Wisconsin

Statewide Communication Interoperability Plan (SCIP)

February 2015

EXECUTIVE SUMMARY

The Wisconsin Statewide Communication Interoperability Plan (SCIP) is a stakeholder-driven, multi-jurisdictional, and multi-disciplinary statewide strategic plan to enhance interoperable and emergency communications. The SCIP is a critical mid-range (three to five years) strategic planning tool to help Wisconsin prioritize resources, strengthen governance, identify future investments, and address interoperability gaps.

The purpose of the Wisconsin SCIP is to:

- Provide the strategic direction and alignment for those responsible for interoperable and emergency communications at the State, regional, local, and tribal levels.

- Explain to leadership and elected officials the vision for interoperable and emergency communications and demonstrate the need for funding.

- Serve as Wisconsin's roadmap to prioritize and justify funding expenditures for interoperable communications projects.

- Provide overall guidance and outline the objectives for the projects Wisconsin will undertake over the next 3-5 years.

- Embrace a shared governance approach to encourage widespread support for achieving statewide interoperability by identifying and addressing the concerns, perspectives, and any unique circumstances of the jurisdictions and organizations that will benefit most from interoperability.

- Establish a clear understanding of each agency's responsibilities.

The following are Wisconsin's Vision and Mission for improving emergency communications operability, interoperability, and continuity of communications statewide.

Vision: To achieve and advance seamless statewide public safety interoperable communications through support and participation of Federal, State, tribal, local, public and private organizations.

Mission: The mission of Wisconsin's Interoperability Initiative is to promote and achieve interoperable communications through development and implementation of standards and best practices, conducting ongoing training and exercising, supporting existing technology, exploring and adopting new technologies, pursuing and securing adequate funding, while integrating all disciplines and jurisdictions. Wisconsin's Interoperability Council will provide outreach and education to our stakeholders.

The following strategic goals represent the priorities for delivering Wisconsin's vision for interoperable and emergency communications.

- <u>Governance</u> –

- o Review findings of governance assessment and develop action and implementation plan
- o Review and revise relevant interoperability statutes and align to current goals

- Standard Operating Procedures (SOPs) –

  - o Develop and maintain central repository for sample SOPs based on discipline or event type

  - o Develop and implement policy on how to contact and deploy Communication Unit Leaders (COML), Communications Unit Technicians (COMT), and the Telecommunicator Emergency Response Taskforce (WI-TERT)

  - o Update and encourage completion of Tactical Interoperable Communications Plans (TICP)

- Technology –

  - o Conduct cybersecurity assessment of the Wisconsin System for Interoperable Communications (WISCOM) and other systems

  - o Develop online reservation/usage of interoperability channels (i.e., "Status Board")

  - o Encourage participation in Interagency Fire Emergency Radio Network (IFERN)

  - o Program radios to ensure all interoperability channels are included and channel nomenclature is consistent

  - o Continue to plan for deployment of the Nationwide Public Safety Broadband Network (NPSBN) in Wisconsin

  - o Create strategic plan for deployment of Next Generation 9-1-1 (NG911)

  - o Promote and encourage Communications Assets Survey and Mapping (CASM) usage

  - o Enhance intra- and inter-State connectivity between WISCOM and other systems

  - o Enhance coverage and capacity of WISCOM

- Training and Exercises –

  - o Support State, local, county, regional and tribal communications exercises

  - o Conduct and coordinate interoperable communications training

  - o Develop orientation program for new participants in the Wisconsin Interoperability Initiative

- Usage –

  - o Encourage use of WISCOM and mutual aid frequencies

- <u>Outreach and Information Sharing</u> –
  - o Develop outreach and information sharing plan
  - o Conduct education and outreach on NPSBN
- <u>Life Cycle Funding</u> –
  - o Develop comprehensive funding plan for maintaining and enhancing interoperable communications

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1. INTRODUCTION

The Wisconsin Statewide Communication Interoperability Plan (SCIP) is a stakeholder-driven, multi-jurisdictional, and multi-disciplinary statewide strategic plan to enhance interoperable and emergency communications. The SCIP is a critical mid-range (three to five years) strategic planning tool to help Wisconsin prioritize resources, strengthen governance, identify future investments, and address interoperability gaps. This document contains the following planning components:

- Introduction – Provides the context necessary to understand what the SCIP is and how it was developed.

- Purpose – Explains the purpose/function(s) of the SCIP in Wisconsin.

- State's Interoperable and Emergency Communications Overview – Provides an overview of the State's current and future emergency communications environment and defines ownership of the SCIP.

- Vision and Mission – Articulates the State's three- to five-year vision and mission for improving emergency communications operability, interoperability, and continuity of communications at all levels of government.

- Strategic Goals and Initiatives – Outlines the strategic goals and initiatives aligned with the three- to five-year vision and mission of the SCIP and pertains to the following critical components: Governance, Standard Operating Procedures (SOPs), Technology, Training and Exercises, Usage, Outreach and Information Sharing, and Life Cycle Funding.

- Implementation – Describes the process to evaluate the success of the SCIP and to conduct SCIP reviews to ensure it is up-to-date and aligned with the changing internal and external environment.

- Reference Materials – Includes resources that provide additional background information on the SCIP or interoperable and emergency communications in Wisconsin or directly support the SCIP.

Figure 1 provides additional information about how these components of the SCIP interrelate to develop a comprehensive plan for improving interoperable and emergency communications.
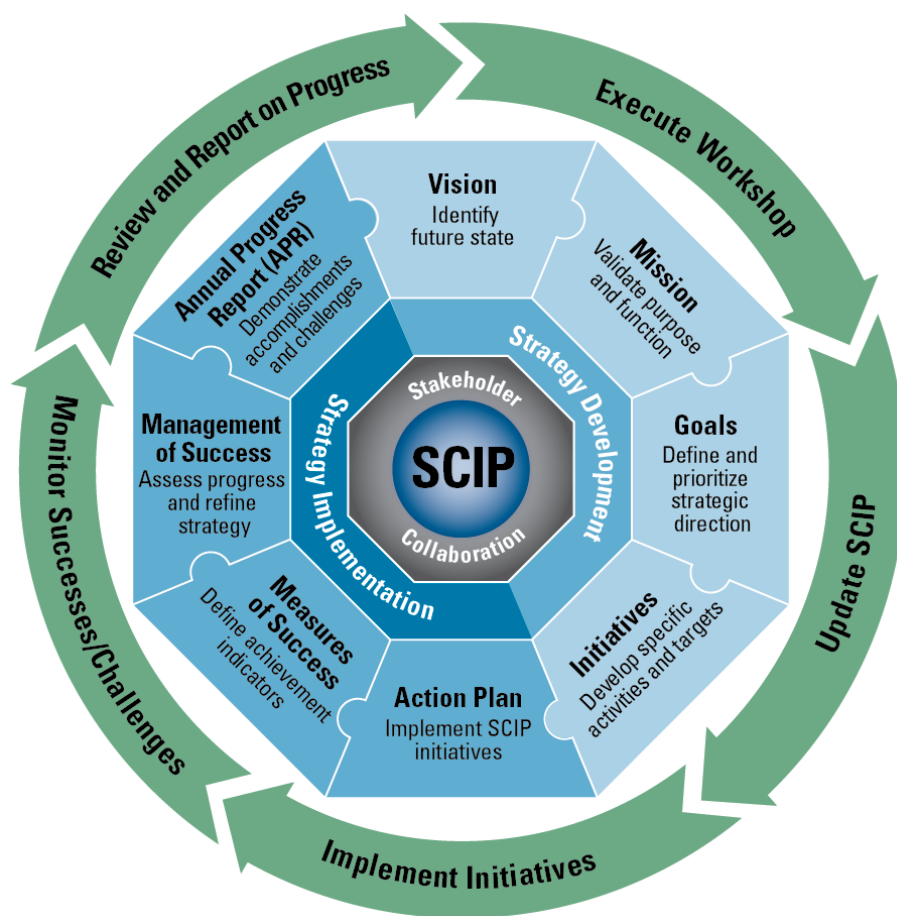
Figure 1: SCIP Strategic Plan and Implementation Components

The Wisconsin SCIP is based on an understanding of the current and mid-range interoperable and emergency communications environment. Wisconsin has taken significant steps towards enhancing interoperable and emergency communications throughout the State, including implementing WISCOM – Wisconsin's flagship statewide radio system – and building out mutual aid capabilities such as the Mutual Aid Radio Channels (MARC), the Interagency Fire Emergency Radio Network (IFERN), and the Mutual Aid Box Alarm System (MABAS Wisconsin). With the advent of the Regional Interoperability Coordinators (RICs), Wisconsin is better able to facilitate communication between the State, regional, local, and tribal levels of government. Wisconsin also improved interoperable communications by formally adopting a recognition process for COMLs.

However, more remains to be done to achieve Wisconsin's vision. It is also important to note that this work is part of a continuous cycle as Wisconsin will always need to adapt to evolving technologies, operational tactics, and changes to key individuals (e.g., Governor, project champions). In the next three to five years, Wisconsin will encounter challenges relating to operability, interoperability, geography, aging equipment/systems, emerging technologies, changing project champions, and sustainable funding.

Wireless voice and data technology is evolving rapidly and efforts are underway to determine how to leverage these new technologies to meet the needs of public safety. For example, the enactment of the Middle Class Tax Relief and Job Creation Act of 2012 (the Act), specifically Title VI, related to Public Safety Communications, authorizes the deployment of the NPSBN. The NPSBN is intended to be a wireless, interoperable nationwide communications network that will allow members of the public safety community to securely and reliably gain and share information with their counterparts in other locations and agencies. New policies and initiatives such as the NPSBN present additional changes and considerations for future planning efforts and require an informed strategic vision to properly account for these changes. Figure 2 illustrates a public safety communications evolution by describing the long-term transition toward a desired converged future.
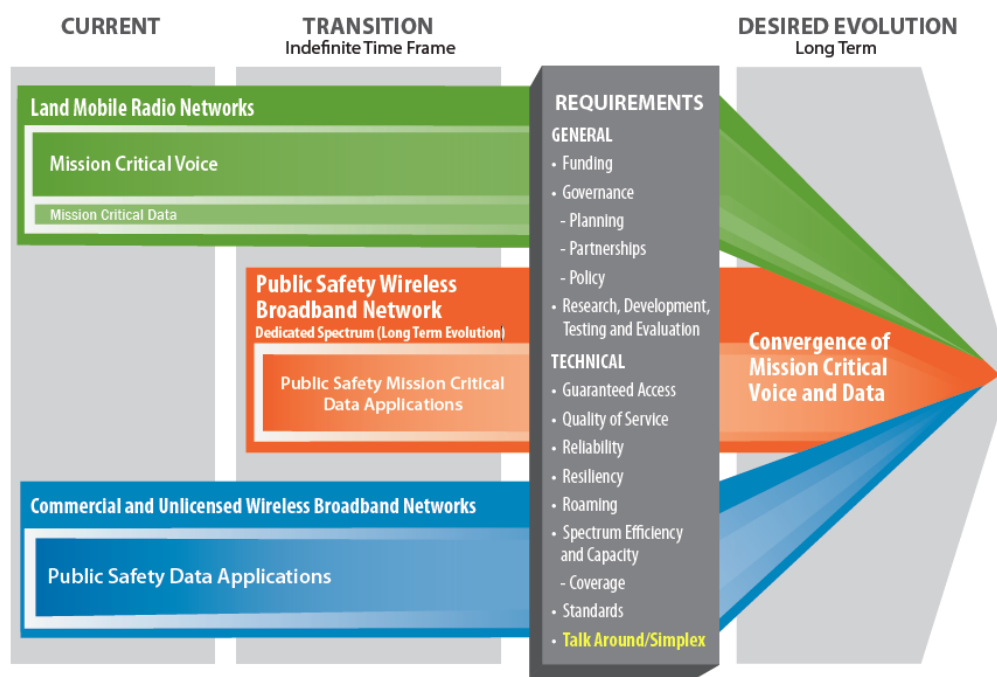
Figure 2: Public Safety Communications Evolution

Integrating capabilities such as broadband provide an unparalleled opportunity for the future of interoperable communications in Wisconsin. It may result in a secure path for information-sharing initiatives, Public Safety Answering Points (PSAPs), and NG911 integration. Broadband will not replace existing Land Mobile Radio (LMR) voice systems in the foreseeable future due to implementation factors associated with planning, deployment, technology, and cost. A cautious approach to this investment is needed. Therefore, robust requirements and innovative business practices must be developed for broadband initiatives prior to any implementation.

