MICHIGAN
STATEWIDE COMMUNICATION
INTEROPERABILITY PLAN

September 2019

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LETTER FROM THE SWIC

Greetings,

I am pleased to present to you the 2019 Michigan Statewide Communication Interoperability Plan (SCIP). This SCIP represents Michigan's continued commitment to improving emergency communications interoperability and supporting the public safety practitioner community throughout the state. In addition, this updated SCIP is also required by the recently released FY2018 Department of Homeland Security (DHS) grant guidelines, which require each state to update its SCIP and designate a full time Statewide Interoperability Coordinator (SWIC).

Representatives from Michigan's Public Safety Communications Interoperability Board (MPSCIB) and its work groups collaborated to update the SCIP to include actionable and measurable goals and objectives. These goals focus on governance, technology, training, education, and outreach, and are designed to support our state in planning for new technologies and navigating the ever-changing emergency communications ecosystem. They also include priorities and activities identified by Michigan's delegation during the National Governors Association (NGA) Regional Workshop on Enhancing Public Safety Communications Governance.

Michigan faces challenges that will require a holistic approach as we work towards achieving public safety interoperability. For the next one-to-three years, this strategic plan will guide our efforts to protect Michigan's citizens through advances in governance, technology, training and exercises, as well as education and outreach for emergency communications.

As we continue to enhance interoperability, we must remain dedicated and continue to improve our ability to communicate among disciplines and across jurisdictional boundaries. With help from public safety practitioners, local and federal agencies, we will work to achieve the goals set forth in this SCIP.

Sincerely,
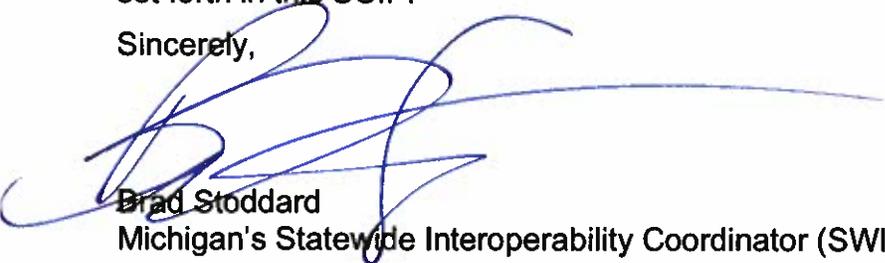
Brad Stoddard
Michigan's Statewide Interoperability Coordinator (SWIC)

EXECUTIVE SUMMARY

The Michigan 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 strategic planning tool to help Michigan prioritize resources, strengthen governance, planning, identify future investments, and address interoperability gaps.

During the SCIP update, Michigan Public Safety Communications Interoperability Board (MPSCIB) members and their work groups developed goals to:

- Develop a statewide integrated governance structure managed by stakeholders following the recommendations adopted by the Governor
- Boards and Councils that have focused on creating efficiency for public safety and public safety communications. Such an example has been the drafted recommendations and structure for the Michigan Emergency Communications Commission (MECC) and a more streamlined governance body for all emergency communications at the state level and bringing all of the state emergency communications together under a focused management structure.
- Maintain and strengthen the role of the Statewide Interoperability Coordinator (SWIC) as an inter- and intra-state leader of interoperable emergency communications.
- Maintain and strengthen regional interoperability committees to encourage information sharing statewide.
- Establish methodologies to assess Michigan's current interoperable and emergency communications capabilities, define the governance role of the MPSCIB, identified as the Statewide Interoperability Governing Body in Michigan, and develop sustainable funding strategies to achieve Michigan's interoperability vision.
- Establish and maintain recurring statewide communications related Standard Operating Procedures (SOPs), Memorandum of Understandings (MOUs) and/or Mutual Aid Agreements (MAAs) and a life cycle process for all SOP, MOU and/or MAA template definition, design, development, implementation, evaluation, and maintenance of related components. Establish a regional repository of best practice communications related SOPs, MOUs and/or MAAs and a life cycle process plan.
- Identify and establish the minimum acceptable technical standards for emergency communications systems (voice, data, encryption, Next Generation 911 (NG-911), Computer-Aided Dispatch (CAD), and customer premise equipment (CPE).
- Develop a technology roadmap for development, access, maintenance, and/or upgrades to operable and interoperable voice, paging, video, and data services over the next three to five years (e.g., Land Mobile Radio (LMR) and other systems that aid in the emergency communications response) for all jurisdictions and disciplines in the state.
- Create a recurring process to understand, record, disseminate, and update the documentation of major statewide interoperable and emergency communications assets and infrastructure. Through the use of Communications Asset Survey and Mapping (CASM).

- Review and update the Michigan Interoperability Field Operations Guide (MIFOG).
- Further develop, expand and promote the Michigan Communications Unit (COMU) program.
- Continued inclusion and planning for training and exercise programs for local, tribal, regional and state agencies that include nongovernmental and private sector companies.
- Enhance and increase usage of CASM at the state and local levels.
- Improve the ability to deliver emergency messages to the public by state, territorial, tribal and local authorities through the development of a statewide Public Alert and Warning program.
- Promote SCIP strategic planning awareness for communications through statewide outreach programs.
- Promote the outreach website for State of Michigan public safety/emergency communications information and publications. Also promote the use of National Public Safety Communications topics via the Public Safety Tools portal.
- Establish a comprehensive, sustainable life cycle funding plan for emergency communications capabilities.
- Provide statewide support for the Office of Michigan's Public Safety Communications System (MPSCS) for sustainable life cycle funding.
- Explore opportunities to ensure that funding of legacy components is appropriately addressed for consumers in the NG911 environment.
- The Auxcomm work group exists to coordinate the awareness, training, and development of the Michigan Auxcomm program.

The resulting goals and objectives along with owners, completion dates and measurements are provided within this SCIP.

As mentioned, this updated SCIP supports the fulfillment of requirements included in the FY2018 Department of Homeland Security, State Homeland Security Grant Program (HSGP) Notice of Funding Opportunity. It requires that all states and territories update their SCIP by the end of the FY 2018 HSGP period of performance (36 months), with a focus on communications resilience/continuity, to include assessment and mitigation of all potential risks.

