 and concluded in 2017 when grant funding ended. During their existence, the RICs provided the vital link for information flow to and from the various local, regional, and state level communications stakeholders. This flow of information is necessary to improve interoperable voice and data communications at the local, regional, and statewide levels. The coordinators were able to reduce “silos” and assist in relationship building to foster communication, cooperation, coordination, and collaboration among the various agencies and disciplines. To continue to build upon the foundation established during the RIC grant program, OEC is in need of funding for three part-time LTE regional outreach coordinator (ROC) positions, who would have specific regions of responsibility and would be tasked to work with the local public safety communications stakeholders and serve as their conduit to express local needs and concerns to OEC, the IC, state agencies, and elected officials.¹³

As the programs under OEC expand, more staff will be needed to effectively run the programs overseen by the Office. For example, as NG9-1-1 becomes a reality with the installation of an ESInet system, more staff will be needed to support the various components of this initiative. In addition, TUSA provided OEC with an estimate that it would take a minimum of five full-time staff to manage the new statewide public safety interoperable radio communications system. Approval for the additional position requested in the 2019-21 biennial budget, funding for the three Regional Outreach Coordinators, and gaining legislative support for future position requests will be essential for OEC and interoperability to be successful in Wisconsin. There are additional courses of action available other than providing additional position authority, such as outsourcing for maintenance or training. However, there would still be a need for additional funding to execute those contracts.

Lack of Financial Resources

One common theme found throughout the obstacles previously discussed in this report involves the lack of financial resources to support interoperability at the state and local levels. In the years following the 9/11 tragedy, there was a period of heavy investment by the U.S. Department of Homeland Security into communications initiatives via federal grants such as the Interoperable Emergency Communications Grant Program. Those grants have since ceased and there has not been a fresh influx of funds to address

¹³ Additional information on the history of the RIC program and the future role of the ROCs can be made available upon request to DMA.

the replacement of the equipment that was purchased with those grants. Priorities have changed at the federal level and it is doubtful that similar grant funding will be available for these radio communications systems in the future. Most of the equipment that was purchased using federal grant dollars has either reached or is fast approaching its end of life. In addition, when these grants were awarded there was little to no consideration for sustainability funding at the state level.

The lack of financial resources at the local level is another obstacle to interoperability with the current WISCOM system. Generally, the cost of radios increases based on the features that are needed by the local agency. Similar to other statewide radio systems, WISCOM requires specific features to be included in the radios that operate on the network. These features come at a significant cost on a per radio basis. Many public safety individuals in the state do not have radios on the WISCOM network today because of the cost of the radios necessary to join. DMA estimates that only half of the radios owned by public safety agencies statewide are capable of working on WISCOM today. In order to get more public safety agencies to join WISCOM or the new radio system, there may need to be financial resources provided to assist local agencies with purchasing radios with the necessary features to join the network. There are several options available to the state to overcome this obstacle, such as cost-sharing or leasing, and does not necessarily need to be a full responsibility of the state. These options will be addressed in the RFP for the new radio system.

Furthermore, the legislature and Governor have already acknowledged the lack of funds dedicated to the advancement of emergency communications by providing new funding for a statewide ESInet and Director of Emergency Communications in 2017 Wisconsin Act 59. In other states with a similar governance structure, it is common for their state OEC-equivalent to receive a dedicated funding stream to allow for administering grants to locals for 9-1-1 costs such as equipment upgrades or training. In those states they commonly have a large annual operating budget that is dedicated to the operation and maintenance of their statewide radio system. OEC does not currently have a sustainable funding source that is adequate to operate and maintain the statewide radio system (current or future), or a dedicated funding stream for 9-1-1 at the state or local level.

OBSTACLES THAT CANNOT BE EASILY ADDRESSED BY LEGISLATIVE/EXECUTIVE ACTION

There are many obstacles that hinder progress toward interoperability that may not be easily addressed by legislative or executive action. These obstacles include state agency level participation, regional and statewide planning, a general lack of understanding of these initiatives, technological obstacles, inadequate training, and culture. Assistance with the obstacles addressed in the previous section, such as funding and staffing, may indirectly help to overcome the additional obstacles described below.

State Agency Level Participation and Coordination

The history of public safety interoperable communications activities at the state agency level can best be viewed as compartmentalized and uncoordinated. The WSP and the radio infrastructure that it manages and maintains are utilized for the statewide interoperable system for communications (WISCOM). Some of the WISCOM infrastructure is also installed on towers owned by the DNR, the ECB, and other towers

that are leased. WSP currently uses WISCOM as its primary communications system. The DNR also has its own radio network that was created primarily for ease of monitoring local channels.

The failure of all state agencies to use a single radio system is one example of an obstacle to interoperable communications. The use of different communications systems by state agencies leads to an inherent lack of coordination and increased costs for supporting multiple systems, much of which is funded through state appropriations established with taxpayer dollars. This may also cause local agencies to question why they should join the WISCOM system or implement interoperability initiatives when those practices are not being employed by all state agencies. This is an obstacle to achieving interoperability, but without the proper planning and involvement of the affected agencies, OEC does not recommend legislative or executive action at this time.