There is no defined timeline for the deployment of the NPSBN; however, Wisconsin will keep up-to-date with the planning and build-out of the NPSBN in the near and long term in coordination with the First Responder Network Authority (FirstNet). FirstNet is an independent authority within the National Telecommunications and Information Administration (NTIA) and is responsible for developing the NPSBN, which will be a

single, nationwide, interoperable public safety broadband network. The network build-out will require continuing education and commitment at all levels of government and across public safety disciplines to document network requirements and identify existing resources and assets that could potentially be used in the build-out of the network. It will also be necessary to develop and maintain strategic partnerships with a variety of stakeholder agencies and organizations at the national, State, regional, local, and tribal levels and design effective policy and governance structures that address new and emerging interoperable and emergency communications technologies. During this process, investments in LMR will continue to be necessary and in the near term, wireless data systems or commercial broadband will complement LMR. More information on the role of these two technologies in interoperable and emergency communications is available in the Department of Homeland Security (DHS) Office of Emergency Communications (OEC) Public Safety Communications Evolution brochure.[1]

To plan and prepare for the NPSBN, Wisconsin will leverage its existing governance structures, including the Interoperability Council (IC) and RICs, to provide guidance and recommendations to the Governor. Wisconsin conducted an initial needs assessment in early 2014, and will continue to work with FirstNet throughout the consultation process and period of performance for the State and Local Implementation Grant Program (SLIGP).

Additionally, achieving sustainable funding in the current fiscal climate is a priority for Wisconsin. As State and Federal grant funding diminishes, the State needs to identify alternative funding sources to continue improving interoperable and emergency communications for voice and data systems. Key priorities for sustainable funding in Wisconsin are:

- To ensure the Wisconsin Statewide Interoperability Coordinator (SWIC) has the resources necessary to continue to be an inter- and intra-State leader for interoperable and emergency communications.

- To ensure full life cycle support of interoperable and emergency communications systems.

- To ensure support for the IC and RICs.

More information on a typical emergency communications system life cycle, cost planning, and budgeting is available in OEC's System Life Cycle Planning Guide.[2]

The Interoperability Continuum, developed by SAFECOM and shown in Figure 3, serves as a framework to address all of these challenges and continue improving operable/interoperable and emergency communications. It is designed to assist emergency response agencies and policy makers with planning and implementing interoperability solutions for voice and data communications.

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[1] OEC's Public Safety Communications Evolution brochure is available here:
http://publicsafetytools.info/oec_guidance/docs/Public_Safety_Communications_Evolution_Brochure.pdf
[2] OEC's System Life Cycle Planning Guide is available here:
http://publicsafetytools.info/oec_guidance/docs/OEC_System_Life_Cycle_Planning_Guide_Final.pdf
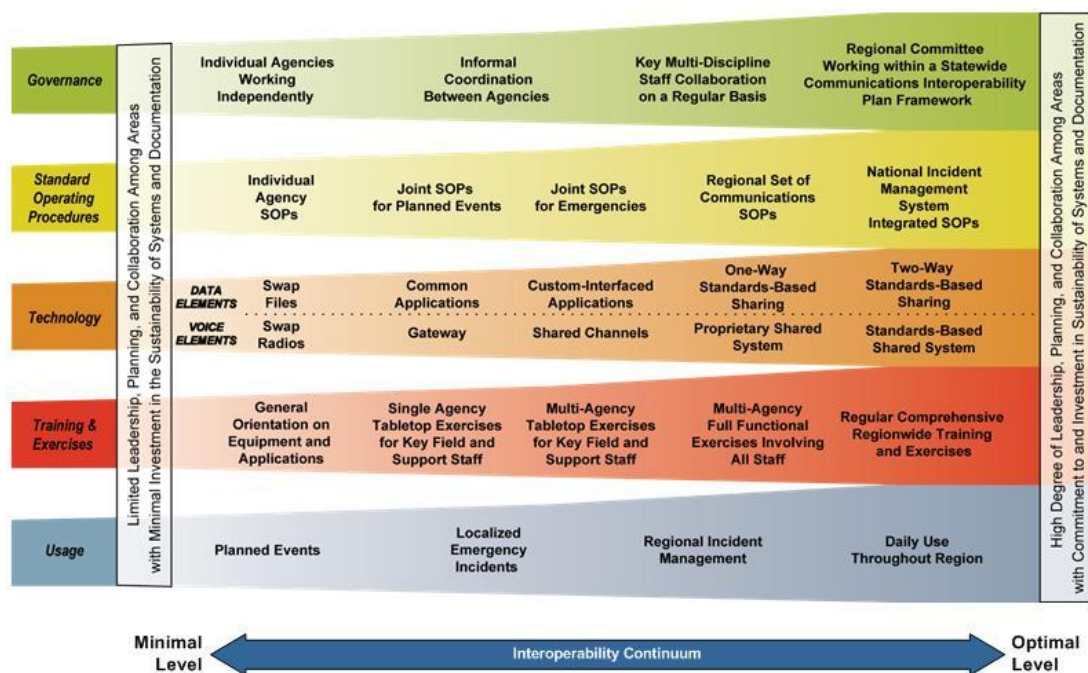
Figure 3: The Interoperability Continuum

The Continuum identifies five critical success elements that must be addressed to achieve a successful interoperable communications solution:

- <u>Governance</u> – Collaborative decision-making process that supports interoperability efforts to improve communication, coordination, and cooperation across disciplines and jurisdictions. Governance is the critical foundation of all of Wisconsin's efforts to address communications interoperability.

- <u>SOPs</u> – Policies, repetitive practices, and procedures that guide emergency responder interactions and the use of interoperable communications solutions.

- <u>Technology</u> – Systems and equipment that enable emergency responders to share voice and data information efficiently, reliably, and securely.

- <u>Training and Exercises</u> – Scenario-based practices used to enhance communications interoperability and familiarize the public safety community with equipment and procedures.

- <u>Usage</u> – Familiarity with interoperable communications technologies, systems, and operating procedures used by first responders to enhance interoperability.

More information on the Interoperability Continuum is available in OEC's Interoperability Continuum brochure.[3] The following sections will further describe how the SCIP will be used in Wisconsin and Wisconsin's plans to enhance interoperable and emergency communications.

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[3] OEC's Interoperability Continuum is available here:
http://www.dhs.gov/sites/default/files/publications/interoperability_continuum_brochure_2.pdf

2. PURPOSE

The purpose of the Wisconsin SCIP is to:

- Provide the strategic direction and alignment for those responsible for interoperable and emergency communications at the State, regional, local, and tribal levels.

- Explain to leadership and elected officials the vision for interoperable and emergency communications and demonstrate the need for funding.

- Serve as Wisconsin's roadmap to prioritize and justify funding expenditures for interoperable communications projects.

- Provide overall guidance and outline the objectives for projects Wisconsin will undertake over the next 3-5 years.

- Embrace a shared governance approach to encourage widespread support for achieving statewide interoperability by identifying and addressing the concerns, perspectives, and any unique circumstances of the jurisdictions and organizations that will benefit most from interoperability.

- Establish a clear understanding of each agency's responsibilities.

The development and execution of the SCIP assists Wisconsin with addressing the results of the National Emergency Communications Plan (NECP) Goals and the Federal government with fulfilling the Presidential Policy Directive 8 (PPD-8)[4] National Preparedness Goal for Operational Communications.[5]

In addition to this SCIP, Wisconsin will conduct a Strategic Plan Review at the annual State Interoperability Symposium that will be shared with OEC and other stakeholders to highlight recent accomplishments and demonstrate progress toward achieving the goals and initiatives identified in the SCIP. More information on the SCIP Strategic Plan Review is available in Section 6.4.

Once formally adopted by the IC, this SCIP is owned and managed by the SWIC. The SWIC has the authority to and is responsible for making decisions regarding this plan, pending approval by the IC. The SWIC is also responsible for ensuring that this plan is implemented and maintained statewide. The Wisconsin SCIP was created by engaging with key public safety agency stakeholders who have detailed knowledge and experience with interoperable communications requirements throughout the State. Beginning with a series of four planning calls and culminating in a two-day workshop,

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[4] PPD-8 was signed in 2011 and is comprised of six elements: a National Preparedness Goal, the National Preparedness System, National Planning Frameworks and Federal Interagency Operational Plan, an annual National Preparedness Report, and ongoing national efforts to build and sustain preparedness. PPD-8 defines a series of national preparedness elements and emphasizes the need for the whole community to work together to achieve the National Preparedness Goal. http://www.dhs.gov/presidential-policy-directive-8-national-preparedness.

[5] National Preparedness Goal – Mitigation and Response Mission Area Capabilities and Preliminary Targets – Operational Communications: Ensure the capacity for timely communications in support of security, situational awareness, and operations by any and all means available, among and between affected communities in the impact area and all response forces.

1. Ensure the capacity to communicate with the emergency response community and the affected populations and establish interoperable voice and data communications between Federal, State, and local first responders.
2. Re-establish sufficient communications infrastructure within the affected areas to support ongoing life-sustaining activities, provide basic human needs, and transition to recovery.

public safety communications leaders in Wisconsin revised the SCIP to outline the strategic direction and alignment of all emergency communications at the State, regional, local, and tribal levels in Wisconsin.

3. STATE'S INTEROPERABLE AND EMERGENCY COMMUNICATIONS OVERVIEW

Wisconsin statute places responsibility for devising solutions to public safety radio communications with the IC and the Wisconsin Department of Justice (DOJ). Collectively known as Wisconsin's Interoperability Initiative, these entities bare statutory responsibility for project oversight. However, while the successful implementation of a statewide solution largely depends on the actions and support of State and local elected officials, that responsibility is shared with State, county, local, and tribal public safety/emergency response agencies, as well as private-sector responders (e.g., emergency medical providers, ambulance services).

Interoperable communications in the State are largely served by its flagship statewide radio system, WISCOM. WISCOM is an EF Johnson, 9600 baud, Project 25 (P25) phase 1, digital very high frequency (VHF) and 800 MHz trunked radio system, and includes 80 core sites to provide the State with 95% mobile coverage. User fees are dependent on system access requirements and invoiced by DOJ. While a handful of local entities use WISCOM for daily use, most counties in the State have retained their local or regional radio systems and use WISCOM as required for interoperability.

4. VISION AND MISSION

The Vision and Mission section describes the Wisconsin vision and mission for improving emergency communications operability, interoperability, and continuity of communications statewide.

Wisconsin Interoperable and Emergency Communications Vision:

To achieve and advance seamless statewide public safety interoperable communications through support and participation of Federal, State, tribal, local, public and private organizations.

Wisconsin Interoperable and Emergency Communications Mission:

The mission of Wisconsin's Interoperability Initiative is to promote and achieve interoperable communications through development and implementation of standards and best practices, conducting ongoing training and exercising, supporting existing technology, exploring and adopting new technologies, pursuing and securing adequate funding, while integrating all disciplines and jurisdictions. Wisconsin's Interoperability Council will provide outreach and education to our stakeholders.