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INTRODUCTION

Interoperability and Emergency Communications Overview

Michigan's statewide public safety communications interoperability has been largely driven by the Office of MPSCS. The MPSCS is managed by the Office of MPSCS, an organizational component residing within the Michigan Department of Technology, Management, and Budget (DTMB). The MPSCS Advisory Board was established and directed by Executive Order Number 2005 – 8, signed by former Governor Jennifer M. Granholm, as the governance structure to the MPSCS, and provide leadership and operational support through its multi-disciplinary and multi-regional membership and working group subcommittees. In 2009, the MPSCIB was established via Executive Order 2009-55 and replaced the MPSCS Advisory Board as Michigan's Statewide Interoperability Governing Body (SIGB) and is now responsible for governing and leading interoperability in Michigan. In 2014, a subcommittee of the Michigan Governor's Council on Law Enforcement and Reinvention prepared a recommendation to establish the Michigan Emergency Communications Commission (MECC). The recommendation was adopted by Commission on Law Enforcement A Reinvention (CLEAR) to create the MECC in statute and adopt the role of the SIGB.

The MPSCIB and the SIGB together ensure stakeholders facilitate the sharing of information, protect security of information and provide ease of use and accessibility of interoperability in Michigan. Furthermore, the establishment of the MPSCIB promotes the use of central/shared systems across public safety disciplines and regions of the state, benefiting the citizens and emergency services providers of Michigan.

The communications capabilities required across the state differ between agencies and disciplines often requiring the use of separate systems. Accordingly, the state recognizes that public safety communications interoperability must function as a system of systems.

The single statewide system, known as Michigan's Public Safety Communications System (MPSCS) was established in the mid-1990s as a baseline statewide option for public safety.

With more than 254 towers, and over 89,000 radios covering an area of more than 59,415 square miles, the MPSCS is the largest public safety communications system in North America and supports more than half of all public safety responders in Michigan. The MPSCS is fully operational from Michigan's southern border to the furthest point north in the Upper Peninsula covering the entire state with a single interoperable Project 25 (P25) system. There are 8 simulcast cells, with an additional 64 towers added to the system in different counties across the state. Of the more than one hundred Public Safety Answering Points (PSAPs) in Michigan, fifty-four PSAPs are connected to the MPSCS and account for 225 console positions that utilize the MPSCS for their dispatching operations. In addition, cross-border interstate interoperability exists with Wisconsin, Indiana, and Ohio using MPSCS "consolettes" at dispatch centers in proximity to the Michigan border. These "consolettes" may be operated using the border radio system(s), or they may be patched into Michigan counties' 911 centers.

Through use of the MPSCS, Michigan's Mutual Aid Box Alarm System (MABAS) is focused on providing fire agencies partnered in MABAS with a statewide communications solution assisting fire agencies involved in MABAS and using an interoperable communications solution, and provide an accompanying template of interoperability channels to facilitate mutual aid statewide.

Interoperable communication networks are the backbone of our public safety system. It is critical that public safety stays the course and provides input to improving communication interoperability and information sharing among local, regional, state, and federal agencies.

The broader emergency communications ecosystem consists of many inter-related components and functions. The first corner, incident response and coordination, deals with government to government emergency communications capabilities such as LMR and broadband communications. Notifications, alerts and warnings is the corner of the ecosystem that deals with the government communicating to the public with emergency communications capabilities. Examples of this include Integrated Public Alert and Warning System (IPAWS) and media, social media updates. Finally, Michigan focused on reporting and requests for assistance which addresses public to government emergency communications capabilities like 911 and amateur radio. Public information exchange makes up the fourth corner of the ecosystem and deals with public to public emergency communications. This fourth corner of the ecosystem does not involve interaction with the government and is beyond the goals and objectives of the SCIP. The primary functions of the emergency communications ecosystem are depicted in the 2014 National Emergency Communications Plan (NECP)[1]

The Interoperability Continuum[2] was developed by SAFECOM and serves as a framework to address challenges and to 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. Cybersecurity and Infrastructure Security Agency (CISA) developed the emergency

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[1] 2014 NECP can be found here: https://www.dhs.gov/publication/2014-national-emergency-communications-plan
[2] Interoperability Continuum can be found here:
https://www.dhs.gov/sites/default/files/publications/interoperability_continuum_brochure_2.pdf

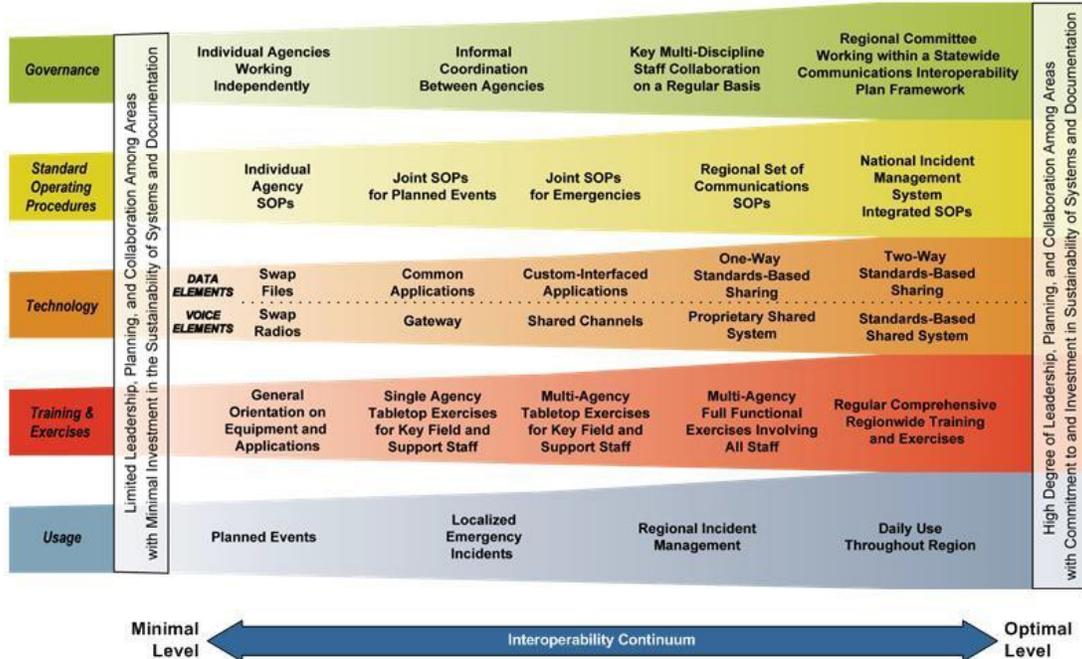communications ecosystem to understand the challenges of the new landscape of emergency communications.