Regional and Statewide Planning

One of the biggest challenges to all forms of public safety interoperable communications has been the lack of understanding of what is occurring in the various counties and regions of the state. Information sharing often occurs because of personal relationships or inadvertent and casual conversations. This lack of comprehensive regional and statewide planning leads to misinformation and a piecemeal response rather than a coordinated approach to interoperability efforts. In addition, the same policies and procedures for interoperable communications are not adopted statewide. Among the reasons for this include home rule, weak governance structures, vendor influences, and the lack of a state level agency specifically dedicated to coordinating public safety interoperability.

In addition, Wisconsin does not have an effective central records system that contains current and accurate data about the technical infrastructure, operations, and contact information for the various public safety radio systems that are being used throughout the state. Without accurate information, local, regional, and state decision makers are hindered in making critical long-term decisions and capital assessments that are based on economies and efficiencies of scale. The lack of a centralized database containing information about frequencies, channels, and general radio system capabilities inhibit the efforts to develop multi-agency, multi-discipline incident communications plans.

To combat some of these issues, local communications stakeholders need a state agency they can turn to for unbiased best practices, guidance, and support, rather than relying upon the inherently biased opinion of a salesperson or private vendor. The newly created Office of Emergency Communications within DMA has the potential to provide the necessary support, provided it has strong executive and funding sponsorship, and a deep commitment to and respect from the first responder community.

Lack of Understanding

Another obstacle that hinders progress toward interoperability is the lack of understanding and commitment to interoperability concepts by public safety stakeholders at the state and local levels. This lack of understanding and commitment can be due to a number of things, such as inexperience or not seeing the need to implement any change in daily emergency communications. There may also be a lack

of understanding by the agency's leadership due to time constraints, technical interest or abilities, and delegation of duties to others.

The commitment to interoperability concepts requires a significant amount of staff time for initial training to implement as well as periodic, reoccurring training to maintain that understanding. Many agencies are hard-pressed to find the time as well as the needed funding when their budgets and staff are already being stretched thin. The lack of understanding of interoperability concepts is amplified by a lack of outreach to all stakeholder groups and a lack of knowledge of what resources are available to aid interoperable communications. The outreach required to improve this obstacle differs from the program development related outreach that was discussed in Section 2, as the emergency communications systems must be in place prior to the adoption of statewide interoperability concepts and policies. OEC plans to develop an outreach program to overcome this obstacle, but additional funding for LTE outreach staff is needed.

Technological Obstacles

For most of the 20th century, public safety communications were primarily limited to voice communications over relatively unsophisticated and easy-to-use conventional, analog systems. For the most part, interoperable communications could be accomplished on the same radio frequencies or using a limited number of state licensed mutual aid frequencies as needed for larger scale incidents. During these simpler times, most public safety emergency communications were adequately handled and did not rise to the level of statewide concern.

Technology has become more sophisticated in the 21st century with the rapid expansion of digital communications involving high speed internet, LTE cellular telephones, texting with photos, streaming video, Global Positioning Systems (GPS), etc. The world is globally connected, and the public assumes and expects public safety to have the same capability to respond to their requests for service in this digital world. Our citizens can seamlessly communicate with others half-way around the world, but the same cannot be said for interoperable communications during routine and dynamic events involving two or more PSAPs and their associated public safety agencies.

This new world transcends traditional political boundaries. Local units of government have limited funding available to keep pace with constantly evolving technology needs of the public safety community. Prior to the digital age, communications equipment could last ten, fifteen or more years without any significant expenditures or concerns about system replacements. With digital technology, the need to upgrade or replace equipment becomes a constant budgetary issue and software/firmware updates can become weekly or monthly issues. If neighboring jurisdictions do not keep up-to-date with software versions, interoperable capabilities suffer.

The technological advancement of communications capabilities and their impact upon interoperability can have both positive and negative repercussions on the public safety community. In the digital world, public safety has the ability to communicate via voice, data, image, and video. The training of support and field staff on the concepts of interoperability and how to use their equipment will improve their

abilities to communicate. However, the issues that prove to be stumbling blocks include limited funding for training programs, overtime costs for staffing back-fill, as well as the scope of the training and frequency. It is noted that not every position requires the same level of knowledge or understanding. The more operational responsibility an individual has usually dictates the needed knowledge of interoperable communications.

At the Information Technology (IT) level, advancing technology creates a different set of circumstances that also hinders public safety interoperable communications. The cost to purchase and maintain an emergency communications system is a major obstacle, along with the costs for public safety to use these systems. From infrastructure to computer networks, subscriber units and other devices, Computer Aided Dispatch (CAD) and Records Management Systems (RMS) as well as all of the ongoing software updates, the operational life of modern technology is becoming shorter and more expensive to maintain. Frequent changes then lead to additional training requirements involving operational staff.