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5. STRATEGIC GOALS AND INITIATIVES

The Strategic Goals and Initiatives section describes the statewide goals and initiatives for delivering the vision for interoperable and emergency communications. The goals and initiatives are grouped into seven sections, including Governance, SOPs, Technology, Training and Exercises, Usage, Outreach and Information Sharing, and Life Cycle Funding.

5.1 Governance

The Governance section of the SCIP outlines the future direction of the Wisconsin governance structure for interoperable and emergency communications. Established in March 2008 under Wisconsin Statutes 15.107 (18) and 16.9645, the IC develops strategies and recommends standards and guidelines for achieving statewide communications interoperability for Wisconsin's public safety community. The IC advises DOJ, and the Department of Military Affairs, on the allocation of homeland security grants and other funding available for the Wisconsin Interoperability Initiative. To this end, the IC uses the SCIP to provide a shared strategic vision and implementation roadmap.

The IC has embraced a shared governance approach by establishing numerous subcommittees and working groups to develop policies and procedures and coordinate SCIP implementation activities. Members are appointed by the Governor and represent key State and local stakeholders. Through these groups, Wisconsin encourages widespread support for achieving statewide interoperability by identifying and addressing the concerns, perspectives, and any unique circumstances of the jurisdictions and organizations that will benefit most from interoperability. The multi-disciplinary subcommittees include:

- **Wisconsin Interoperable System for Communications (WISCOM) Subcommittee:** Advises the Department of Justice, through the Interoperability Council, on technical and operational standards as well as guidelines and procedures for using WISCOM.

- **Nationwide Public Safety Broadband Network (NPSBN) Subcommittee:** Advises the Interoperability Council on matters related to FirstNet and the NPSBN in Wisconsin.

- **Land Mobile Radio (LMR) Subcommittee:** Manages the Wisconsin Mutual Aid frequency plan and other matters related to LMR in Wisconsin.

- **911 Subcommittee:** Guides the implementation of the SCIP to assist public safety answering points (PSAPs) where relevant.

- In addition, **Regional SCIP Implementation Councils (RSICs)** have been established throughout the State to ensure that interoperability implementations address local concerns and unique regional circumstances, while also adhering to the strategies and tactics adopted in the SCIP. Each Council is supported by a Regional Interoperability Coordinator with experience in public safety communications and emergency response.

Figure 4 below represents the information flow and coordination among these various groups.
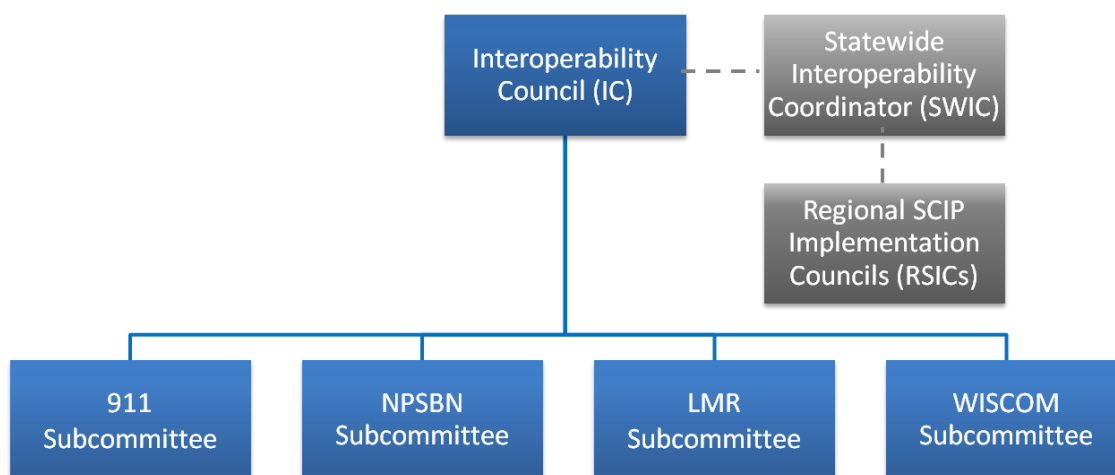
Figure 4: Interoperable Communications Governance in Wisconsin

Despite the existence of this governance structure, Wisconsin still faces challenges to interoperable communications governance in the State (e.g., diminishing momentum among working group members, overlapping responsibilities, outdated charters and by-laws). To help address these challenges, Wisconsin held a Governance Technical Assistance (TA) offering in April 2014, with help from OEC's Interoperable Communications Technical Assistance Program (ICTAP). OEC/ICTAP conducted an assessment of all Interoperability Initiative-related governance bodies, and reviewed relevant statutes, memoranda of understanding, charters, and by-laws. The Governance TA provided stakeholders with the opportunity to provide input on how to improve governance and eliminate confusion over authority, roles, and responsibilities. The IC has reviewed the assessment and is progressing towards implementation of recommendations provided.

Table 1 outlines Wisconsin's goals and initiatives related to governance.

Table 1: Governance Goals and Initiatives

Governance Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
1.	Review findings of governance assessment and develop action and implementation plan	1.1 Review recommendations in governance assessment and accept appropriate recommendations	IC	July 2014

Governance Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
		1.2 Evaluate composition and by-laws of IC to determine if membership needs to be revised	IC	December 2014
		1.3 Evaluate IC workgroup charters	IC	December 2014
		1.4 Develop action plan for implementing accepted governance assessment recommendations	IC	December 2014
2.	Review and revise relevant interoperability statutes and align to current goals	2.1 Review relevant statutes	IC	September 2014
		2.2 Identify missing components of existing legislation	SWIC, IC Workgroups	September 2014
		2.3 Identify path for final approval	SWIC	September 2014
		2.4 Implement plan for final approval; officially request statute revision	IC	May 2016

5.2 Standard Operating Procedures (SOPs)

The SOPs section of the SCIP identifies the framework and processes for developing and managing SOPs statewide. Through assigned Subcommittees of the IC, Wisconsin develops standards to improve the quality and consistency of public safety radio communications across the State. Wisconsin's SOPs establish binding authority on the components they cover. For example, Wisconsin formally adopted a recognition procedure for COMLs in the State and implemented the Wisconsin Telecommunicator Emergency Response Taskforce (WI-TERT). However, many emergency response entities in Wisconsin are either not familiar with these assets or do not know how to request their assistance. In addition, the State TICP and individual county TICPs are either out of date or incomplete.

Table 2 outlines Wisconsin's goals and initiatives for SOPs.

Table 2: Standard Operating Procedures Goals and Initiatives

Standard Operating Procedures Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
3.	Develop and maintain central repository for sample SOPs based on discipline or event type	3.1 Identify appropriate website to host sample SOPs	SWIC	April 2015
		3.2 Develop criteria for accessing website and protocol for uploading SOPs	IC	June 2015
		3.3 Review and upload SOPs	RICs, IC	September 2015
		3.4 Conduct outreach and information sharing of website and encourage partners to submit SOPs for sharing	RICs, IC	September 2015
4.	Develop and implement policy on how to contact and deploy COMLs, COMTs, and the WI-TERT	4.1 Draft and implement deployment policy for COML/COMT	SWIC, IC	July 2015
		4.2 Draft and implement deployment policy for WI-TERT	WEM, WI-TERT Coordinators	September 2015
		4.3 Conduct outreach and information sharing of deployment policy	RICs, IC	September 2015
		4.4 Upload contact list of certified COML/COMT by region and WI-TERT Coordinators to website	SWIC	September 2015
5.	Update and encourage completion of TICPs	5.1 Encourage counties and tribal governments to complete their TICP	SWIC, RICs	June 2014, ongoing
		5.2 Update State agency TICP	SWIC and State Agency Representatives	June 2014, ongoing
		5.3 Develop Regional TICPs	RICs	December 2017

5.3 Technology

The Technology section of the SCIP outlines Wisconsin's plan to maintain and upgrade existing technology; the roadmap to identify, develop, and implement new and emerging

technology solutions; and the approach to survey and disseminate information on current and future technology solutions to ensure user needs are met.

WISCOM operates as Wisconsin's primary statewide radio system, both for daily use and for mutual aid. While WISCOM leveraged existing radio towers and other infrastructure in its original build out, thereby reducing the initial costs to its users, agencies that rely on the system for daily use support WISCOM financially through an annual fee. WISCOM does not use proprietary technology, but rather works with a wide variety of local systems operating in the State. WISCOM currently serves thousands of users. To join the system, agencies must complete an application and sign a membership agreement. Agencies must also develop a communications plan and a template to ensure compatibility with the system.

Public safety agencies in Wisconsin rely on additional systems for mutual aid across the State, including Mutual Aid Radio Channels (MARC)—a mutual aid repeater system, the Interagency Fire Emergency Radio Network (IFERN), and the Wisconsin Mutual Aid Box Alarm System (MABAS Wisconsin).

Wisconsin plans to continue to support those who use WISCOM for daily use and mutual aid, including long-term funding for operation and maintenance of the system. However, because Wisconsin is a home-rule State, upgrading independent, local systems is a local decision, making it difficult to implement statewide interoperability solutions. Wisconsin is also looking to increase the coverage and capacity of WISCOM and link it to statewide systems in neighboring Minnesota, Michigan, and Illinois.

Table 3 outlines Wisconsin's goals and initiatives for technology.

Table 3: Technology Goals and Initiatives

Technology Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
6.	Conduct cybersecurity assessment of WISCOM and other systems	6.1 Identify systems to conduct cybersecurity assessment	SWIC, CIO, CWG, DOT	December 2014
		6.2 Identify resources to complete assessment	SWIC, CIO, CWG, DOT	May 2015
		6.3 Conduct assessment of systems	CIO, CWG	December 2015
		6.4 Evaluate findings of assessment and take necessary action on vulnerabilities	SWIC, CIO, CWG, DOT	December 2016
7.	Develop online reservation/usage of interoperability channels (i.e., "Status Board")	7.1 Acquire example Status Board templates from Minnesota and other States	DOJ, DOT	December 2014
		7.2 Modify template/program for use within Wisconsin and	DOJ, DOT	June 2015

Technology Goals and Initiatives

Goal #	Goals	Initiatives	Owner	Completion Date
		implement tool		
		7.3 Review existing LMR and WISCOM policies and procedures for channel assignments	IC (LMR/WISCOM)	December 2015
		7.4 Conduct training and outreach for Status Board	IC, RICs	December 2015
8.	Encourage participation in IFERN	8.1 Continue implementation of IFERN	MABAS Wisconsin	June 2014, ongoing
		8.2 Conduct outreach and information sharing on IFERN	MABAS Wisconsin, RICs	June 2014, ongoing
		8.3 Encourage implementation of IFERN-2 in congested areas	MABAS Wisconsin, RICs	December 2015, ongoing
9.	Program radios to ensure all interoperability channels are included and channel nomenclature is consistent	9.1 Conduct education and outreach of Wisconsin Standard Channel Naming Best Practices, and "Annex K"	SWIC, RICs, IC	June 2014, ongoing
		9.2 Provide assistance to agencies that are reprogramming radios, as requested	SWIC, RICs	June 2014, ongoing
		9.3 Validate through exercises that radios have been programmed correctly	SWIC, RICs	December 2014, ongoing as exercises are conducted
10.	Continue to plan for deployment of NPSBN in Wisconsin	10.1 Work with FirstNet through consultation process	DOJ	July 2014, ongoing
		10.2 Review and evaluate FirstNet RFP for Wisconsin, and provide recommendations to the Governor	DOJ, IC	June 2016
		10.3 Complete requirements of SLIGP	DOJ, IC	September 2016
11.	Create strategic plan for deployment of NG911	11.1 Educate stakeholders and begin developing strategic plan through technical assistance workshop	SWIC, Public Service Commission (PSC), IC	October 2014
		11.2 Develop working group to create a formal strategic plan	IC, NG911 Working Group	December 2014