		Minimal Level ← Interoperability Continuum → Optimal Level				
Governance	Limited Leadership, Planning, and Collaboration Among Areas with Minimal Investment in the Sustainability of Systems and Documentation	Individual Agencies Working Independently	Informal Coordination Between Agencies	Key Multi-Discipline Staff Collaboration on a Regular Basis	Regional Committee Working within a Statewide Communications Interoperability Plan Framework	High Degree of Leadership, Planning, and Collaboration Among Areas with Commitment to and Investment in Sustainability of Systems and Documentation
Standard Operating Procedures		Individual Agency SOPs	Joint SOPs for Planned Events	Joint SOPs for Emergencies	Regional Set of Communications SOPs	National Incident Management System Integrated SOPs
Technology DATA ELEMENTS		Swap Files	Common Applications	Custom-Interfaced Applications	One-Way Standards-Based Sharing	Two-Way Standards-Based Sharing
Technology VOICE ELEMENTS		Swap Radios	Gateway	Shared Channels	Proprietary Shared System	Standards-Based Shared System
Training & Exercises		General Orientation on Equipment and Applications	Single Agency Tabletop Exercises for Key Field and Support Staff	Multi-Agency Tabletop Exercises for Key Field and Support Staff	Multi-Agency Full Functional Exercises Involving All Staff	Regular Comprehensive Regionwide Training and Exercises
Usage		Planned Events	Localized Emergency Incidents	Regional Incident Management	Daily Use Throughout Region	

Figure 1: SAFECOM Interoperability Continuum

Vision & Mission

The following are Michigan's SCIP vision and mission statements:

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Vision:

Baseline and expand interoperable voice and data communications solutions and practices for first responders of local, state, tribal, and federal public safety agencies and include government and private organizations that fall within the public safety support system.

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Mission:

Provide strategic direction and a unified multi-disciplinary, multi-jurisdictional all hazards communications approach that includes:

- Reliable, standards-based, shared communications infrastructure supporting voice, data, and public access to emergency services;
- Governance and outreach;
- Comprehensive communications planning in training and exercises;
- Integration through sharing existing and emerging technologies with sustainable funding solutions;
- Create partnerships with governmental and non-governmental entities;
- Compliance with the National Incident Management System (NIMS);
- Establishment and use of SOPs.

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Michigan SCIP Overview

- ***Overview of Goals & Objectives:*** Provides an executive summary of the SCIP goals and objectives and their intended benefits.
- ***Governance:*** Describes the current governance mechanisms for communications interoperability within the state along with lessons learned from the National Governor's Association (NGA) workshop and priorities for improving governance within the evolving landscape.
- ***Technology:*** Describes the state's approach to overcoming the various technological challenges it faces in the landscape of emergency communications broken down into the key technologies of LMR, notifications, alerts and warnings, 911, and broadband.
- ***Training, Outreach & SOPs:*** Describes the state's approach to ensuring all stakeholders are continuously trained and up-to-date on relevant policies, procedures, and practices, collaboration with state, local, tribal, and federal entities, and efforts to develop and implement standardized policies and procedures.

- ***Implementation Plan:*** Describes how Michigan plans to implement, maintain, and update the SCIP to enable continued evaluation of and progress towards the state's interoperability goals.

GOALS, OBJECTIVES & BENEFITS

The following section provides an overview of the Michigan's SCIP goals, objectives, and benefits, and how activities outlined in this SCIP can drive advancements in interoperability capabilities throughout the state.

Goals	Objectives	Benefits
Develop a statewide integrated governance structure managed by stakeholders	• MPSCIB continues as the Governor's only board with focus on strategic interoperable communications. • Review and update SIGB membership to validate that members are fully representative and actively participating. • Evolvement of SIGB to new proposed governance model creating the MECC. • Strengthen the SIGB by codifying it and its related objectives into law.	Ensure the best possible development of governance structure in state
Maintain and strengthen the role of the SWIC as an inter- and intra- state leader of interoperable emergency communications.	• Establish the SWIC as the point of contact for coordination with multi-disciplinary and multi-jurisdictional stakeholders regarding interoperable and emergency communications. • Empower the SWIC to lead the state's strategic planning process for interoperable and emergency communications. • Create direct access to the SIGB chair.	Ensures the continual state prioritization of SWIC for inter-intra – state leader of interoperable emergency communication
Maintain and strengthen regional interoperability committees to encourage	• Continuation and fostering the concept of Regional interoperability	Ensures committees encourage information sharing and

information sharing statewide.	committees to meet regularly to learn about each region's assets and capabilities by providing uniform guidance planning. • Organize annual interoperability conference/committees' workshop	coordination of strategic planning efforts
Identify and establish the minimum acceptable technical standards for emergency communications systems (Voice, encryption 911 and CAD and cross and borders communications).	• Research and develop guidance doctrine that identifies and delineates standards-based technologies that will facilitate acquisitions of compliant and interoperable voice and encryption on radio systems • Research and develop a guidance doctrine that identifies and delineates standards-based technologies that will facilitate acquisitions of compliant and interoperable NG911 technologies. • Research and develop guidance doctrine that identifies and delineates standards-based technologies that will facilitate acquisitions of compliant and interoperable CAD technologies • Explore opportunities to ensure that funding of legacy components is appropriately addressed for consumers in the NG911 environment.	Ensures that Michigan will implement the best possible technology for 911 and meet the current needs of reporting and requests for assistance.

Develop a technology roadmap for development, access, maintenance, and/or upgrades to operable and interoperable voice, video, and data services over the next three to five years (e.g., LMR and other systems that aid in the emergency communications response) for all jurisdictions and disciplines in the state	• Finalize the upgrade of the MPSCS and other state communications systems • Establish data interoperability between first responders and the public • Create a large capacity backhaul network to support future technology • Recommend, in consultation with PSAPs, the adoption of the National Emergency Number Association (NENA) i3 standards for PSAP cybersecurity, as well as establishing a planned migration to the Task Force on Optimal Public Safety Answering Point Architecture (TFOPA) EC3 concept for cybersecurity.	Ensures the best possible usage of technology applications development for emerging capabilities in 911 and LMR.
Develop technology best practices and lessons learned repository	• Research emerging technologies • Publish best practices and lessons learned documents to repository • Document and coordinate use of best practices • The MiPSCIB and its working groups to help oversee development of an Emerging Technologies Strategic Plan as they grow.	Ensuring that all best practices are developed for statewide use.
Develop an implementation plan for the Introduction of new technology and communications systems	• Research best practices in implementation planning from other states • Develop/Update Emerging Technologies Implementation Strategic Plan • Submit Emerging Technologies Implementation Strategic Plan to SIGB • SIGB reviews Emerging Technologies	Ensures implementation of new emerging technologies and communications systems