The complexity of the communications technology is a huge challenge for public safety to support. Many local agencies have a difficult time hiring and retaining qualified individuals, especially in areas where the employment pool is limited. In addition, even if there are qualified individuals available, there is often the inability to pay competitive wages given the demand. There is also the issue that due to the broad range of skill sets needed such as radio specialists, network support, software support, cybersecurity, etc., that a single “generalist” is not capable of handling all functions. If an agency does not have in-house IT support, the option is to turn to a third party for support. This usually takes the form of a private contractor, although there are also public sector examples. Although there is the potential for a higher level of IT expertise, it is not guaranteed.

Technology can also become problematic when systems are built without using compatible industry standards or best practices. There is currently no statewide mandate that locals must comply with industry standards when building or enhancing their radio systems. This becomes problematic when attempting to connect systems for interoperability uses.

Another technological obstacle and emerging threat to public safety interoperability comes in the form of cyberattacks and the need for cybersecurity countermeasures. As public safety communications transition from the analog to digital world, the ability to share information and data provides important benefits and capabilities to the first responder community including text and video messaging, call transferring, and improved sustainability and redundancies. Current analog PSAPs can be targeted by telephony denial-of-service attacks, where the 9-1-1 center is flooded with calls that prevent actual emergency calls from getting through. In the digital world, distributed denial-of-service attacks from multiple online sources could be used to overwhelm a 9-1-1 center. Such an attack could greatly diminish the response capabilities of agencies relying on that PSAP which may include multiple law enforcement agencies, fire, and emergency medical services agencies. If that PSAP has an IP-based interconnection with other systems and networks, the potential impact of that attack on other systems increases dramatically.

Inadequate Training

The National Emergency Communications Plan (NECP) of 2014 identifies training as an essential goal for ensuring successful operable and interoperable emergency communications. The following excerpt was used to introduce Goal 3 Training and Exercises in the NECP:

“Effective training and exercise programs can bolster emergency responders’ proficiency with communications equipment, as well as improve their ability to execute policies, plans, and procedures governing the use of communications. Continuing to train on Land Mobile Radio systems is necessary to ensure that emergency responders can achieve mission critical voice communications. However, as wireless broadband and other communications technologies become integrated into response and recovery operations, the need for training and exercises becomes even more critical to ensure that response personnel are routinely practicing with new communications capabilities to maximize their benefits.¹⁴”

Training operators for use of the WISCOM system and for interoperable communications is currently inadequate due to staffing and funding issues. Though providing adequate training cannot be easily addressed with legislative or executive action, providing increased staffing and funding will allow for OEC to create and implement initial and ongoing training programs for the statewide public safety interoperable communications systems. The training component may also potentially be a part of the contract for the new statewide radio system.

Culture

When examining the obstacles that hinder interoperability efforts, the culture component is considered by many to be the leading impediment to better communications. Personal biases are a frequent roadblock, especially when it comes to the use or purchase of specific brands of radio equipment or operating on certain radio channels. The State of Wisconsin is governed by the concept of home rule within its Constitution and by statute, unless a particular issue is considered of statewide concern by the legislature (e.g. the establishment of “9-1-1” as the statewide emergency services number). Since counties and other local government bodies are vested with broad powers relating to the delivery of public safety services such as police, fire and health, public safety emergency communications activities have long been understood to be the domain of local government. However, evidence and lessons learned from other states have proven that initiatives for interoperable communications are more effectively dealt with on a statewide basis. In this instance, constitutional and statutory home rule often conflicts with any statewide approach to interoperable communications.

Additionally, interoperability can be hindered by a simple unwillingness to change, regardless of information from after-action reports and incidents that would clearly support the importance of interoperability. It is essential for the individuals who are influential within their organization to practice

¹⁴ “National Emergency Communications Plan of 2014”, U.S. Department of Homeland Security, <https://www.dhs.gov/publication/2014-national-emergency-communications-plan>

communication, cooperation, and coordination with other public safety agencies in their community as well as statewide.

In conclusion, in the current environment of public safety communications, there are many obstacles that hinder progress toward interoperability. Some obstacles can be addressed with legislative or executive action, such as not having a single office overseeing the state radio system, staffing, or funding. Other obstacles are not as easy to address with direct legislative or executive action but may be improved with increased funding and staffing levels. These obstacles include state agency level participation, regional/statewide planning, a lack of understanding of these initiatives, technological obstacles, inadequate training, and culture.

Section 4 RESPONSE TO 9132(1X)(D)

RECOMMENDATIONS FOR LEGISLATIVE AND EXECUTIVE ACTION TO PROMOTE INTEROPERABILITY

There are obstacles that hinder progress toward interoperability identified in Section 3 of this report that can be addressed by the following recommendations for legislative or executive action. DMA believes that implementing these recommendations are integral to improving interoperability at the state, county, and local levels.

Consolidation of staff working on the statewide system

The obstacles created due to not having a single state agency overseeing the statewide radio system may be resolved by consolidating the staff working on the statewide system to ensure they fall under the same state agency. Currently, both DOT and DMA have different responsibilities for the management and maintenance of the WISCOM system. It is recommended that all responsibilities be shifted to fall within the same state agency to increase efficiency and effectiveness of operations. It is recommended that all state staff working on the various statewide public safety interoperable communications systems work for the same state agency in the future. DMA believes this is the best recommendation regardless of which state agency becomes responsible for these activities.