Technology Goals and Initiatives

Goal #	Goals	Initiatives	Owner	Completion Date
		11.3 Complete strategic NG911 plan	RICs, PSC, NENA, APCO	June 2015
		11.4 Conduct outreach and education of strategic NG911 Plan	DOJ	September 2015
		11.5 Present strategic plan to legislature	DOJ	April 2016
12.	Promote and encourage CASM usage	12.1 Conduct outreach and information sharing to local stakeholders on CASM capabilities, webinars, and usage opportunities	RICs	June 2014, ongoing
		12.2 Schedule statewide webinar on CASM	SWIC	December 2014
		12.3 Develop new strategies for engaging local stakeholders	RICs, SWIC	December 2014
13.	Enhance intra- and inter-State connectivity between WISCOM and other systems	13.1 Identify systems to be connected	WISCOM, SWIC, local agencies	December 2014, ongoing
		13.2 Identify technical options for connecting systems	WISCOM	April 2015
		13.3 Establish user agreements and operational protocols between entities	System owners	April 2015, ongoing
		13.4 Map protocols for connecting systems	System owners	December 2015, ongoing
		13.5 Connect, test and operate systems	System owners	December 2015, ongoing
14.	Enhance coverage and capacity of WISCOM	14.1 Identify areas to enhance coverage of WISCOM	SSMG	June 2014, ongoing
		14.2 Prioritize system enhancements	SSMG, local agencies	June 2014, ongoing
		14.3 Begin system upgrades	DOJ, DOT, local agencies	September 2014, ongoing

5.4 Training and Exercises

The Training and Exercises section of the SCIP explains Wisconsin's approach to ensure that emergency responders are familiar with interoperable and emergency communications equipment and procedures and are better prepared for responding to real-world events. Wisconsin Emergency Management (WEM) manages training and exercises for the State's emergency managers and first responders, and has developed a Multiyear Training and Exercise Plan (TEP) to serve as the roadmap for the State to accomplish the priorities described in the 2012-2015 Wisconsin Homeland Security Strategy. The State plans to focus training and exercise initiatives in support of these priorities, one of which is communications interoperability. To that end, the TEP identifies specific training and exercise opportunities throughout the State that include communications interoperability as a critical objective. In addition, the State relies on the RICs to coordinate and conduct regional interoperability training and exercises. First responders and emergency managers can view the complete training catalogue and register for courses through its online training portal at www.trainingwisconsin.org. WEM's exercise policy also requires that exercises are National Incident Management System (NIMS)-compliant. Although interoperable communications is one of the target capabilities that may be tested, there is no requirement that all exercises evaluate communications as a critical task.

In addition to the courses offered by WEM, technical colleges in Wisconsin have recently developed a unique education programs for PSAP operators. Wisconsin plans to leverage this program, and implement its own training standards and State-certification program for telecommunicators. Wisconsin will also continue to maintain integration with the ICSG to ensure its financial support and awareness of emerging technologies such as NG911.

Table 4 outlines Wisconsin's goals and initiatives for training and exercises.

Table 4: Training and Exercises Goals and Initiatives

Training and Exercises Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
15.	Support State, local, county, regional and tribal communications exercises	15.1 Provide assistance in designing, conducting, and evaluating exercises	SWIC, RICs, and WEM	September 2015
		15.2 Encourage all agencies to include a communications component and evaluator in every exercise	SWIC, RICs, and WEM	September 2015

Training and Exercises Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
		15.3 Develop tabletop exercises with bordering agencies to evaluate interstate interoperability	SWIC, RICs and WEM	September 2016
16.	Conduct and coordinate interoperable communications training	16.1 Identify stakeholder groups that require training	IC, SWIC, RICs	December 2017
		16.2 Determine tools, training curriculum and delivery methods	IC, SWIC, State Training Officer (STO)	December 2017
		16.3 Deliver training on biannual basis or as requested	Varies (dependent on type of training, funding and end user)	December 2017, ongoing
17.	Develop orientation program for new participants in the Wisconsin Interoperability Initiative	17.1 Document history and program goals related to Wisconsin Interoperability Initiative	SWIC	March 2015
		17.2 Provide orientation to new participants and refresher to current members	IC, SWIC	March 2017, ongoing

5.5 Usage

The Usage section of the SCIP outlines efforts to ensure responders adopt and familiarize themselves with interoperable and emergency communications technologies, systems, and operating procedures in the State. Regular usage ensures the maintenance and establishment of interoperability in case of an incident. Interoperability in Wisconsin is promoted daily at the local, regional, tribal, and State levels through the use of WISCOM, as well as mutual aid resources, including MARC, IFERN, and MABAS Wisconsin.

Wisconsin plans to continue to support those agencies that use WISCOM for daily use and mutual aid, but also seeks to include an interoperability component to the mutual aid capabilities such as MABAS Wisconsin.

Table 5 outlines Wisconsin's goals and initiatives for usage.

Table 5: Usage Goals and Initiatives

Usage Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
18.	Encourage use of WISCOM and mutual aid frequencies	18.1 Promote participation in roll calls	RICs	June 2014, ongoing
		18.2 Promote use of WISCOM and mutual aid frequencies in communications exercises and planned events	RICs	June 2014, ongoing

5.6 Outreach and Information Sharing

The Outreach and Information Sharing section of the SCIP outlines Wisconsin's approach for building a coalition of individuals and emergency response organizations statewide to support the SCIP vision and for promoting common emergency communications initiatives. Wisconsin encourages outreach and information sharing through its Regional SCIP Implementation Councils, which were established to ensure that interoperability implementations address local concerns and unique regional circumstances, while also adhering to the strategies and tactics adopted in the SCIP. Each Council is supported by a grant-funded RIC with experience in public safety communications and emergency response. As part of their duties, the RICs are responsible for providing timely information and updates about WISCOM, as well as coordinating and conducting regional interoperability training and exercises.

Wisconsin will continue to leverage the Regional SCIP Implementation Councils, the RICs, and the IC Subcommittees and workgroups to further the goals and initiatives outlined in the SCIP.

Table 6 outlines Wisconsin's goals and initiatives for outreach and information sharing.

Table 6: Outreach and Information Sharing Goals and Initiatives

Outreach and Information Sharing Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
19.	Develop outreach and information sharing plan	19.1 Identify elements of plan, including, but not limited to: COMU awareness; SOPs; WI-TERT; NG911; ARES/RACES; P25; funding opportunities; training and exercises; mutual	IC, SWIC	June 2015, annually thereafter

Outreach and Information Sharing Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
		aid frequencies		
		19.2 Identify methods of delivery (e.g., website, conferences, webinars, RICs)	IC, SWIC, various	June 2015, annually thereafter
20.	Conduct education and outreach on NPSBN	20.1 Develop curriculum for education and outreach plan on NPSBN	DOJ	September 2014
		20.2 Deliver education and outreach on NPSBN to stakeholders and elected officials	IC, DOJ	December 2014, ongoing

5.7 Life Cycle Funding

The Life Cycle Funding section of the SCIP outlines Wisconsin's plan to fund existing and future interoperable and emergency communications priorities. Many of the State's previous initiatives and accomplishments were funded by both Federal and State grant programs. However, appropriations are currently the main source of funding for interoperable communications projects. Establishing a long-term funding mechanism for the operation and maintenance of WISCOM remains a primary goal since there is no monthly or annual cost for non-Federal users. Wisconsin seeks to establish a permanent funding mechanism for other interoperable communications projects as well.

Table 7 outlines Wisconsin's goals and initiatives for life cycle funding.

Table 7: Life Cycle Funding Goals and Initiatives

Life Cycle Funding Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
21.	Develop comprehensive funding plan for	21.1 Identify and pursue all available funding	IC, DOT, DOJ, WEM, local	June 2014, ongoing

Life Cycle Funding Goals and Initiatives

Goal #	Goals	Initiatives	Owner	Completion Date
	maintaining and enhancing interoperable communications	opportunities, including grants and public/private partnerships	agencies	
		21.2 Identify mechanism to transition from grant funding to dedicated and sustainable State, local, and other funding sources	SWIC, IC, DOT, DOJ, WEM, local agencies	June 2014, ongoing
		21.3 Develop recommendations for allocating grant funding to local agencies	IC	March 2015, annually thereafter
		21.4 Identify elements of plan, including, but not limited to: NG911 funding; training and exercises funding, WISCOM funding; equipment; maintenance funding; WI-TERT; dispatcher/PSAP training and standards; RICs	IC, SWIC, other granting agencies	January 2016
		21.5 Review and update funding plan on annual basis and as needed	IC	January 2016

6. IMPLEMENTATION

6.1 Action Plan

The Action Plan section of the SCIP describes the process Wisconsin will use to determine a plan to execute the initiatives in the SCIP. Twenty-one new strategic goals, corresponding initiatives, and measures for success were developed through the SCIP revision process. Following an initial review, the SWIC will submit the revised SCIP to the IC for their review and comment. The IC is responsible for providing final approval of the Wisconsin SCIP.

6.2 Measures of Success

The Measures of Success section of the SCIP defines the measures that Wisconsin will use to monitor progress and indicate accomplishments toward achieving the vision for interoperable and emergency communications. Measures of success are used to meaningfully assess the outcomes and impacts of program functions and processes in

meeting strategic goals. Table 8 outlines these measures for Wisconsin. More information on how these measures are managed is included in Section 6.3.

Table 8: SCIP Measures of Success

Measures of Success					
Goal #	Strategic Goal(s) Supported	Initial State	Target Measurement	Measure Completion Date	Owner or Source
1.	Review findings of governance assessment and develop action and implementation plan	Recent governance assessment provided recommendations on restructuring governance body and working groups	Governance body and associated working groups are restructured and are comprised of appropriate State and local members who are meeting regularly	December 2014	IC
2.	Review and revise relevant interoperability statutes and align to current goals	Existing statutes are not aligned to the current vision and mission	Existing statutes reviewed, revised, and codified in law by the legislature	May 2016	IC, SWIC, Workgroups
3.	Develop and maintain central repository for sample SOPs based on discipline or event type	State lacks an information sharing site for sample SOPs	Secure web portal provides users with sample SOPs by discipline or event type, and the ability to submit SOPs for sharing	September 2015	SWIC, RICs, IC
4.	Develop and implement policy on how to contact and deploy COMLs, COMTs, and the WI-TERT	Responders are not familiar with COMU and WI-TERT resources available for incident response, or how to deploy such resources	Deployment policy for COMU and WI-TERT resources is available through secure web portal. Responders are familiar with available COMU and WI-TERT resources through outreach and information sharing sessions (e.g., meetings, conferences)	September 2015	SWIC, IC, RICs, WEM, WI-TERT Coordinators

Measures of Success

Goal #	Strategic Goal(s) Supported	Initial State	Target Measurement	Measure Completion Date	Owner or Source
5.	Update and encourage completion of TICPs	Not all counties in Wisconsin have completed a TICP; State TICP is not current; regional TICPs do not exist.	90% of counties have completed TICPs; State TICP is current; and four regional TICPs are complete	December 2017	SWIC, RICs, State agency representatives
6.	Conduct cybersecurity assessment of WISCOM and other systems	WISCOM and other systems are potentially vulnerable to cybersecurity attacks and have not been evaluated for risks	WISCOM and 75% of other major radio systems in Wisconsin are evaluated for cybersecurity vulnerabilities; 75% of recommendations are implemented	December 2016	SWIC, CIO, CWG, DOT
7.	Develop online reservation/usage of interoperability channels (i.e., "Status Board")	There is no online method of managing usage of statewide interoperability channels	Wisconsin "Status Board" is fully operational; State and local agencies are familiar with and trained on how to use Status Board	December 2015	DOJ, DOT, IC
8.	Encourage participation in IFERN	Very few IFERN / IFERN-2 base stations are in use in Wisconsin	IFERN / IFERN-2 base stations are in use at 90% of primary fire dispatch centers or counties in Wisconsin; MABAS Wisconsin conducts outreach on IFERN with 100% of State and local agencies	December 2015	MABAS Wisconsin, RICs