	• Implementation Strategic Plan elements • Publish Implement Emerging Technology Implementation Plan • Create baseline document of existing communications assets and infrastructure	
Create a recurring process to record, disseminate, and update documentation of major statewide interoperable and emergency communications assets and infrastructure	• Identify and formalize a process to record, disseminate, and update documentation of communications assets and infrastructure • Implement documentation of communications assets and infrastructure process	Supports efforts towards the development of formal processes to update and document communications assets and infrastructure
Update MIFOG	• Select form factors, methods and paths to publish the MIFOG • Distribute the revised MIFOG via various media product(s) through selected methods and processes • Establish and maintain processes to gather revisions and updates of the MIFOG information; review and update the information • Development of an electronic MIFOG or eMIFOG.	Ensures MIFOG is updated on a regular basis
Maintain COMU Program	• Identify existing position resources • Assess (Communications Unit Technician (COMT)/Communications Unit Leader (COML) Auxiliary Emergency Communications (AUXCOMM) training needs • Develop training plan to meet the identified gaps • Exercise COML/COMT/AUXCOMM resources	Ensures advancement of COMU program planning and exercises

	• Consider addition of additional COMU positions Incident Tactical Dispatcher (INTD), Information Technology Services Leader (ITSL) • Evaluate program effectiveness by collection and repository of after action reporting	
Develop training and exercise program for local, tribal, regional, and state agencies that includes nongovernmental and private sector companies	• Determine training courses, schedule (3-5 years out) and instructors for training and exercise program • Establish and conduct mandatory radio operations training course for first response personnel statewide • Establish mandatory requirement that when communications equipment is purchased, users must be trained to operate the equipment • Develop train-the-trainer course for systems administrators of MPSCS or local radio systems	Ensure collaboration for training and exercise development to include all state agencies
Establish Unified Statewide Credentialing solution	• Identify and implement credentialing solutions • Maintain a current and validated database of communications personnel available as a communications resource	Ensure statewide credentialing solutions are established
Enhance and increase usage of Communications Asset Survey and Mapping (CASM)	• Continuation of CASM utilization and tracking of Michigan's communications assets.	Ensure enhancement of usage of CASM
Promote SCIP educational awareness through outreach programs statewide	• Present SCIP to SIGB • SCIP approval and endorsement by SIGB • Create SCIP overview talking points for	Ensure educational outreach materials for continued learning and development of SCIP awareness

	• presentations to elected, appointed government officials and public safety agency leadership • Distribution to stakeholders	
Public Safety Broadband Networks (PSBN) education	• Submit State Local Implementation Grant Program (SLIGP) documentation • Develop informational materials (webinars, documents, handouts, marketing) • Update website for Michigan specific information	Ensure development of PSBN informational materials
Develop outreach website for public safety/emergency communications information and publications	• Publish technology roadmap • Publish technology best practices and lessons learned documents • Publish SOP/MOU/MAA templates • Publish operational best practices and lessons learned • Publish training and exercise calendar and repository	Ensure statewide emergency communications information and publications are readily availible
Establish and maintain a recurring statewide communications-related SOP/MOU/MAA life cycle process for template definition, design, development, implementation, evaluation, and maintenance of all SOP/MOU/MAA components	• COMU Working Group to research best practices from regional and inter- regional agencies in template development and create sample templates for review • Present SOP/MOU/MAA template to SIGB for review • SIGB garners support from Michigan Emergency Management Homeland Security (EMHS) Regional boards	Ensure and maintain statewide communications life-cycle design and development.
Improve the ability to deliver emergency	• Update Regional and State EAS plans	Provide for the delivery of timely and accurate emergency alert

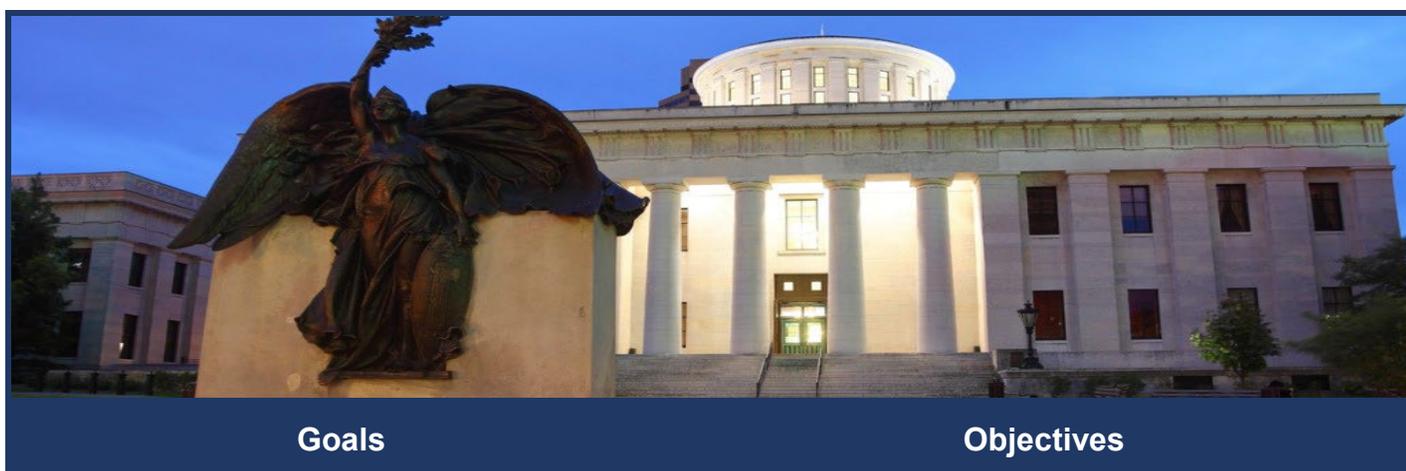| messages to the public by state, territorial, tribal and local authorities through the development of a statewide Public Alert and Warning program	• Development of Statewide EAS/IPAWS/Mass Notification vendor requirements • Increase the number of authorized alerting authorities with access to IPAWS • Increase the use of the FEMA Joint Interoperable Test Command (JITC) lab	warning information to the public.

GOVERNANCE

The Governance section of the SCIP outlines the future direction of the Michigan governance structure for interoperable and emergency communications. Interoperability efforts throughout the state are led by the MPSCIB as the SIGB. The MPSCIB consists of sixteen members (nine of whom are appointed by the Governor) and focus on providing statewide interoperability to public safety agencies throughout the state, while adopting procedures governing the organization and operation of the Office of MPSCS. The Director of the Office of MPSCS, also recognized as the SWIC, is responsible for execution of the MPSCIB's actions. Regional interoperability committees are active throughout Michigan's seven emergency management regions and coordinate regularly with members of the MPSCIB. In addition, the MPSCIB hosts information sharing meetings quarterly with Illinois, Indiana, and Ohio, and also coordinates interoperability efforts with Canadian counterparts at each of the state's international border crossings.