Similarly, DMA is recommending that frequency management for frequencies utilized by statewide public safety interoperable communications systems be added as a duty and power of the state agency that is overseeing the statewide systems, and as a responsibility of the IC under Wis. Stat. § 323.29. Currently, the Land Mobile Radio Subcommittee, WISCOM Subcommittee, and the IC informally provide recommendations to staff at OEC regarding the use of frequencies and radio talkgroups. Formalizing these duties in statute will help to ensure radio frequencies utilized by these statewide systems are effectively managed to not only support the needs of the system and the stakeholders, but also to ensure that Wisconsin is compliant with FCC regulations related to frequency usage. The FCC has recently implemented a new policy that requires public safety stakeholders to receive approval from the Statewide Interoperability Coordinator (SWIC) prior to submitting requests to the FCC for non-federal agencies to utilize the federal interoperability channels. It is recommended that the frequency management responsibility reside within the same state agency as the SWIC to allow for more efficiency in this new approval process. The recommended statutory language for the additional frequency management responsibilities can be found under Wis. Stat. § 323.29(2)(g) and § 323.29(3)(a)3 in Appendix A.

New position authority

With the interoperability program changes that occurred in 2017 Wisconsin Act 59 and the additional implementation schedules that will occur with the new Statewide Public Safety Interoperable Radio Communications System and statewide ESInet, additional staffing is required to adequately meet the demands of these system implementations and the needs of the public safety stakeholders and citizens.

While at DOJ, the Interoperability Unit originally utilized six and then eventually three LTEs to complete outreach to stakeholders throughout the state. However, with the enactment of 2017 Wisconsin Act 59, the funding for these LTEs was not authorized. This lack of LTE funding is prohibitive in providing outreach to local stakeholders across the state. DMA was able to hire one LTE through salary savings that occurred, but that funding is not sustainable long-term, and one LTE is not sufficient to provide the amount of work required. As the various interoperability programs are modified or implemented, the ability to provide clear and concise guidance to local stakeholders through extensive outreach efforts will be key to the success of the programs.

One significant statutory change that 2017 Wisconsin Act 59 authorized was the ability to create a fee for general usage of interoperable communication systems (e.g. WISCOM). This will require significant stakeholder meetings, research, and communication to develop and maintain the fee structure, billing process, and contracting needs to ensure consistency and accuracy with the fees.

Required interoperability positions:

- A financial specialist to focus on processing the fees and handling general interoperability payments and receivables.
- A contract specialist devoted to ensuring contracts for services follow acceptable administrative principles and are safeguarding the state. These contracts will encompass any fee-related contracts, tower use/rental agreements and miscellaneous purchasing contracts.
- A Budget Analyst is needed to assist with the overall financial picture and projections for all interoperable programs.
- Program and Policy Analyst(s) to assist with all interoperability projects and to provide support to the existing program managers with implementation and oversight of the ESInet and Statewide Public Safety Interoperable Radio Communications System.
- A Frequency Manager that is dedicated to the new Statewide Public Safety Interoperable Communications System is needed. This position will be responsible for ensuring all frequencies used by the Statewide Public Safety Interoperable Communications Systems are properly licensed, being used in accordance with FCC rules, and not causing interference to adjacent frequencies. In addition, this position will be responsible for managing and authorizing use of the statewide mutual aid frequencies that are licensed to the State of Wisconsin.
- Three LTE positions to serve as Regional Outreach Coordinators (ROCs) to conduct outreach to locals throughout the state. Since these positions are LTEs, DMA is not asking for position authority in this instance, but rather for the funding to support these positions. DMA anticipates the total cost for all three positions to be \$106,554 for the first year, and \$104,754 for the second year and ongoing.¹⁵

Additional positions that may be needed dependent on growth of the program through increased position authority:

¹⁵ Additional information on the history of the RIC program and the future role of the ROCs can be made available upon request to DMA.

- IT Technical Services staff may be needed to assist interoperability program staff to ensure systems link with state technologies as well as assist with daily office staff IT needs that cannot be absorbed by existing IT staffing.
- Grant Specialist may be needed, either permanent or project authority, based on the federal government's issuance of applicable interoperability grants or if the state provides funding dedicated for grants to locals. DMA anticipates that OEC may be receiving Federal grant funding from the 911 Grant Program in 2019.
- Webmaster/Public Information Officer to assist with stakeholder communications, maintain current information on the public portals and communicate to media outlets as interoperable programs progress and are implemented.

OEC is not able to perform these duties with the current staffing allocations. It is possible that these duties could be performed by another state agency or outsourced where possible to reduce the number of new staffing positions. DMA will work with the Joint Committee on Finance to determine staffing requirements.