Measures of Success

Goal #	Strategic Goal(s) Supported	Initial State	Target Measurement	Measure Completion Date	Owner or Source
9.	Program radios to ensure all interoperability channels are included and channel nomenclature is consistent	Not all radios are programmed with all interoperability channels and nomenclature varies	100% of agencies are provided with Wisconsin Standard Channel Naming Best Practices and Annex K; 90% of agencies have correctly named interoperability channels programmed; evaluated during emergency response exercises	December 2016	SWIC, RICs, IC
10.	Continue to plan for deployment of NPSBN in Wisconsin	Wisconsin is monitoring FirstNet and evaluating how to proceed with NPSBN implementation	Wisconsin makes opt in/out decision and completes requirements of SLIGP	September 2016	DOJ, IC
11.	Create strategic plan for deployment of NG911	Stakeholders and legislature are not familiar with NG911 capabilities and no state plan exists	Wisconsin conducts NG911 technical assistance workshop, drafts strategic plan for deployment of NG911, and conducts outreach with State and local agencies on NG911	April 2016	SWIC, PSC, IC, RICs, DOJ, NENA, APCO

Measures of Success

Goal #	Strategic Goal(s) Supported	Initial State	Target Measurement	Measure Completion Date	Owner or Source
12.	Promote and encourage CASM usage	State and local agencies are not familiar with CASM; CASM is not current	State and local agencies are familiar with CASM through targeted outreach; CASM is reviewed for accuracy on monthly basis; 75% of agencies have populated and current CASM data	December 2016	RICs, SWIC
13.	Enhance intra- and inter-State connectivity between WISCOM and other systems	WISCOM is not interoperable with all inter- and intra-State systems	WISCOM is interoperable with 75% of systems within Wisconsin and 50% of cross-border systems	December 2015	WISCOM, SWIC, local agencies, system owners
14.	Enhance coverage and capacity of WISCOM	WISCOM lacks coverage in some parts of Wisconsin	WISCOM coverage/capacity is increased; number of WISCOM users is increased	September 2014	WISCOM, local agencies, DOJ, DOT
15.	Support State, local, county, regional and tribal communications exercises				
16.	Conduct and coordinate interoperable communications training	Interoperable communications is not included in curriculum for public safety responders	Interoperable communications training is integrated in 100% of basic academy level training; Wisconsin provides ongoing interoperable communications training for public safety personnel twice a year	December 2017	IC, SWIC, RICs, STO

Measures of Success

Goal #	Strategic Goal(s) Supported	Initial State	Target Measurement	Measure Completion Date	Owner or Source
17.	Develop orientation program for new participants in the Wisconsin Interoperability Initiative	Governance participants lack historical context and full understanding of interoperability vision, mission and goals	New participants are provided with orientation	March 2017	SWIC, IC
18.	Encourage use of WISCOM and mutual aid frequencies	WISCOM and mutual aid frequencies are not used by all agencies during exercises and planned events	90% of local and State agencies participate in roll calls; WISCOM and/or mutual aid frequencies are used in 90% of exercises and planned events	June 2014	RICs
19.	Develop outreach and information sharing plan	Wisconsin lacks a comprehensive outreach and information sharing plan to key stakeholders for interoperable communications initiatives	Outreach and information plan is completed, identifies key stakeholders (e.g. locals, legislators) and includes strategy for multiple forms of communication (e.g. listserve, e-mail, webinar, brochures, presentations, etc.); SWIC, RICs and IC have implemented plan	June 2015	IC, SWIC

	Measures of Success				
Goal #	Strategic Goal(s) Supported	Initial State	Target Measurement	Measure Completion Date	Owner or Source
20.	Conduct education and outreach on NPSBN	Wisconsin stakeholders and elected officials are not familiar with NPSBN	DOJ and IC draft education and outreach plan for NPSBN; DOJ and IC conduct targeted outreach with 90% of Wisconsin stakeholders and elected officials	December 2017	DOJ, IC
21.	Develop comprehensive funding plan for maintaining and enhancing interoperable communications	Interoperable communications initiatives lack funding for sustainment and enhancement	Wisconsin employs a mix of funding streams including, but not limited to, grants, public/private partnerships, and annual appropriations to complete the goals in this SCIP	January 2016	IC, SWIC, DOT, DOJ, WEM, local agencies

6.3 Management of Success

The Management of Success section describes the iterative, repeatable method Wisconsin will follow to add, update and refine the measures of success. To evaluate its progress, the SWIC and IC will conduct an annual review of the Wisconsin SCIP at the State Interoperability Symposium. During the symposium, the SWIC, the IC, and public safety leaders that participated in drafting the revised SCIP will convene to evaluate which initiatives have been completed, and determine the status of the outstanding goals and initiatives.

6.4 Strategic Plan Review

The Strategic Plan Review section outlines the process Wisconsin will use to conduct reviews of the SCIP to ensure it is up to date and aligned with the changing internal and external interoperable and emergency communications environment, as well as to track and report progress against the defined initiatives and measures of success. During the annual review process at the State Interoperability Symposium, Wisconsin will identify completed goals, and revise existing goals and initiatives based on the new environment. The IC will be provided with an opportunity to review and comment before formally approving the updated SCIP.

7. REFERENCE MATERIALS

The Reference Materials section outlines resources that contribute additional background information on the SCIP and interoperable and emergency communications in Wisconsin. Table 9 includes the links to these reference materials.

Table 9: SCIP Reference Materials

Title	Description	Source/Location
Training and Exercise Plan	3 Year Training and Exercise Plan, 2013-2015	Wisconsin Emergency Management
Annex K	Wisconsin Mutual Aid Frequencies	Interop.wi.gov
Wisconsin Standard Channel Naming Best Practices	Radio Channel Naming Best Practices	Interop.wi.gov

APPENDIX A: MAJOR SYSTEMS

Table A-1: Major Systems, Updates, and New Systems

Major Systems Information						
System Type / Coverage Area	System Name	System Owner(s)	System Description	# Subscribers and Agencies	Users' Level of Government	Status and Changes/Updates
Shared statewide system	WISCOM	WISCOM	VHF (High Band): 150MHz to 170MHz P25 Compatible Chose make EF Johnson Digital Trunked Not Encrypted *Choose Primary Usage:* Voice Other: Number of Sites:105	> 20,000 subscriber units	-Federal -State -Regional -Local -Tribal	-No change

APPENDIX B: LIST OF ACRONYMS

APCO   Association of Public Safety Communications Officials

APR   Annual Progress Report

ARES   Amateur Radio Emergency Services

CASM   Communications Assets Survey and Mapping

CIO   Wisconsin Chief Information Officer

COML   Communications Unit Leader

COMT   Communications Unit Technician

COMU   Communications Unit

CWG   Cybersecurity Working Group

DHS   U.S. Department of Homeland Security

DOJ   Wisconsin Department of Justice

DOT   Wisconsin Department of Transportation

FirstNet   First Responder Network Authority

IC   Interoperability Council

ICSG   Interoperable Communications Standards Group

IFERN   Interagency Fire Emergency Radio Network

MABAS   Mutual Aid Box Alarm System

MARC   Mutual Aid Radio Channels

MFCG   Mutual Aid Frequency Coordination Group

MHz   Megahertz

LMR   Land Mobile Radio

NECP   National Emergency Communications Plan

NENA   National Emergency Number Association

NG911   Next Generation 911

NIMS   National Incident Management System

NPSBN   Nationwide Public Safety Broadband Network

NTIA   National Telecommunications and Information Administration

OEC   Office of Emergency Communications

P25   Project 25

PPD   Presidential Policy Directive

PSAP	Public Safety Answering Point
PSC	Public Service Commission
RACES	Radio Amateur Civil Emergency Services
RIC	Regional Interoperabilty Coordinator
SASI	State Agency SCIP Implementation Group
SCIP	Statewide Communication Interoperability Plan
SOP	Standard Operating Procedure
SSMG	Statewide System Management Group
STO	State Training Officer
SWIC	Statewide Interoperability Coordinator
TEP	Training and Exercise Plan
TICP	Tactical Interoperable Communications Plan
VHF	Very High Frequency
WEM	Wisconsin Emergency Management
WI-TERT	Wisconsin Telecommunicator Emergency Response Taskforce
WISCOM	Wisconsin Interoperable System for Communications
UHF	Ultra High Frequency

ANNEX K: STATEWIDE MUTUAL AID FREQUENCY PLAN

Wisconsin Mutual Aid Communications Frequencies

This statewide plan for mutual aid communications outlines public safety mutual aid frequencies available in Wisconsin for on scene tactical radio communications. All public safety and governmental agencies are encouraged to implement these frequencies.

Updates in this Edition

As interoperability planning in Wisconsin evolves and matures, a number of changes have been implemented since the last edition of this plan.

- A portable tactical repeater channel, VTAC36, has been established by combining VTAC11 as the output and VTAC14 as the input.

- A Project 25 digital version of this channel, VTAC36DG, is also available. Law enforcement special operations, such as SWAT, may use encrypted communications on the VTAC##DG channels. These are Wisconsin only channels and not part of the national plan.

- National channel nomenclature has been established by the National Public Safety Telecommunications Council for nationwide interoperability channels. Several channel names have been changed in order to integrate with the national naming standards. WISPERN becomes VLAW31, VCALL becomes VCALL10, and VTAC1 through VTAC4 become VTAC11 through VTAC14.

- A sixteen channel "National Zone" has been established to include the primary nationwide VHF interoperability channels. Whenever possible, mobile and portable radios should include these channels for interoperability use when leaving Wisconsin, or working with agencies other states.

- The Network Access Code (NAC) on the digital VTAC channels (VTAC##DG) has been changed from 800 to 293 to comply with the national standard.

- Tone squelch on receive can now be optionally implemented on channels that had been carrier squelch receive, such as some of the Fireground channels.

- The State Interoperability Council has established policy for the narrowbanding of all statewide mutual aid/interoperability channels during the April to November 2011 timeframe. **ALL VHF AND UHF CHANNELS IN THIS DOCUMENT ARE NARROWBAND.** The changes listed above are to be implemented through the narrowband programming process.

- Agencies should consider to converting their communications systems to narrowband operation in that 2011 timeframe, prior to the December 31, 2012 deadline.

- The list of 700 MHz interoperability and low power frequencies are now included.

LMR Subcommittee

The LMR Subcommittee has been established as a committee of the State Interoperability Council to manage the statewide mutual aid/interoperability channel resources. See the Wisconsin Interoperability Initiative website at www.interop.wi.gov for more information on the LMR Subcommittee and all aspects of public safety communications interoperability in Wisconsin.

Usage

All public safety agencies in Wisconsin are encouraged to implement the statewide common frequencies. In some cases there are local assignments that may conflict with the statewide use plan. It is highly desirable for these situations to be integrated into the state plan. The state frequency coordinator will work with those county and local agencies affected to address these situations. Counties and agencies with additional frequencies are encouraged to implement the statewide plan frequencies and making currently licensed simplex frequencies available for reassignment.

Be sure to identify your agency and unit when using common channels and to clear or signoff when done.

Law Enforcement

In general, each county will have a unique dispatch repeater channel. Some counties have an alternate dispatch channel.

Fire/Rescue/EMS

In general, each county will have a unique dispatch channel and a paging channel. Some counties may combine the functions of these channels. A pool of shared public safety on scene tactical channels has been established for fireground communications. Use of frequencies outlined in the state plan will increase the number of tactical channels available and provide for a high degree of interoperability between units at an incident.

Dispatch – a channel for communications between dispatch and field units, also unit to unit communications for longer range if through a repeater

Paging – a channel primarily for transmitting alerting messages to paging receivers

Local – a county specific channel for local administrative and training, usually a simplex frequency

Fireground – a channel for on scene tactical communications

Highway/Local Government

Each county is assigned a county highway department frequency (pair) and a local government frequency for road maintenance and other municipal operations.