It was anticipated that the MPSCIB will evolve into the MECC and act as the primary organization overseeing all interoperable and emergency communications activities. CLEAR has adopted a model for public safety stakeholders to oversee and create strategic direction for all emergency communications in the state. The model recommends creating a statutory public body (the MECC) to manage and govern all emergency communications (911, radio interoperability, and public safety broadband). The proposal was under review by the Governor's office and had substantial support. The recommended model was consistent with success in other State's such as the State of Utah's all-inclusive governance and operational format of emergency communications governed and managed at the state level by a single Board and Office. The envisioned change to the State of Michigan would be to integrate the current State 911Committee (SNC) and MPSCIB will fall under the envisioned concept of the MECC and those operational areas supporting each Committee and Board would evolve into a single State of Michigan agency reporting to the MECC.

Table 1 outlines Michigan's goals and objectives related to Governance.

Table 1: Governance Goals and Objectives

Goals	Objectives

Develop a statewide integrated governance structure managed by stakeholders	• Review and update SIGB membership to validate that members are fully representative and actively participating • Evolvement of SIGB to new proposed governance model creating the MECC • Strengthen the SIGB by codifying it in law
Maintain and strengthen the role of the SWIC as an inter- and intra- state leader of interoperable emergency communications.	• Establish the SWIC as the point of contact for coordination with multi- disciplinary and multi-jurisdictional stakeholders regarding interoperable and emergency communications. • Empower the SWIC to lead the state's strategic planning process for interoperable and emergency communications. • Create direct access to the SIGB chair.
Maintain and strengthen regional interoperability committees to encourage information sharing statewide.	• Continuation and fostering the concept of Regional interoperability committees to meet regularly to learn about each region's assets and capabilities by providing uniform guidance planning. • Organize annual interoperability conference/committees' workshop

TECHNOLOGY

The Technology section of the SCIP outlines Michigan's plan to maintain and upgrade existing technology, provides 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. Most public safety agencies throughout the state utilize voice interoperability and are funded either by the state or locally. Regional or county systems also focus on multi-agency utilization that is comparable to the Office of MPSCS, ensuring that effective interoperability can be provided locally with the same effectiveness for normal operations as in emergency situations.

As Michigan looks to the future, emergency communications stakeholders are focused on addressing emerging technology issues for voice, data, and video uses and the impacts that these technologies will have upon existing systems and operations. Michigan will continue to incorporate new communications technologies into daily operations and expand interoperability among voice and data communications systems. By designing a technology roadmap and articulating minimum standards for operable and interoperable voice, video, and data services, Michigan is better prepared.

Table 2 outlines Michigan's goals and objectives related to Technology.

Table 2: Technology Goals and Objectives

Goals	Objectives
Identify and establish the minimum acceptable technical standards for emergency communications systems (Voice, encryption, 911, CAD and cross borders communications.	• Research and develop guidance doctrine that identifies and delineates standards-based technologies that will facilitate acquisitions of compliant and interoperable voice radio systems • Research and develop guidance doctrine that identifies and delineates standards-based technologies that will facilitate acquisitions of compliant and interoperable NG911 technologies

	• Research and develop guidance doctrine that identifies and delineates standards-based technologies that will facilitate acquisitions of compliant and interoperable CAD technologies
Develop a technology roadmap for development, access, maintenance, and/or upgrades to operable and interoperable voice, video, and data services over the next three to five years (e.g., LMR and other systems that aid in the emergency communications response) for all jurisdictions and disciplines in the state	• Upgrade of the MPSCS and other state emergency communications systems • Establish data interoperability between first responders and the public • Best practices for NG 911 • Create a dashboard to reflect the status of NG911 deployments in Michigan.
Develop technology best practices and lessons learned repository	• Research emerging technologies • Publish best practices and lessons learned documents to repository • Document and coordinate use of best practices • Use of expertise from the established working groups to oversee development of Emerging Technologies Strategic Plan • Verification of decommissioning of legacy 911 components
Develop an implementation plan for the introduction of new technology/emergency communications systems	• Research best practices in implementation planning from other states • Develop/Update Emerging Technologies Implementation Strategic Plan • Submit Emerging Technologies Implementation Strategic Plan to SIGB • SIGB reviews Emerging Technologies Implementation Strategic Plan • Publish an Emerging Technology Implementation Plan • Create baseline document of existing communications assets and infrastructure. • Further make available the existing statewide Geographic Information System (GIS) Repository to route calls through an ESInet(s) being utilized in the State of Michigan.

Create a recurring process to record, disseminate, and update documentation of major statewide interoperable and emergency communications assets and infrastructure	• Identify and formalize a process to record, disseminate, and update documentation of communications assets and infrastructure • Implement documentation of communications assets and infrastructure process
Provide an alert origination software solution to state approved IPAWS message originators for the dissemination of emergency alert and warning messages to the public through multiple communications methods	• Select and implement an alert origination software solution based on the program requirements as defined by the Public Alerting workgroup • Select and implement a mass notification software solution based on the program requirements as defined by the Public Alerting workgroup

TRAINING, OUTREACH, AND STANDARD OPERATING PROCEDURES

All seven of Michigan's emergency management regions conduct emergency management training and exercises yearly to various levels of complexity. The exercises and related training sessions are typically multi-agency, and multidiscipline in nature, and include tabletop, functional and full-scale formats. After Action Reports and Improvement Plans from exercises help participating agencies identify interoperability and communications capability gaps that need to be addressed in the next round of training, exercises and funding allocations.

Priorities for Michigan include maintaining a COMU program, a comprehensive training and exercise program inclusive of the private sector and volunteer organizations, a specific training opportunity focusing primarily upon train-the-trainer classes on the various types of communications equipment deployed, its features, and capabilities, and the maintenance of the MIFOG. These efforts will ensure that all public safety personnel have the requisite knowledge.

To ensure public safety personnel, their agencies, and governmental officials are familiar with the state's interoperable and emergency communications environment, the MPSCIB provides outreach through educational awareness information to local public information officers to distribute within their communities. Also, the MPSCIB provides information regarding FirstNet and other Public Safety Broadband Networks to contacts throughout the state. Michigan additionally collaborates with neighboring states and the province of Ontario, Canada on interoperability efforts. Multi-state regional meetings are also conducted monthly with representatives from the Federal Emergency Management Administration (FEMA) Region V states to share common interests related to systems, life cycle costs, operational issues and to discuss other emergency communications items such as lessons learned and best practices.

While there have been many successes in interoperability throughout the state, challenges to outreach and information sharing efforts exist. These challenges include:

- Disparate systems, capabilities and lack of SOPs throughout the state. Lack of information sharing between the regional interoperability committees necessary to understand each region's assets and capabilities;
- Need to implement and comply with NIMS/Incident Command System (ICS) procedures and plain language usage during incidents;
- Lack of MOUs and operational plans under development statewide;
- Need to increase outreach efforts for elected officials and public safety leadership to garner their support for the development of formalized procedures for all emergency response efforts.