Additional funding

Due to the lack of financial resources available for the various statewide public safety interoperable communications systems, it is recommended that an adequate sustainable funding source be identified by legislative or executive action. Additional funding is needed for implementation, management, and maintenance of the radio and 9-1-1 systems, along with funding for staffing, and a funding source to provide grants to locals for purchasing equipment to utilize the state emergency communications systems. Estimates for the funding required to implement the new Statewide Public Safety Interoperable Radio Communications System and the statewide ESInet will be completed by DMA and provided to the legislature and Governor in separate documents. Additional costs for full NG9-1-1 implementation may also be identified at a later date.

Address OEC Budgetary Issues

2017 Wisconsin Act 59, the biennial budget act, transferred the interoperability program from DOJ to DMA. However, statutorily, the program resides in budgetary program 3 (§ 20.465(3): Emergency Management Services). A statutory change is needed to remove OEC from under the budgetary program 3 to a separate budgetary program. This would reduce the complexity between the two programs regarding funding and position authority. The two programs are currently operating independently because of the differences and have various complexities that need to be considered. This request is included in the DMA Agency Budget Request, Decision Item Narrative 5006.

When the responsibility for interoperability was transferred from DOJ to DMA, there were limited positions and funding supplied. While at DOJ, interoperability programs utilized staffing funded by other funding sources that were not specific to interoperability and therefore, that funding and staffing was not transferred to DMA. For example, one portion of an FTE was transferred from DOJ; however, the remainder of the FTE position was not provided which is necessary to enable the agency to hire and utilize the position. The agency received 0.20 FTE funded by a federal aid appropriation, but the agency does not currently have any grants for interoperability. Additionally, the 0.20 FTE is unable to be utilized

since it does not meet the definition of a permanent position. Wisconsin Administrative Code, Chapter ER1 defines permanent employment as “employment in a position in which permanent status in class may be obtained and which requires the services of an employee for 600 hours or more on an annual basis...”. A 0.20 FTE does not meet that definition and therefore, cannot be utilized unless additional position authority is added using a fund source that is viable. This request has been included in the DMA Agency Budget Request, Decision Item Narrative 5001.

Additionally, when the OEC Director and administrative support positions were created in 2017 Wisconsin Act 59, the allocated budget for those positions only included funding for salary and fringe. A change is needed to add approximately \$60,000 to § 20.465(3)(q) for supplies and services for those positions and to fund travel and operating expenses of the IC and 911 Subcommittee.

Continued funding for the current WISCOM system is also needed regardless of the decision made by the legislature and Governor. Even if a new system is built, the existing system will need to be maintained for several years until the new system is fully deployed. In April of 2018, DMA requested in a § 13.10 action that funding held by the Joint Committee on Finance (JCF) be transferred to DMA for use on contracts and equipment needs for WISCOM. The JCF approved the request and transferred \$464,000 GPR in SFY18 and SFY19 to DMA. To ensure the continued maintenance and to enable DMA to enter into a longer-term contract, DMA is requesting a permanent transfer of these funds to DMA for purposes of maintaining the current radio network.

In conclusion, DMA has identified four main recommendations for legislative and executive action to promote interoperability in the state. The recommendations include the consolidation of state staff working on the statewide system, new position authority, additional funding, and addressing current OEC budgetary issues. It is important to note that all of these recommendations are essential for the future success of emergency communications and interoperability in the state.

CONCLUSION

After the passage of 2017 Wisconsin Act 59, DMA has worked diligently to ensure this report was completed prior to the deadline while also receiving adequate input from the IC and its subcommittees, along with additional public safety stakeholders in Wisconsin. This report details recommendations for changing the statutory authority of the IC, describes the progress that has been made since 2017 Wisconsin Act 59 was passed, provides an analysis of interoperability in the state, and details recommendations for legislative or executive action as requested in the Act.

Recommendations for changing the statutory authority of the IC are described in Section 2 of this report and include suggestions such as defining “statewide public safety interoperable communications system”, updating the IC membership requirements, adding the responsibility to advise DMA on the management of frequencies, and revising the statutory language regarding goals of the IC. Implementing all of these recommendations will positively impact the role of the IC and its subcommittees.

Section 2 of this report also describes the significant progress that has been made toward creating or enhancing a statewide public safety interoperable communication system. This progress includes the completion of the WISCOM Report, the creation of OEC, an extended service agreement with EF Johnson, consultation and continued collaboration with DOT, ongoing outreach to stakeholders, and the development of a RFP for a statewide public safety interoperable radio communications system. Despite efforts to improve the statewide radio system used by public safety, obstacles to accomplishing true interoperability remain.

Additionally, Section 3 of this report describes some of the obstacles that hinder progress toward interoperability. Some obstacles that are identified can be addressed with legislative or executive action, such as not having a single agency overseeing the state radio system, staffing, or funding. Other obstacles are not as easy to address with direct legislative or executive action but may be improved with increased funding and staffing levels. These obstacles include state agency level participation, regional/statewide planning, a lack of understanding, technological obstacles, inadequate training, and culture.