Statewide Public Safety Common Mutual Aid Frequencies

These frequencies have been established for statewide public safety interagency and on scene communications and can be authorized for use under the state license.

MABAS

See the Mutual Aid Box Alarm System (MABAS) communications plan for more information at:
www.mabasradio.org and www.mabaswisconsin.com.

Name	Interagency Fire Emergency Radio Network
Acronym	**IFERN**
Receive Frequency	154.265
Receive Tone	210.7
Transmit Frequency	154.265
Transmit Tone	210.7
Primary Discipline	Fire/Rescue/EMS, Mutual Aid Box Alarm System
State Callsign	KO2099
Usage	Mutual aid base/mobile dispatch

Name	Fireground Red
Acronym	**FG RED**
Receive Frequency	153.830
Receive Tone	69.3
Transmit Frequency	153.830
Transmit Tone	69.3
Primary Discipline	Fire/Rescue/EMS, Mutual Aid Box Alarm System
State Callsign	KO2099
Usage	Fireground operations, on scene tactical

Name	Fireground White
Acronym	**FG WHITE**
Receive Frequency	154.280
Receive Tone	74.4
Transmit Frequency	154.280
Transmit Tone	74.4
Primary Discipline	Fire/Rescue/EMS, Mutual Aid Box Alarm System
State Callsign	KO2099
Usage	Fireground operations, on scene tactical

Name	Fireground Blue
Acronym	**FG BLUE**
Receive Frequency	154.295
Receive Tone	85.4
Transmit Frequency	154.295
Transmit Tone	85.4
Primary Discipline	Fire/Rescue/EMS, Mutual Aid Box Alarm System
State Callsign	KO2099
Usage	Fireground operations, on scene tactical

Name	Fireground Gold
Acronym	**FG GOLD**
Receive Frequency	153.8375
Receive Tone	91.5
Transmit Frequency	153.8375
Transmit Tone	91.5
Primary Discipline	Fire/Rescue/EMS, Mutual Aid Box Alarm System
State Callsign	KO2099
Usage	Fireground operations, on scene tactical
	Do not use at the same incident as Fireground Red and MARC1.

MABAS

Name   Fireground Black
Acronym   **FG BLACK**
Receive Frequency   154.2725
Receive Tone   94.8
Transmit Frequency   154.2725
Transmit Tone   94.8
Primary Discipline   Fire/Rescue/EMS, Mutual Aid Box Alarm System
State Callsign   KO2099
Usage   Fireground operations, on scene tactical
                      Do not use at the same incident as IFERN and Fireground White.

Name   Fireground Gray
Acronym   **FG GRAY**
Receive Frequency   154.2875
Receive Tone   136.5
Transmit Frequency   154.2875
Transmit Tone   136.5
Primary Discipline   Fire/Rescue/EMS, Mutual Aid Box Alarm System
State Callsign   KO2099
Usage   Fireground operations, on scene tactical
                      Do not use at the same incident as Fireground White and Blue.

Name   Interagency Fire Emergency Radio Network 2
Acronym   **IFERN2**
Receive Frequency   154.3025
Receive Tone   67.0
Transmit Frequency   154.3025
Transmit Tone   67.0
Primary Discipline   Fire/Rescue/EMS, Mutual Aid Box Alarm System
State Callsign   KO2099
Usage   Alternate mutual aid base/mobile dispatch
                      Do not use at the same incident as Fireground Blue and 154.310.

Mutual Aid Radio Channels

Name	Mutual Aid Radio Channel 1
Acronym	**MARC1**
Receive Frequency	151.280
Receive Tone	136.5
Transmit Frequency	153.845
Transmit Tone	136.5
Primary Discipline	All public safety
State Callsign	WNPG812
Usage	Wide area interagency communications through repeaters

Name	Mutual Aid Radio Channel 2
Acronym	**MARC2**
Receive Frequency	151.280
Receive Tone	136.5
Transmit Frequency	151.280
Transmit Tone	136.5
Primary Discipline	All public safety
State Callsign	WNPG812
Usage	On scene tactical incident communications
	Medical helicopter landing zone coordination

Name	Mutual Aid Radio Channel 3
Acronym	**MARC3**
Receive Frequency	154.010
Receive Tone	71.9
Transmit Frequency	154.010
Transmit Tone	71.9
Primary Discipline	Fire/Rescue/EMS, alternate for other public safety
State Callsign	KO2099
Usage	Fireground operations, on scene tactical
	Use is restricted in the Marinette County area.

Name	Mutual Aid Radio Channel 4
Acronym	**MARC4**
Receive Frequency	154.130
Receive Tone	82.5
Transmit Frequency	154.130
Transmit Tone	82.5
Primary Discipline	Fire/Rescue/EMS, alternate for other public safety
State Callsign	KO2099
Usage	Fireground operations, on scene tactical
	Use is restricted in the La Crosse County area.

EMS

See the State EMS Communications plan for more info:
http://dhs.wisconsin.gov/ems/EMSsection/EMS_Reports.htm#COMMUNICATIONS

Name	State EMS Advanced (ALS)
Acronym	**EMS A**
Receive Frequency	155.400
Receive Tone	None
Transmit Frequency	155.400
Transmit Tone	D156 for statewide; each hospital is assigned a tone
Primary Discipline	EMS only
State Callsign	KH4762
Usage	ALS ambulance to hospital and ambulance to ALS intercept communications

Name	State EMS Basic (BLS)
Acronym	**EMS B**
Receive Frequency	155.340
Receive Tone	None
Transmit Frequency	155.340
Transmit Tone	D156 for statewide; each hospital is assigned a tone
Primary Discipline	EMS
State Callsign	KH4762
Usage	Ambulance to hospital communications

Name	State EMS Coordination
Acronym	**EMS C**
Receive Frequency	155.280
Receive Tone	D156 for statewide/mobile; each hospital is assigned a tone
Transmit Frequency	155.280
Transmit Tone	D156 for statewide/mobile; each hospital is assigned a tone
Primary Discipline	EMS, Public Health
State Callsign	KH4762
Usage	Hospital to hospital communications, on scene coordination, Alternate for medical helicopter landing zone coordination Use may be limited in some areas due to non-EMS users.

POINT / WEM CAR

Name	Point to Point
Acronym	**POINT**
Receive Frequency	155.370
Receive Tone	Optionally 146.2
Transmit Frequency	155.370
Transmit Tone	146.2
Primary Discipline	Law Enforcement
	Use by other disciplines only if directed by law enforcement
State Callsign	KA6570
Usage	Base to base interagency communications

Name	Wisconsin Emergency Management Car to Car
Acronym	**WEM CAR**
Receive Frequency	156.000
Receive Tone	136.5
Transmit Frequency	156.000
Transmit Tone	136.5
Primary Discipline	Emergency Management
State Callsign	KGT483
Usage	On scene tactical incident communications

NATIONAL VHF

Name	VLAW31
	Formerly Wisconsin Police Emergency Radio Network
Acronym	**VLAW31**
Receive Frequency	155.475
Receive Tone	Optionally 156.7
Transmit Frequency	155.475
Transmit Tone	156.7
Primary Discipline	Law Enforcement
	Use by other disciplines only if directed by law enforcement
State Callsign	KA6570
Usage	Interagency communications

Name	VHF Calling
Acronym	**VCALL**
Receive Frequency	155.7525
Receive Tone	156.7
Transmit Frequency	155.7525
Transmit Tone	156.7
Primary Discipline	All public safety, nationwide
State Callsign	N/A
Usage	Public safety interagency calling channel, nationwide

NATIONAL VHF

Name	VHF Tactical 11
Acronym	**VTAC11**
Receive Frequency	151.1375
Receive Tone	156.7
Transmit Frequency	151.1375
Transmit Tone	156.7
Primary Discipline	All public safety, nationwide
State Callsign	N/A
Usage	Public safety interagency tactical communications

Name	VHF Tactical 12
Acronym	**VTAC12**
Receive Frequency	154.4525
Receive Tone	156.7
Transmit Frequency	154.4525
Transmit Tone	156.7
Primary Discipline	All public safety, nationwide
State Callsign	N/A
Usage	Public safety interagency tactical communications

Name	VHF Tactical 13
Acronym	**VTAC13**
Receive Frequency	158.7375
Receive Tone	156.7
Transmit Frequency	158.7375
Transmit Tone	156.7
Primary Discipline	All public safety, nationwide
State Callsign	N/A
Usage	Public safety interagency tactical communications

Name	VHF Tactical 14
Acronym	**VTAC14**
Receive Frequency	159.4725
Receive Tone	156.7
Transmit Frequency	159.4725
Transmit Tone	156.7
Primary Discipline	All public safety, nationwide
State Callsign	N/A
Usage	Public safety interagency tactical communications

Name	VHF Tactical 11 Digital
Acronym	**VTAC11DG**
Receive Frequency	151.1375
Receive Tone	156.7 and NAC 293
Transmit Frequency	151.1375
Transmit Tone	NAC 293
Primary Discipline	All public safety
State Callsign	N/A
Usage	Public safety interagency tactical communications

NATIONAL VHF

Name	VHF Tactical 12 Digital
Acronym	**VTAC12DG**
Receive Frequency	154.4525
Receive Tone	156.7 and NAC 293
Transmit Frequency	154.4525
Transmit Tone	NAC 293
Primary Discipline	All public safety
State Callsign	N/A
Usage	Public safety interagency tactical communications

Name	VHF Tactical 13 Digital
Acronym	**VTAC13DG**
Receive Frequency	158.7375
Receive Tone	156.7 and NAC 293
Transmit Frequency	158.7375
Transmit Tone	NAC 293
Primary Discipline	All public safety
State Callsign	N/A
Usage	Public safety interagency tactical communications

Name	VHF Tactical 14 Digital
Acronym	**VTAC14DG**
Receive Frequency	159.4725
Receive Tone	156.7 and NAC 293
Transmit Frequency	159.4725
Transmit Tone	NAC 293
Primary Discipline	All public safety
State Callsign	N/A
Usage	Public safety interagency tactical communications

Name	VHF Tactical 36
Acronym	**VTAC36**
Receive Frequency	151.1375
Receive Tone	156.7
Transmit Frequency	159.4725
Transmit Tone	136.5
Primary Discipline	All public safety, nationwide
State Callsign	KO2099
Usage	Public safety interagency tactical communications repeater

Name	VHF Tactical 36 Digital
Acronym	**VTAC36DG**
Receive Frequency	151.1375
Receive Tone	156.7 and NAC 293
Transmit Frequency	159.4725
Transmit Tone	NAC 293
Primary Discipline	All public safety
State Callsign	KO2099
Usage	Public safety interagency tactical communications repeater

NATIONAL VHF

Name	National Search & Rescue
Acronym	**NATSAR**
Receive Frequency	155.160
Receive Tone	Optionally 127.3
Transmit Frequency	155.160
Transmit Tone	127.3
Primary Discipline	Search and Rescue
State Callsign	KO2099
Usage	Interface between public safety agencies and search and rescue groups Use may be limited in some areas due to non-EMS users.

See the state plan for more info (available at www.interop.wi.gov).