The MPSCIB has final governing authority over SOPs for interoperable and emergency communications in Michigan. All levels of government and other statewide organizations are responsible for developing and implementing discipline and equipment specific communications and interoperability policies and procedures. While the functions and features of Michigan's interoperability platform are designed to be accessible by its users, Michigan recognizes that it is equally important that SOPs and relevant terminology are compliant with the NIMS. NIMS compliance is crucial as SOPs and terminology also follow the guidelines of

the National Response Framework to ensure they promote interoperability on a national level, recognize incident management practices, and improve domestic preparedness.

The MPSCIB reviews SOPs for accuracy and compliance with NIMS, while the SWIC is responsible for ensuring SOPs, where applicable, are compliant with Michigan's SCIP. Michigan conducts comprehensive education and training for first responders and related personnel in order to gain compliance with established SOPs and continues to develop and maintain effective operational procedures to support first responders across the state.

The Life Cycle Funding section of the SCIP outlines Michigan's plan to fund existing and future interoperable and emergency communications priorities. The Office of MPSCS is funded by a general fund appropriation with a minimal restricted fund allocation when a one-time user fee per radio is assessed when a new radio is added to the system.

Communications equipment and services used by local agencies are generally funded through local and county budgets. User fees and general fund allocations, however, are insufficient, at all levels of government, to provide adequate funding for equipment, services, and future capital replacements of emergency communications equipment.

To resolve Michigan's life cycle challenges, the MPSCIB plans to develop an all- encompassing funding strategy for the state that addresses:

- Funding for MPSCS;
- Funding for equipment, increased systems coverage and capabilities;
- Funding for response to major, on-going incidents or cyber security incidents;
- Funding of communication systems redundancy and resiliency at the local, tribal, and State levels;
- Examples of restricted funding ideas for statewide emergency and communication/interoperability expenditures;
- Compilation of current funding challenges for State and local governments as well as future challenges; and
- Engagement of leadership who fund interoperable and emergency communications systems.

Table 3 outlines Michigan's goals and objectives related to Training, Outreach, and Standard Operating Procedures.

Table 3: Training, Outreach, and Standard Operating Procedures Goals and Objectives

Goals	Objectives
Update MIFOG	• Identify, scope, gather validate and compile the information sources to be used in the development of the MIFOG • Submit final draft of the proposed MIFOG for approval by SIGB • Select form factors, methods and paths to publish the MIFOG • Distribute the final MIFOG product(s) through selected methods and processes • Establish processes to gather revisions and updates of the MIFOG information; review and update the information
COMU Program Training	• Assess identify COMU training needs • Develop plan to meet the identified training gaps • Exercise COML/COMT/AUXCOMM resources • Evaluate program effectiveness
Develop initial training, refresher training and exercise programs for local, tribal, regional, and state agencies that includes nongovernmental and private sector companies	• Determine training courses, schedule (3-5 years out) and instructors for training and exercise program • Inclusion of non-governmental communications resource personnel and groups as defined within AUXCOMM • Establish and conduct mandatory radio operations training course for first response personnel statewide • Establish mandatory requirement that when communications equipment is purchased, users must be trained to operate the

	• equipment • Maintain train-the-trainer course for systems administrators of MPSCS or local radio systems • Coordinate with Emergency Management and the State Interoperability groups to include PSAPs in the planning, testing, training, exercising, and evaluation of interoperability exercises.
Establish Unified Statewide Credentialing and Identification System	• Credentialing of persons for proper identification, skillset and security • Identification System
Enhance and increase usage of Communications Asset Survey and Mapping (CASM)	• Continuation of CASM utilization and tracking of Michigan's Communications assets.
Promote SCIP educational awareness through outreach programs statewide	• Present SCIP to SIGB • SCIP approval and endorsement by SIGB • Create SCIP overview talking points for presentations to elected, appointed government officials and public safety agency leadership • Distribution to stakeholders
Develop Michigan PSBN information	• Submit SLIGP documentation • Develop outreach materials (webinars, documents, handouts, marketing) • Develop outreach website/branding
Public Alerting Work Group	• Public Alerting program approval and endorsement by the SIGB • Create public alerting program overview talking points • Distribute to stakeholders
Develop outreach website for public safety/emergency communications information and publications	• Publish technology roadmap • Publish technology best practices and lessons learned documents • Publish SOP/MOU/MAA templates • Publish operational best practices and lessons learned

	• Publish training and exercise calendar and repository
Establish and maintain a recurring statewide communications-related SOP/MOU/MAA life cycle process for template definition, design, development, implementation, evaluation, and maintenance of all SOP/MOU/MAA components	• COMU Working Group • Research best practices from regional and inter- regional agencies in template development and create sample templates for review • Present SOP/MOU/MAA template to SIGB for review • SIGB garners support from Michigan Emergency Management Homeland Security Division (EMHSD) boards • SIGB reviews SOP/MOU/MAA process annually

Establish a comprehensive, sustainable, life cycle funding plan for emergency communications capabilities	• Develop the methods and processes necessary for the state to identify and establish sustainable funding to support the following systems, resources and initiatives:
	    ○ Capital expenditures for replacement/upgrades of statewide systems
	    ○ Operational expenditures for annual maintenance for communications systems
	    ○ SWIC position and staff
	    ○ Emergency communications governance entities
	    ○ SOPs development and maintenance
	    ○ Periodic technology assessments and deployments
	    ○ Continuing and recurring training and exercises development and execution
	    ○ Continuing outreach and information sharing initiatives
	• Establish a process for the SWIC and the State Administering Agency (SAA) for collaborative review and approval of emergency communications funding requests

	• SWIC and SIGB involvement in the grant allocation process for emergency communications resources • Educate stakeholders statewide of MPSCS life cycle needs, funding efforts, and funding allocations
Provide support statewide for MPSCS sustainable life cycle funding	• Continued Support in the State Budget Process for Office of MPSCS overall budget supporting the operations and maintenance of the system.
Increase the ability of the State, territorial, tribal and local authorities to alert and warn the public	• Increase the number of approved alerting authorities with access to IPAWS throughout the state. • Increase the number of approved alerting authorities using the FEMA JITC Lab for training and exercising. • Increase the number of approved alerting authorities that participate with Michigan Association of Broadcasters (MAB) in originating the Required Monthly Test. • Update State and Regional EAS plans. • Establish a process for sending alert and warning messages across county and State boundaries.