Finally, in this report DMA has identified four main recommendations for legislative and executive action to promote interoperability in the state. The recommendations include the consolidation of state staff working on the statewide radio system, new position authority, additional funding, and addressing current OEC budgetary issues. It is essential that this report be considered in its entirety to improve and ensure future success of public safety communications interoperability in the state.

DMA would again like to thank the legislature and Governor for the opportunity to submit this report on public safety interoperability in the state, as well as thank the public safety community and governance members for taking the time to provide invaluable input on the report. DMA is proud of the progress that has been made since the passage of 2017 Wisconsin Act 59, which could not have happened without the collaboration and support from the other state agencies. In the next several months, OEC

will be completing a statewide system assessment for Next Generation 9-1-1, approaching DOA to begin the development of an RFP for a statewide ESInet, and finalizing the updated Wisconsin Statewide Communication Interoperability Plan (SCIP).

GLOSSARY OF TERMS

Base Station – A base station is a wireless communications device that acts as both a transmitter and receiver installed at a fixed location (such as a tower site). For this report, it is for land mobile radio use. The base station is a device designed for long duration transmissions and allows a dispatch center to maintain contact with units in the field.

Computer Aided Dispatch (CAD) – A computer-based system, which aids PSAP personnel by automating selected dispatching and record keeping activities.

Conventional System – A simple wireless communications system where repeater(s) at a tower site(s) talks to as many as 70 or more portable and/or mobile radios in the area on a single channel.

Cybersecurity – The protection of information and information systems from unauthorized access, use, disclosure, disruption, modification, or destruction in order to provide confidentiality, integrity, and availability.

DMA – State of Wisconsin, Department of Military Affairs

DNR – State of Wisconsin, Department of Natural Resources

DOT – State of Wisconsin, Department of Transportation

ECB – State of Wisconsin, Educational Communications Board

Emergency Services Internet Protocol (IP) based Network (ESInet) – A managed IP network that is used for emergency services communications, and which can be shared by all public safety agencies. It provides the IP transport infrastructure upon which independent application platforms and core functional processes can be deployed, including, but not restricted to, those necessary for providing NG9-1-1 services.

Encryption – In radio communications, the process of encoding information (in this case audio signals) in such a way that eavesdroppers or hackers cannot understand it, but authorized parties can access it.

Federal Communications Commission (FCC) – The primary regulatory authority for communications law, regulation and technological innovation. For emergency communications, the FCC is responsible for overseeing the integrity of the use of the spectrum allocated to LMR users and regulation of telecommunications services providers that provide 9-1-1 services in the United States.

First Responder – A person (such as a police officer or an EMT) who is among those responsible for going immediately to the scene of an accident or emergency to provide assistance.

First Responder Network Authority (FirstNet) – An independent authority within the National Telecommunications & Information Administration (NTIA) created by the Middle Class Tax Relief and Job Creation Act of 2012 to provide emergency responders with the first nationwide, high-speed, broadband network dedicated to public safety.

Grounding-- A common return path for electric current, or a direct physical connection to the earth. Electronic equipment is required to be electrically bonded/grounded to the site/enclosure ground system. Proper interior and exterior grounding and bonding of systems, cables, and other equipment is essential in order to ensure an appropriate level of operability, reliability, safety, and readiness.

Geographic Information System (GIS) - Means a computer software system that enables one to visualize geographic aspects of a body of data. It contains the ability to translate implicit geographic data (such as a street address) into an explicit map location. It has the ability to query and analyze data in order to receive the results in the form of a map. It also can be used to graphically display coordinates on a map (i.e. Latitude/Longitude from a wireless 9-1-1 call).

HVAC (Heating, Ventilation and Air Conditioning) – This is the equipment necessary to maintain a consistent temperature, humidity and fresh air requirements.

HVAC loading – This is the amount of energy created by devices working in a location that the HVAC system needs to counteract to maintain the desired temperature in a given location.

Home Rule – Also known as “constitutional home rule” in Wisconsin, means that if a policy is entirely a matter of a city or village’s local affairs and government, a city or village is authorized to regulate that matter, and the Legislature is prohibited from enacting a law that would preempt the local regulation of that matter.

Infrastructure – The fixed assets of an LMR network that support the services necessary for wide-area mobile/in-vehicle and portable/handheld radio communications. Includes components such as towers, equipment shelters, back-up power systems, microwave, fiber, base/repeater stations and antenna systems.

Internet Protocol (IP) – Primary communications protocols used for relaying information across networks. Data travels across an IP network in the form of packets.

Interoperability – The ability of public safety agencies and other agencies and entities to communicate with each other by means of radio or associated communications systems, including the exchange of voice, data, or video communications on demand and in real time, as needed and authorized.

Interoperability Council (IC) – A Wisconsin governance body created under Wis. Stat. § 15.315(1)(a) and tasked with making recommendations and assisting the Department of Military Affairs with public safety interoperability tasks identified under Wis. Stat. § 323.29(2). The IC has four subcommittees including the Land Mobile Radio Subcommittee, WISCOM Subcommittee, Nationwide Public Safety Broadband Network (NPSBN) Subcommittee, and the 911 Subcommittee which was created under Wis. Stat. § 15.315(2)(a).