UHF

Name   UHF Calling
Acronym   **UCALL40**
Receive Frequency   453.2125
Receive Tone   156.7
Transmit Frequency   458.2125
Transmit Tone   156.7
Primary Discipline   All public safety, nationwide
State Callsign   N/A
Usage   Public safety interagency calling channel (repeater)

Name   UHF Calling Direct
Acronym   **UCALL40D**
Receive Frequency   453.2125
Receive Tone   156.7
Transmit Frequency   453.2125
Transmit Tone   156.7
Primary Discipline   All public safety, nationwide
State Callsign   N/A
Usage   Public safety interagency calling channel (direct)

Name   UHF Tactical 41
Acronym   **UTAC41**
Receive Frequency   453.4625
Receive Tone   156.7
Transmit Frequency   458.4625
Transmit Tone   156.7
Primary Discipline   All public safety, nationwide
State Callsign   N/A
Usage   Public safety interagency tactical communications (repeater)

Name   UHF Tactical 41 Direct
Acronym   **UTAC41D**
Receive Frequency   453.4625
Receive Tone   156.7
Transmit Frequency   453.4625
Transmit Tone   156.7
Primary Discipline   All public safety, nationwide
State Callsign   N/A
Usage   Public safety interagency tactical communications (direct)

Name   UHF Tactical 42
Acronym   **UTAC42**
Receive Frequency   453.7125
Receive Tone   156.7
Transmit Frequency   458.7125
Transmit Tone   156.7
Primary Discipline   All public safety, nationwide
State Callsign   N/A
Usage   Public safety interagency tactical communications (repeater)

UHF

Name	UHF Tactical 42 Direct
Acronym	**UTAC42D**
Receive Frequency	453.7125
Receive Tone	156.7
Transmit Frequency	453.7125
Transmit Tone	156.7
Primary Discipline	All public safety, nationwide
State Callsign	N/A
Usage	Public safety interagency tactical communications (direct)

Name	UHF Tactical 43
Acronym	**UTAC43**
Receive Frequency	453.8625
Receive Tone	156.7
Transmit Frequency	458.8625
Transmit Tone	156.7
Primary Discipline	All public safety, nationwide
State Callsign	N/A
Usage	Public safety interagency tactical communications (repeater)

Name	UHF Tactical 43 Direct
Acronym	**UTAC43D**
Receive Frequency	453.8625
Receive Tone	156.7
Transmit Frequency	453.8625
Transmit Tone	156.7
Primary Discipline	All public safety, nationwide
State Callsign	N/A
Usage	Public safety interagency tactical communications (direct)

700 MHz

Interoperability frequencies in the public safety 700 MHz band are subject to planning by the State Interoperability Council and Mutual Aid Frequency Coordinating Group. At present, more information is available at the CAPRAD web site: www.caprad.org

Receive Frequency	RX NAC	Transmit Frequency	TX NAC	Label	Description	Use/Notes
769.14375	F7E	799.14375	293	7TAC51	General Public Safety Services (secondary trunked)	
769.64375	F7E	799.64375	293	7TAC52	General Public Safety Services (secondary trunked)	
770.14375	F7E	800.14375	293	7TAC53	General Public Safety Services (secondary trunked)	
770.64375	F7E	800.64375	293	7TAC54	General Public Safety Services (secondary trunked)	
769.24375	F7E	799.24375	293	7CALL50	Calling Channel	Mandatory[1]
769.74375	F7E	799.74375	293	7TAC55	General Public Safety Service	Mandatory[1]
770.24375	F7E	800.24375	293	7TAC56	General Public Safety Service	Mandatory[1]
770.74375	F7E	800.74375	293	7DATA69	Mobile Data	
769.39375	F7E	799.39375	293	7MED65	Emergency Medical Service	Mandatory[1]
769.89375	F7E	799.89375	293	7FIRE63	Fire Service	Mandatory[1]
770.39375	F7E	800.39375	293	7LAW61	Law Enforcement Service	Mandatory[1]
770.89375	F7E	800.89375	293	7MOB59	Mobile Repeater	Mandatory[1]
769.49375	F7E	799.49375	293	7MED66	Emergency Medical Service	Mandatory[1]
769.99375	F7E	799.99375	293	7FIRE64	Fire Service	Mandatory[1]
770.49375	F7E	800.49375	293	7LAW62	Law Enforcement Service	Mandatory[1]
770.99375	F7E	800.99375	293	7GTAC57	Other Public Service	Mandatory[1]
773.10625	F7E	803.10625	293	7TAC71	General Public Safety Services (secondary trunked)	
773.60625	F7E	803.60625	293	7TAC72	General Public Safety Services (secondary trunked)	
774.10625	F7E	804.10625	293	7TAC73	General Public Safety Services (secondary trunked)	
774.60625	F7E	804.60625	293	7TAC74	General Public Safety Services (secondary trunked)	
773.25625	F7E	803.25625	293	7CALL70	Calling Channel	Mandatory[1]
773.75625	F7E	803.75625	293	7TAC75	General Public Safety Service	Optional[2]
774.25625	F7E	804.25625	293	7TAC76	General Public Safety Service	Optional[2]
774.75625	F7E	804.75625	293	7DATA89	Mobile Data	
773.00625	F7E	803.00625	293	7MED86	Emergency Medical Service	Optional[2]
773.50625	F7E	803.50625	293	7FIRE83	Fire Service	Optional[2]
774.00625	F7E	804.00625	293	7LAW81	Law Enforcement Service	Optional[2]
774.50625	F7E	804.50625	293	7MOB79	Mobile Repeater	
773.35625	F7E	803.35625	293	7MED87	Emergency Medical Service	Optional[2]
773.85625	F7E	803.85625	293	7FIRE84	Fire Service	Optional[2]
774.35625	F7E	804.35625	293	7LAW82	Law Enforcement Service	Optional[2]
774.85625	F7E	804.85625	293	7GTAC77	Other Public Services	Optional[2]

Channels Labeled as Mandatory and Optional include both the mobile transmit and mobile receive (a total of 21 channels) for subscriber units only. Mandatory[1] required for all 700MHz licensees. Optional[2] are recommended additional Interop channels for radios that have additional channel capacity. Simplex channel names should carry the "D" (for Direct) suffix as used in the national interoperability channel naming convention

700 MHz

LIST OF 700 MHz NARROWBAND LOW POWER FREQUENCIES
Pursuant to 2nd Report & Order
Adapted from the Region 54 700 MHz Plan

In the Third Report & Order in Docket 96-86, the FCC allocated twenty-four 6.25 kHz frequency pairs for low power, on-site operations such as fireground. Analog primary operations are permitted on these frequencies. When allocating for analog use, 12.5 kHz bandwidth would be required. Operation on these frequencies is limited to 2 watts ERP and antenna height is limited to 20' above ground.

Six (three 12.5 kHz) of these frequency pairs are for nationwide itinerant use and are not subject to Regional Planning. The remaining 18 (nine 12.5 kHz) low power frequency pairs are to be administered by the 700 MHz Regional Planning Committees.

Interest has arisen from Region 54 fire service representatives to establish common channel naming and tone squelch for these channels in order to accommodate common usage on the fireground and other tactical situations. Analog 12.5 kHz operation with a common tone squelch of 156.7 Hz is used on all frequencies.

Each channel has been given a discipline indicator to allow users some channels to focus on, however, all nine channels would be available for assignment as needed. Within each discipline group, frequency separation has been provided in order to reduce interference.

7FTAC1	**700 Fire Tactical**
7FTAC2	**700 Fire Tactical**
7FTAC3	**700 Fire Tactical**
7GTAC4	**700 General Govt Tactical**
7GTAC5	**700 General Govt Tactical**
7LTAC6	**700 Law Tactical**
7LTAC7	**700 Law Tactical**
7LTAC8	**700 Law Tactical**
7MTAC9	**700 Medical Tactical**
7NTAC10	**700 National Tactical/Itinerant**
7NTAC11	**700 National Tactical/Itinerant**
7NTAC12	**700 National Tactical/Itinerant**

FCC Channels	Receive Frequency	RX Tone	Transmit Frequency	TX Tone	Name
1-2	769.006250	156.7	799.006250	156.7	7FTAC1
3-4	769.018750	156.7	799.018750	156.7	7LTAC6
5-6	769.031250	156.7	799.031250	156.7	7GTAC4
7-8	769.043750	156.7	799.043750	156.7	7FTAC3
9-10	769.056250	156.7	799.056250	156.7	7NTAC10
11-12	769.068750	156.7	799.068750	156.7	7NTAC11
949-950	774.931250	156.7	804.931250	156.7	7FTAC2
951-952	774.943750	156.7	804.943750	156.7	7LTAC7
953-954	774.956250	156.7	804.956250	156.7	7GTAC5
955-956	774.968750	156.7	804.968750	156.7	7MTAC9
957-958	774.981250	156.7	804.981250	156.7	7LTAC8
959-960	774.993750	156.7	804.993750	156.7	7NTAC12

800 MHz

Name	800 Tactical Red
Acronym	**8TACRED**
Receive Frequency	851.450
Receive Tone	156.7
Transmit Frequency	851.450
Transmit Tone	156.7
Primary Discipline	All public safety (fire first choice)
State Callsign	WQJX638
Usage	On scene tactical incident communications

Name	800 Tactical White
Acronym	**8TACWHITE**
Receive Frequency	851.950
Receive Tone	156.7
Transmit Frequency	851.950
Transmit Tone	156.7
Primary Discipline	All public safety (fire first choice)
State Callsign	WQJX638
Usage	On scene tactical incident communications

Name	800 Tactical Blue
Acronym	**8TACBLUE**
Receive Frequency	852.450
Receive Tone	156.7
Transmit Frequency	852.450
Transmit Tone	156.7
Primary Discipline	All public safety (fire first choice)
State Callsign	WQJX638
Usage	On scene tactical incident communications

Name	800 Tactical Gold
Acronym	**8TACGOLD**
Receive Frequency	852.950
Receive Tone	156.7
Transmit Frequency	852.950
Transmit Tone	156.7
Primary Discipline	All public safety (law first choice)
State Callsign	WQJX638
Usage	On scene tactical incident communications

Name	800 Tactical Black
Acronym	**8TACBLACK**
Receive Frequency	853.450
Receive Tone	156.7
Transmit Frequency	853.450
Transmit Tone	156.7
Primary Discipline	All public safety (law first choice)
State Callsign	WQJX638
Usage	On scene tactical incident communications

Name	800 Tactical Gray
Acronym	**8TACGRAY**
Receive Frequency	853.950
Receive Tone	156.7
Transmit Frequency	853.950

800 MHz

Transmit Tone 156.7
Primary Discipline All public safety (law first choice)
State Callsign WQJX638
Usage On scene tactical incident communications

Name 800 Calling
Acronym **8CALL90**
Receive Frequency 851.0125
Receive Tone 156.7
Transmit Frequency 821.0125
Transmit Tone 156.7
Primary Discipline All public safety, nationwide
State Callsign N/A
Usage Public safety interagency calling channel (repeater)

Name 800 Calling Direct
Acronym **8CALL90D**
Receive Frequency 851.0125
Receive Tone 156.7
Transmit Frequency 851.0125
Transmit Tone 156.7
Primary Discipline All public safety, nationwide
State Callsign N/A
Usage Public safety interagency calling channel (direct)

Name 800 Tactical 1
Acronym **8TAC91**
Receive Frequency 851.5125
Receive Tone 156.7
Transmit Frequency 806.5125
Transmit Tone 156.7
Primary Discipline All public safety, nationwide
State Callsign N/A
Usage Public safety interagency tactical communications (repeater)

Name 800 Tactical 1 Direct
Acronym **8TAC91D**
Receive Frequency 851.5125
Receive Tone 156.7
Transmit Frequency 851.5125
Transmit Tone 156.7
Primary Discipline All public safety, nationwide
State Callsign N/A
Usage Public safety interagency tactical communications (direct)

Name 800 Tactical 2
Acronym **8TAC92**
Receive Frequency 852.0125
Receive Tone 156.7
Transmit Frequency 807.0125
Transmit Tone 156.7
Primary Discipline All public safety, nationwide
State Callsign N/A
Usage Public safety interagency tactical communications (repeater)

800 MHz

Name   800 Tactical 2 Direct
Acronym   **8TAC92D**
Receive Frequency   852.0125
Receive Tone   156.7
Transmit Frequency   852.0125
Transmit Tone   156.7
Primary Discipline   All public safety, nationwide
State Callsign   N/A
Usage   Public safety interagency tactical communications (direct)

Name   800 Tactical 3
Acronym   **8TAC93**
Receive Frequency   852.5125
Receive Tone   156.7
Transmit Frequency   807.5125
Transmit Tone   156.7
Primary Discipline   All public safety, nationwide
State Callsign   N/A
Usage   Public safety interagency tactical communications (repeater)

Name   800 Tactical 3 Direct
Acronym   **8TAC93D**
Receive Frequency   852.5125
Receive Tone   156.7
Transmit Frequency   852.5125
Transmit Tone   156.7
Primary Discipline   All public safety, nationwide
State Callsign   N/A
Usage   Public safety interagency tactical communications (direct)

Name   800 Tactical 4
Acronym   **8TAC94**
Receive Frequency   853.0125
Receive Tone   156.7
Transmit Frequency   808.0125
Transmit Tone   156.7
Primary Discipline   All public safety, nationwide
State Callsign   N/A
Usage   Public safety interagency tactical communications (repeater)

Name   800 Tactical 4 Direct
Acronym   **8TAC94D**
Receive Frequency   853.0125
Receive Tone   156.7
Transmit Frequency   853.0125
Transmit Tone   156.7
Primary Discipline   All public safety, nationwide
State Callsign   N/A
Usage   Public safety interagency tactical communications (direct)

See the NPSPAC Region 45 and 54 plans for more info; they are available at www.caprad.org. The transmit and receive references listed above are for mobile and portable operation, not for base stations.