IMPLEMENTATION PLAN

The SWIC serves as the chief administrator of the SCIP and is responsible for tracking progress towards achieving the SCIP goals. The Michigan MPSCIB will add the objectives assigned to its committees as formal agenda items for review and oversight during regular meetings. The SWIC and working group members will provide status updates and coordinate collaborative action and planning to ensure continued progress. The MPSCIB will also conduct a thorough review of the SCIP on a biennial basis to update strategies and tactics to address identified needs and advancements involving statewide emergency communications capabilities.

The following table clearly defines the measures that Michigan will use to monitor progress and indicate accomplishments towards achieving the vision for expanding interoperable voice and data communications solutions and practices:

Table 4: Measures of Success, Owners, and Timelines

Goal	Objectives	Measures of Success	Owners	Completion Date
Develop statewide integrated governance structure managed by stakeholders	• Review and update SIGB membership to validate that members are fully representative and actively participating • Evolvement of SIGB to new proposed governance model creating the MECC • Strengthen the SIGB by codifying it in law	• Single integrated emergency communications governance board responsible for all forms of emergency communications • All statutes that are regarding emergency communications would need to be revised	DTMB/MSP/ SWIC/State 911 Coordinator/ State Legislature	2020/2021

Maintain and strengthen the role of the SWIC as an inter- and intra-state leader of interoperable emergency communications	• Establish the SWIC as the point of contact for coordination with multi- disciplinary and multi-jurisdictional stakeholders regarding interoperable and emergency communications. • Empower the SWIC to lead the state's strategic planning process for interoperable and emergency communication • Create direct access to the SIGB chair.	• SIGB support and direction of the SWIC responsibilities	MPSCIB/SWIC/MSP/DTMB	Ongoing
Maintain and strengthen regional interoperability committees to encourage information sharing statewide	• Continuation and fostering the concept of Regional interoperability committees to meet regularly to learn about each region's assets and capabilities by providing uniform guidance planning. • Organize annual interoperability conference/committees' workshop	• Establishment of a regional interoperability committee within each emergency management region of the State	MSP EMHSD/MPSCIB/SWIC	2021

Identify and establish the minimum acceptable technical standards for emergency communications systems (Voice, 911 and CAD and cross borders communications.	• Research and develop guidance doctrine that identifies and delineates standards-based technologies that will facilitate acquisitions of compliant and interoperable voice radio systems • Research and develop guidance doctrine that identifies and delineates standards-based technologies that will facilitate acquisitions of compliant and interoperable NG911 technologies • Research and develop guidance doctrine that identifies and delineates standards-based technologies that will facilitate acquisitions of compliant and interoperable CAD technologies	• Create encryption task force to develop best practices and examples for encryption utilization and voice technologies statewide • Further adoption and best practices for NG 911 deployments across the state in reference to the NENA i3 standards for PSAP, NG 911 and cyber security • Develop a standardized effort in testing and validating vendor dispatch console integration with MPSCS	COMU Working Group/State 911 Committee/MPSCS/MPSCIB	2019/2021

Develop technology best practices and lessons learned repository	• Research emerging technologies • Publish best practices and lessons learned documents to repository • Document and coordinate use of best practices • Use of the MPSCIB Working Groups to oversee development of Emerging Technologies Strategic Plan	• Participate in national committee efforts focused on emerging technologies in emergency communications • Research lessons learned from in-state and out-of-state emergency communications communities of best practices; document best of breed solutions and publish to Michigan's emergency communications community • Highlight Michigan's best practices for guidance and reuse for Michigan's emergency communications community	MPSCIB/MPSCIB working groups/MPSCS/SWIC/State 911 Coordinator	2021

Develop an implementation plan for the Introduction of new technology/comm unifications systems	• Research best practices in implementation planning from other states • Develop/Update Emerging Technologies Implementation Strategic Plan • Submit Emerging Technologies Implementation Strategic Plan to SIGB • SIGB reviews Emerging Technologies Implementation Strategic Plan when submitted • Publish Implement Emerging Technology Implementation Plan once validated	• Establishment of a repository that captures strategic plans and solutions for emergency communications and emerging technologies statewide	MPSCIB/MP SCS	2020
Create a recurring process to record, disseminate, and update documentation of major statewide interoperable and emergency communications assets and infrastructure	• Identify and formalize a process to record, disseminate, and update documentation of communications assets and infrastructure • Implement documentation of communications assets and infrastructure process	• Use of CASM and the use of most recent version of the MIFOG available • Development of an electronic application version of the MIFOG	MPSCIB/MP SCS/COMU/ SWIC/State CASM administrator	Ongoing

Update MIFOG	• Identify, scope, gather validate and compile the information sources to be used in the development of the MIFOG • Submit final draft of the proposed MIFOG for approval by SIGB • Select form factors, methods and paths to publish the MIFOG • Distribute the final MIFOG product(s) through selected methods and processes • Establish processes to gather revisions and updates of the MIFOG information; review and update the information	• MPSCIB work group(s) review of the AARs as provided by communities • COMU WG review proposed edits to the MIFOG on a quarterly basis • Maintain record of changes and updates to the MIFOG	MPSCIB work groups	2020
Maintain COMU Program	• Assess (Communications Unit Technician (COMT)/Communications Unit Leader (COML) training need • Identify existing COMT/COML/Auxcomm resources • Develop plan to meet the identified gaps • Exercise COML/COMT resources • Evaluate program effectiveness	• Annually evaluate success of training programs • Use of the COMMEX to exercise and validate training in emergency communications response • Review event AARs to capture successful utilization of COMU resources	MPSCIB	2020

The Auxcomm work group exists to coordinate the awareness, training, and development of the Michigan Auxcomm program	• Enhance statewide redundant communication coverage. • Review various state and local planning documents and more thoroughly incorporate Auxcomm capabilities into the plans. • Conduct a statewide Auxcomm Capability Assessment. • Develop statewide Auxcomm Activation Protocols. • Create an Auxcomm operator training plan. • Increase regional Auxcomm coordination across the state.	• Analyze, document, and enhance redundant voice and data pathways between all local emergency operations centers (EOC) and the state emergency operations center (SEOC). • Incorporate Auxcomm functions into state and local EOC operational and communications plans. • Implement Auxcomm Resources and Nets boards into the Michigan Critical Incident Management System (MI CIMS). • Develop and implement Michigan Auxcomm Operator training plan and tracking mechanism. • Increased participation of regional Auxcomm emergency coordinators into regional emergency management meetings.	Auxcomm Work Group MSP EMHSD	Ongoing