Land Mobile Radio (LMR) – A classification of FCC radio communications used by private business, state and local governments and others for coordination of resources and improving efficiency of response in emergency scenarios.

Maintenance – The effort to repair unscheduled and scheduled deficiencies of a communications system to keep the system running at peak performance including, but not limited to, upkeep of physical infrastructure, equipment and software upgrades, etc.

Mobile Radio – A two-way radio device physically installed/mounted in a vehicle; usually equipped with a rooftop antenna and a handheld microphone. This radio can typically transmit at a power of 15 to 100 watts.

Mutual Aid Frequencies – A common set of frequencies that are used during incidents in which multiple agencies may respond.

Narrowbanding – An order from the FCC to increase spectrum efficiency that mandates Part 90 Very High Frequency (VHF) and Ultra High Frequency (UHF) frequencies operating in wideband mode (25 kHz) to operate in narrowband mode (12 kHz).

National Council of Statewide Interoperability Coordinators (NCSWIC) - Established by the Department of Homeland Security's (DHS) Office of Emergency Communications (OEC) in July 2010, the NCSWIC supports SWICs from the 56 states and territories by developing products and services to assist them with leveraging their relationships, professional knowledge, and experience with public safety partners involved in interoperable communications at all levels of government.

Next Generation 9-1-1 (NG9-1-1) – An Internet Protocol (IP) based system comprised of managed Emergency Services IP network(s), functional elements (applications), and databases that replicate traditional 9-1-1 features and functions and provides additional capabilities. NG9-1-1 is designed to provide access to emergency services from all connected communications sources and provide multimedia data capabilities for Public Safety Answering Points (PSAPs) and other emergency service organizations.

OEC – State of Wisconsin, Department of Military Affairs, Office of Emergency Communications

OJA – The former State of Wisconsin, Office of Justice Assistance

Portable Radio – A two-way radio device typically worn in a radio case (holster) on the hip of the user, or the radio may be carried by hand. Portable/handheld radios typically transmit at a lower power (3 watts) than their mobile/in-vehicle counterparts.

Power loading – The total electrical demand required by all the equipment at a tower site. This includes, but is not limited to: Base Stations, battery chargers, microwave transmitters, HVAC units, generator heaters, air dryers (for microwave wave guides), lights).

Project 25 (P25) – A suite of digital two-way radio standards that define over-the-air and network interfaces to enable interoperability between users and computability among P25 equipment providers.

Public Safety agency – Means a functional division of a public agency which provides firefighting, law enforcement, medical or other emergency services.

Public Safety Answering Point (PSAP) – Means a facility to which a call on a basic or sophisticated system is initially routed for response, and on which a public agency directly dispatches the appropriate emergency service provider, relays a message to the appropriate emergency service provider or transfers the call to the appropriate emergency service provider.

Records Management System (RMS) - The management of records for an organization throughout the records life-cycle. The activities in this management include the systematic and efficient control of the creation, maintenance, and destruction of the records along with the business transactions associated with them.

SAFECOM – A mission-guided, stakeholder-supported public safety communications program administered by the U.S. Department of Homeland Security Office of Emergency Communications, with representatives from the emergency responder community and major national public safety associations.

Service agreement – A contract between parties to document an agreed upon level of tasks and time frames for those tasks to be accomplished. Generally, this will relate to providing maintenance and repair services for equipment and software, and the maximum amount of time a vendor has to accomplish different levels of tasks.

Stakeholder – For the purposes of this report, “stakeholder” means individuals, agencies and entities that utilize emergency communications networks (e.g. county sheriff’s offices, local fire departments, etc.)

Statewide – For the purposes of this report, “statewide” means within the geographical boundaries of the State of Wisconsin.

Statewide Interoperability Coordinator (SWIC) – There are 56 total SWIC positions across the country as the SWIC is the central coordination point for their state or territory and plays a critical role in a state’s interoperability effort. The SWIC works with emergency response leaders across all levels of government to implement a statewide strategic vision for interoperability. As part of this effort, SWICs are responsible for the implementation of the Statewide Communication Interoperability Plan (SCIP), which establishes a vision for interoperability in the state.

Tower loading – This is the amount of weight, wind resistance and twisting force a tower needs to resist to prevent damage or collapse. The engineering must also account for specific amounts of ice, wind and other forces specified in the standard TIA-222 – Revision H.

Trunked System – Multiple radios tied together under control of a dedicated, digital system control channel, allowing 100 or more subscribers per channel.

TUSA – Tusa Consulting Services, LLC

Very High Frequency (VHF) – This is the frequency band from 30 Megahertz (MHz) to 300 MHz and is the main frequency band utilized by the WISCOM system.

Wisconsin Interoperable System for Communications (WISCOM) – A shared statewide, Very High Frequency, digital Project 25 radio network that first responders in communities across the state may use to communicate with each other for daily operations and/or major disasters and large-scale incidents.