Frequency Use Authorization

All users must either hold their own license or be authorized by letter to operate under another qualified licensee's license in order to legally transmit on a frequency. In many cases, local agencies can receive their authorization from the county. To receive authorization to operate under a statewide license, complete and submit the Frequency Authorization Request form. Generally, only mobile and portable radios can be authorized to operate under someone else's license; base stations must be licensed for a specific location.

Updates and Revisions

This document will be updated annually or as needed to reflect changes due to FCC rules, narrowbanding, frequency assignments, etc. Revision 4.3 prepared February 2011 by:

Carl Guse
State Frequency Coordinator
Wisconsin State Patrol
POB 7912
Madison WI 53707-7912
608-266-2497 office
608-267-4495 fax
carl.guse@dot.wi.gov

WISCONSIN STATEWIDE PUBLIC SAFETY COMMON FREQUENCY CHART

VHF Band

Mobile Receive Frequency	RX Tone	Mobile Transmit Frequency	TX Tone	State Name	National Name	State Callsign	Primary Use
155.4750	CS	155.4750	156.7	VLAW31	VLAW31	KA6570	Law Enforcement
155.3700	CS	155.3700	146.2	POINT	None	KA6570	Law Enforcement
151.2800	136.5	153.8450	136.5	MARC1	None	WNPG812	All Public Safety
151.2800	136.5	151.2800	136.5	MARC2	None	WNPG812	All Public Safety
154.0100	71.9	154.0100	71.9	MARC3	None	KO2099	All Public Safety
154.1300	82.5	154.1300	82.5	MARC4	None	KO2099	All Public Safety
156.0000	136.5	156.0000	136.5	WEM CAR	None	KGT483	Emergency Mgt.
155.3400	CS	155.3400	D156	EMS B	VMED28	KH4762	EMS
155.2800	D156	155.2800	D156	EMS C	None	KH4762	EMS
155.4000	CS	155.4000	D156	EMS A	None	KH4762	EMS
154.2650	210.7	154.2650	210.7	IFERN	VFIRE22	KO2099	Fire
153.8300	69.3	153.8300	69.3	FG RED	None	KO2099	Fire
154.2800	74.4	154.2800	74.4	FG WHITE	VFIRE21	KO2099	Fire
154.2950	85.4	154.2950	85.4	FG BLUE	VFIRE23	KO2099	Fire
153.8375	91.5	153.8375	91.5	FG GOLD	None	KO2099	Fire
154.2725	94.8	154.2725	94.8	FG BLACK	VFIRE24	KO2099	Fire
154.2875	136.5	154.2875	136.5	FG GRAY	VFIRE25	KO2099	Fire
154.3025	67.0	154.3025	67.0	IFERN2	VFIRE26	KO2099	Fire
155.1600	127.3	155.1600	127.3	NATSAR	None	KO2099	Search & Rescue
155.7525	156.7	155.7525	156.7	VCALL10	VCALL10	KO2099	All Public Safety
151.1375	156.7	151.1375	156.7	VTAC11	VTAC11	KO2099	All Public Safety
154.4525	156.7	154.4525	156.7	VTAC12	VTAC12	KO2099	All Public Safety
158.7375	156.7	158.7375	156.7	VTAC13	VTAC13	KO2099	All Public Safety
159.4725	156.7	159.4725	156.7	VTAC14	VTAC14	KO2099	All Public Safety
151.1375**	N293*	151.1375	N293	VTAC11DG	None	KO2099	All Public Safety
154.4525**	N293*	154.4525	N293	VTAC12DG	None	KO2099	All Public Safety
158.7375**	N293*	158.7375	N293	VTAC13DG	None	KO2099	All Public Safety
159.4725**	N293*	159.4725	N293	VTAC14DG	None	KO2099	All Public Safety
151.1375**	156.7	159.4725	136.5	VTAC36	None	KO2099	All Public Safety
151.1375**	N293*	159.4725	N293	VTAC36DG	None	KO2099	All Public Safety

All channels are narrowband.   * = Mixed Mode Receive   N = P25 NAC   **These channels are *not* required in new grant-funded radios.

NATIONAL ZONE PUBLIC SAFETY COMMON FREQUENCY CHART

VHF Band

Mobile Receive Frequency	RX Tone	Mobile Transmit Frequency	TX Tone	National Name	State Callsign	Primary Use
155.7525	156.7	155.7525	156.7	VCALL10	KO2099	National Calling
151.1375	156.7	151.1375	156.7	VTAC11	KO2099	National Tactical
154.4525	156.7	154.4525	156.7	VTAC12	KO2099	National Tactical
158.7375	156.7	158.7375	156.7	VTAC13	KO2099	National Tactical
159.4725	156.7	159.4725	156.7	VTAC14	KO2099	National Tactical
154.280	CS	154.280	156.7	VFIRE21	KO2099	Fire
154.265	CS	154.265	156.7	VFIRE22	KO2099	Fire
154.295	CS	154.295	156.7	VFIRE23	KO2099	Fire
154.2725	CS	154.2725	156.7	VFIRE24	KO2099	Fire
154.2875	CS	154.2875	156.7	VFIRE25	KO2099	Fire
154.3025	CS	154.3025	156.7	VFIRE26	KO2099	Fire
155.340	CS	155.340	156.7	VMED28	KH4762	EMS to Hospital
155.3475	CS	155.3475	156.7	VMED29	KH4762	EMS Portables**
155.475	CS	155.475	156.7	VLAW31	KA6570	Law Enforcement
155.4825	CS	155.4825	156.7	VLAW32	KA6570	Law Portables**
155.160	CS	155.160	127.3	SAR	KO2099	Search & Rescue

All channels are narrowband.** 6 watts maximum

800 MHz National Mutual Aid

Mobile Receive Frequency	RX Tone	Mobile Transmit Frequency	TX Tone	Name	National Name	Primary Use
851.0125	156.7	806.0125	156.7	8CALL90	8CALL90	All Public Safety
851.5125	156.7	806.5125	156.7	8TAC91	8TAC91	All Public Safety
852.0125	156.7	807.0125	156.7	8TAC92	8TAC92	All Public Safety
852.5125	156.7	807.5125	156.7	8TAC93	8TAC93	All Public Safety
853.0125	156.7	808.0125	156.7	8TAC94	8TAC94	All Public Safety
851.0125	156.7	851.0125	156.7	8CALL90D	8CALL90D	All Public Safety
851.5125	156.7	851.5125	156.7	8TAC91D	8TAC91D	All Public Safety
852.0125	156.7	852.0125	156.7	8TAC92D	8TAC92D	All Public Safety
852.5125	156.7	852.5125	156.7	8TAC93D	8TAC93D	All Public Safety
853.0125	156.7	853.0125	156.7	8TAC94D	8TAC94D	All Public Safety

Statewide 800 MHz Mutual Aid Channels

Statewide 800 MHz mutual aid / interoperability / tactical channels ("8TACs") have been licensed by the FCC under callsign WQJX638. All Wisconsin public safety agencies with 800 MHz radios are encouraged to include these channels. These are the "rebanded" frequencies and they will not be further changed during rebanding processes. As with the VHF mutual aid frequencies, these channels are authorized under the statewide license by letter from the State Patrol Bureau of Public Security and Communications frequency coordinator.

800 MHz Statewide Mutual Aid

Mobile Receive Frequency	RX Tone	Mobile Transmit Frequency	TX Tone	Name	National Name	Primary Use
851.450	156.7	851.450	156.7	8TACRED	None	Fire/EMS
851.950	156.7	851.950	156.7	8TACWHITE	None	Fire/EMS
852.450	156.7	852.450	156.7	8TACBLUE	None	Fire/EMS
852.950	156.7	852.950	156.7	8TACGOLD	None	Law/DPW
853.450	156.7	853.450	156.7	8TACBLACK	None	Law/DPW
853.950	156.7	853.950	156.7	8TACGRAY	None	Law/DPW

Priority Order for Implementation of VHF Channels

The chart below provides a general guide for the priority of implementation of channels in radios that do not have sufficient capacity to include all statewide interoperability channels. In radios that have 16 channel zones, it is generally suggested that the most used channels be included in the 1st zone, other Priority 1 through 12 channels be included in the 2nd zone and Priority 13 through 24 channels be included in the 3rd zone. This list makes no further suggestion regarding the order in which channels should be placed within radios.

PRIORITY	LAW ENFORCEMENT	FIRE	EMS	EMERGENCY MGT	DPW/HWY
1	VLAW31	FG BLUE	EMS B	WEM CAR	WEM CAR
2	MARC1	MARC1	MARC1	MARC1	MARC1
3	MARC2	MARC2	MARC2	MARC2	MARC2
4	MARC3	MARC3	MARC3	MARC3	MARC3
5	MARC4	MARC4	MARC4	MARC4	MARC4
6	POINT	IFERN	IFERN	IFERN	IFERN
7	WEM CAR	FG RED	FG RED	FG RED	FG RED
8	FG BLUE	FG WHITE	FG WHITE	FG WHITE	FG WHITE
9	IFERN	WEM CAR	FG BLUE	FG BLUE	FG BLUE
10	EMS C	EMS C	EMS C	EMS C	EMS C
11	FG RED	VLAW31	VLAW31	VLAW31	VLAW31
12	FG WHITE	POINT	POINT	POINT	POINT
13	NATSAR	NATSAR	NATSAR	NATSAR	NATSAR
14	EMS B	EMS B	WEM CAR	EMS B	EMS B
15	EMS A	EMS A	EMS A	EMS A	EMS A
16	FG GOLD	FG GOLD	FG GOLD	FG GOLD	FG GOLD
17	FG BLACK	FG BLACK	FG BLACK	FG BLACK	FG BLACK
18	FG GRAY	FG GRAY	FG GRAY	FG GRAY	FG GRAY
19	IFERN2	IFERN2	IFERN2	IFERN2	IFERN2
20	VCALL10	VCALL10	VCALL10	VCALL10	VCALL10
21	VTAC11	VTAC11	VTAC11	VTAC11	VTAC11
22	VTAC12	VTAC12	VTAC12	VTAC12	VTAC12
23	VTAC13	VTAC13	VTAC13	VTAC13	VTAC13
24	VTAC14	VTAC14	VTAC14	VTAC14	VTAC14