Develop initial training, refresher training and exercise programs for local, tribal, regional, and state agencies that includes nongovernmental and private sector companies	• Determine training courses, schedule (3-5 years out) and instructors for training and exercise program • Establish and conduct mandatory radio operations training course for first response personnel statewide • Establish mandatory requirement that when communications equipment is purchased, users must be trained to operate the equipment • Develop train the trainer course for systems administrators of MPSCS or local radio systems	• Further involvement of the AUXCOMM program in the state • Utilize new technology solutions to meet the demand of user training around the state (videos, online training, etc.) • Recognition and use of established baseline/basic training programs as applicable for respective disciplines	MPSCIB WGs/MPSCS/MSP/State 911 Committee/Respective disciplines	2021
Establish Unified Statewide Credentialing and Identification System	• Credentialing • ID System	• Establishment of credentialing program meeting NIMS standards	DTMB/MSP EMHSD	Ongoing
Enhance and increase usage of Communications Asset Survey and Mapping (CASM)	• Continuation of CASM utilization and tracking of Michigan's Communications assets.	• Continued education and training regarding the use and capabilities fo CASM	MPSCIB/State CASM administrator	Ongoing

Promote SCIP educational awareness through outreach programs statewide	- Present SCIP to SIGB - SCIP approval and endorsement by SIGB - Create SCIP overview talking points for presentations to elected, appointed government officials and public safety agency leadership - Distribution to stakeholders	- Provide draft and applicable revisions to MPSCIB membership for review and approval - Develop SCIP informational materials - Publish SCIP to MPSCIB website	MPSCIB/MPSCS/SWIC	2019
PSBN information	- Submit SLIGP documentation - Develop outreach materials (webinars, documents, handouts, marketing) - Develop outreach website/branding	Public Safety Broadband Work Group to submit quarterly SLIGP reports	MPSCIB/Public Safety Broadband work group	2020

Develop outreach website for public safety/emergency communications information and publications	• Publish technology roadmap • Publish technology best practices and lessons learned documents • Publish SOP/MOU/MAA templates • Publish operational best practices and lessons learned • Publish training and exercise calendar and repository	• Develop an inclusive emergency communications technology roadmap • MPSCIB to approve technology roadmap • Publish approved technology roadmap to the MPSCIB website • Develop technology best practices and lessons learned documents • MPSCIB to approve technology best practices and lessons learned documents • Publish approved technology best practices and lessons learned documents to the MPSCIB website • Maintain a monthly updated training and exercise calendar published to the MPSCIB website	MPSCIB/MPSCIB work groups/MPSCS	2020

Establish and maintain a recurring statewide communications-related SOP/MOU/MAA life cycle process for template definition, design, development, implementation, evaluation, and maintenance of all SOP/MOU/MAA components	• Research best practices from regional and inter-regional agencies in template development and create sample templates for review • Present SOP/MOU/MAA templates to SIGB for review • SIGB garners support from Michigan Emergency Management Homeland Security (EMHS) regional boards • SIGB reviews SOP/MOU/MAA process annually	• MPSCIB work groups research best practices from regional and inter- regional agencies in template development and create sample templates for review • Develop draft SOP/MOU/MAA templates • Formalize SOP/MOU/MAA templates for use statewide • SIGB members to attend regional Homeland Security Boards meetings as applicable	MPSCIB/MP SCIB work groups/MSP EMHSD/MP SCS/SWIC	2020
Provide an alert origination software solution to state approved IPAWS message originator for the dissemination of emergency alerts and warnings messages to the public through multiple communications methods	• Develop a statewide EAS/IPAWS program • Select and implement an alert origination software solution based on the program requirements as defined by the Public Alerting work group. • Develop a statewide Mass Notification program • Select and implement a mass notification software solution based on the program requirements defined by the Public Alerting work group	• Provide an IPAWS solution for state authorized alerting authorities. • Provide a Mass Notification solution to State and approved territorial, tribal and local authorities.	DTMB/MSP-EMHSD/ MAB/Local EM	2020/2021

Increase the ability of the State, territorial, tribal, and local authorities to alert and warn the public	• Increase the number of approved AA with access to IPAWS • Increase the number of approved AA using the FEMA JITC lab • Update State and Regional EAS plans • Develop a process for sending alerts and warnings across county and State boundaries	• Increased number of AA with current EAS plans and procedures • Increase the number of AA that participate with MAB in originating RMTs • Increase use of the FEMA JITC lab in training and exercises	MSP-EMHSD /MAB/Local EM	2022

APPENDIX A: LIST OF ACRONYMS

AA	Alerting Authority
AAR	After Action Report
APCO	Association of Public-Safety Communications Officials
APR	Annual Progress Report
CAD	Computer Aided Dispatch
CASM	Communications Asset Survey and Mapping
CLEAR	Commission on Law Enforcement Reinvention
CLEMIS	Courts and Law Enforcement Management Information System
COML	Communications Unit Leader
COMT	Communications Unit Technician
COMU	Communications Unit
DHS	U.S. Department of Homeland Security
DNR	Department of Natural Resources
DTMB	Department of Technology, Management, and Budget
ECC	Emergency Communications Commission
EMHSD	Emergency Management Homeland Security Division
EOC	Emergency Operations Center
FCC	Federal Communications Commission
FEMA	Federal Emergency Management Administration
FirstNet	First Responder Network Authority
GIS	Geographic Information System
HSGP	Homeland Security Grant Program
IPAWS	Integrated Public Alert and Warning System
ICS	Incident Command System
JITC	Joint Interoperable Test Command
LMR	Land Mobile Radio
MAA	Mutual Aid Agreement
MAB	Michigan Association of Broadcasters
MABAS	Mutual Aid Box Alarm System
MECC	Michigan Emergency Communications Commission
MHz	Megahertz
MI CIMS	Michigan Critical Incident Management System
MIFOG	Michigan Interoperability Field Operations Guide
MPSBN	Michigan Public Safety Broadband Network
MPSCIB	Michigan Public Safety Communications Interoperability Board
MPSCS	Michigan Public Safety Communications System
MOU	Memorandum of Understanding
MSP	Michigan State Police
NCC	Network Communications Center
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
NPSTC	National Public Safety Telecommunications Council
NTIA	National Telecommunications and Information Administration
CISA	Cybersecurity and Infrastructure Security Agency
P25	Project 25
PPD	Presidential Policy Directive
PSAP	Public Safety Answering Point
PSBN	Public Safety Broadband Network
SAA	State Administering Agency
SCIP	Statewide Communication Interoperability Plan
SEOC	State Emergency Operations Center
SIGB	Statewide Interoperability Governing Body
SLIGP	State and Local Interoperability Grant Program
SMEs	Subject Matter Experts
SNC	State 911 Committee
SOP	Standard Operating Procedure
SOW	Site on Wheels
SWIC	Statewide Interoperability Coordinator
TFOPA	Task Force on Optimal PSAP Architecture
UHF	Ultra High Frequency
UASI	Urban Areas Security Initiative
VHF	Very High Frequency