WSP – State of Wisconsin, Department of Transportation, Wisconsin State Patrol

APPENDIX A RECOMMENDED STATUTORY CHANGES

The information provided recommends changes to the existing statutes.

Section 323.29 is amended to read:

323.29 Statewide public safety interoperable communications systems.

(1) DEFINITIONS.

(a) "Council" means the interoperability council created under s. 15.315 (1) (a).

(am) "Department" means the department of military affairs.

(b) "Dispatch center" has the meaning given for "public safety answering point" in s. 256.35 (1) (gm).

(c) "Interoperability" means the ability of public safety agencies to communicate with each other and with agencies and entities identified under sub. (2) (a) by means of radio or associated communications systems, including the exchange of voice, data, or video communications on demand and in real time, as needed and authorized.

(d) "Public safety agency" has the meaning given in s. 256.35 (1) (g).

(e) "Statewide public safety interoperable communications systems" means statewide communications systems, regardless of technology platform, that are utilized by public safety agencies to do one or more of the following:

1. Provide emergency communications for the purposes of interoperability as defined in par. (c).

2. Establish statewide communications systems for use by public safety agencies to communicate with each other and agencies and entities identified in sub. (2) (a).

3. Establish shared statewide communications systems across multiple jurisdictions and public safety disciplines.

4. Provide voice, data, or video communications on demand and in real time, as needed for coordinated incident response and management.

5. Establish a statewide emergency number system which automatically connects a person dialing the digits "911" to a public safety answering point or dispatch center.

(2) INTEROPERABILITY COUNCIL. The council shall do all of the following:

(a) Identify types of agencies and entities, including public works and transportation agencies, hospitals, and volunteer emergency services agencies to be included, in addition to public safety agencies, in statewide public safety interoperable communication systems.

(b) Recommend and support cooperative strategies to achieve statewide public safety communications interoperability.

(c) Recommend and periodically review a strategy and timeline for achieving the goals under par. (b), including objectives for local units of government.

(d) Assist the department in identifying and obtaining funding to implement statewide public safety interoperable communication systems.

(e) Advise the department on allocating funds, including those available for homeland security, for the purpose of achieving the goals under par. (b).

(f) Make recommendations to the department on all of the following:

1. Technical and operational standards for public safety interoperable communication systems.
2. Guidelines and procedures for using public safety interoperable communication systems.
3. Minimum standards for public safety interoperable communication systems, facilities, and equipment used by dispatch centers.
4. Certification criteria for persons who operate public safety interoperable communication systems for dispatch centers.

(g) Advise the department on the management of frequencies utilized by statewide public safety interoperable communications systems.

(3) DEPARTMENT DUTIES AND POWERS.

(a) The department shall do all of the following:

1. Provide staff support for the council and oversight of the development and operation of a statewide public safety interoperable communication system.
2. During the 2017-19 fiscal biennium, conduct a request for proposals regarding a statewide public safety interoperable radio communication system. The department shall require the submitted proposals to include all costs associated with their fulfillment, including costs to the state and local governments.
3. Provide frequency management for frequencies utilized for statewide public safety interoperable communications systems.

(b) The department may do any of the following:

1. Charge a public safety agency that is a state agency a fee for use of the statewide public safety interoperable communication system under this section.

2. Charge a person that is not a state agency a fee for use of the statewide public safety interoperable communication system under this section.

(4) DIRECTOR OF EMERGENCY COMMUNICATIONS. The adjutant general shall appoint a director of emergency communications within the department to serve at the pleasure of the adjutant general outside the classified service. The position shall be funded from the appropriation under s. 20.465 (3) (q).

Section 15.315 is amended to read:

15.315 Same; councils.

(1) INTEROPERABILITY COUNCIL.

(a) There is created an interoperability council, attached to the department of military affairs under s. 15.03.

(b) The council consists of all of the following:

1. The attorney general, the adjutant general, the secretary of natural resources, the secretary of transportation, and a representative from the department of administration with knowledge of information technology, or their designees.

~~2. Ten members appointed by the governor for staggered 4-year terms, including a chief of police, a sheriff, a chief of a fire department, a director of emergency medical services, a local government elected official, a local emergency management director, a representative of a federally recognized American Indian tribe or band in this state, a hospital representative, a local health department representative, and one other person with relevant experience or expertise in interoperable communications.~~

2. Ten members appointed by the governor for staggered 4-year terms, including:

(a) A chief of police.

(b) A sheriff.

(c) A chief of a fire department.

(d) A director of emergency medical services.

(e) A representative of a public safety answering point.

(f) A local emergency management director.

(g) A representative of a federally recognized American Indian tribe or band in this state.

(h) A hospital representative.

(i) A state government elected official or designee.

(j) One other person with relevant experience or expertise in interoperable communications.

(c) The governor shall designate a member of the council as the chairperson and a member as the vice chairperson.

(d) In making appointments under par. (b) (2), the governor shall consider the geographical diversity of, and the representation of urban and rural interests by, the membership of the interoperability council. The governor shall also consider recommendations made by Wisconsin public safety associations.