State of Michigan
Statewide Communications Interoperability Plan

TABLE OF CONTENTS

SCIP CRITERIA COMPLIANCE MATRIX

No.		Criteria	Section(s) Addressed in SCIP
1. Background and Preliminary Steps			
1.	1.1	Provide an overview and background information on the state and its regions. Include geographic and demographic information.	Section 2.1 State Overview
2.	1.2	List all agencies and organizations that participated in developing the plan. (List them according to the categories recommended for a communications interoperability committee in the All-Inclusive Approach section above.)	Appendix D Points of Contact
3.	1.3	Identify the point of contact. DHS expects that each state will have a full time interoperability coordinator. The coordinator should not represent or be affiliated with any one particular agency and should not have to balance the coordinator duties with other responsibilities.	Section 2.3 Statewide Plan Point of Contact
4.	1.4	Describe the communications and interoperability environment of the current emergency response effort.	Section 4 Current Statewide Assessment and ii
5.	1.5	Include a problem definition and possible solutions that addresses the challenges identified in achieving interoperability within the SAFECOM Interoperability Continuum.	Section 5.1 Interoperability Vision
6.	1.6	Identify any Tactical Interoperability Communications Plans in the state.	Section 2.1.3 UASI Areas/TIC Plans
7.	1.7	Set the scope and timeframe of the plan.	Section 2.4 Scope and Time Frame
2. Strategy			
8.	2.1	Describe the strategic vision, goals, and objectives for improving emergency response interagency wireless communications statewide, including how they connect with existing plans within the state.	Section 5 – 5.4 Strategy

9	2.2	Provide a strategic plan for coordination with neighboring states. If applicable, include a plan for coordination with neighboring countries.	Section 5.4 Strategic Initiatives
1	2.3	Provide a strategic plan for addressing data interoperability in addition to voice interoperability.	Section 5.4 Strategic Initiatives
1	2.4	Describe a strategy for addressing catastrophic loss of communication assets by developing redundancies in the communications interoperability plan.	Section 5.4 Strategic Initiatives
1	2.5	Describe how the plan is, or will become, compliant with the National Incident Management System (NIMS) and the National Response Plan.	Section 5.5 NIMS Compliance
1	2.6	Describe a strategy for addressing communications interoperability with the safety and security elements of the major transit systems, intercity bus service providers, ports, and passenger rail operations within the state.	Section 5.4 Strategic Initiatives
1	2.7	Describe the process for periodic review and revision of the state plan.	Section 5.6 Review and Update Process
3. Methodology			
1	3.1	Describe the method by which multi-jurisdictional, multi-disciplinary input was provided from all regions of the state. For an example of a methodology that ensures input from all regions, see the Statewide Communication Interoperability Plan, or SCIP, methodology developed by SAFECOM.	Section 3 Methodology
1	3.2	Define the process for continuing to have local input and for building local support of the plan.	Section 3 Methodology
1	3.3	Define how the TICPs were incorporated into the statewide plan.	Section 3 Methodology
1	3.4	Describe the strategy for implementing all components of the statewide plan.	Section 3 Methodology
4. Governance			
1	4.1	Identify the executive or legislative authority for the governing body of the interoperability effort.	Section 4.1 Governance Structure

2	4.2	Provide an overview of the governance structure that will oversee development and implementation of the plan. Illustrate how it is representative of all of the relevant emergency response disciplines and regions in the state.	Section 4.1 Governance Structure
2	4.3	Provide the charter for the governing body, and use the charter to state the principles, roles, responsibilities, and processes.	Section 4.1 Governance Structure
2	4.4	Identify the members of the governing body and any of its committees. (List them according to the categories recommended for a communications interoperability committee in the All-Inclusive Approach section above.)	Section 4.1 Governance Structure Appendix D Points of Contact
2	4.5	Provide a meeting schedule for the governing body.	Section 4.1 Governance Structure
2	4.6	Describe multi-jurisdictional, multi-disciplinary agreements needed for decision-making and for sharing resources.	Section 4.1 Governance Structure
5. Technology			
2	5.1	Include a statewide capabilities assessment (or a plan for one) which includes, critical communications equipment and related interoperability issues. At a minimum this should include types of radio systems, data and incident management systems, the manufacturer, and frequency assignments for each major emergency responder organization within the state. Ultimately more detailed information will be required to complete the documentation of a migration strategy. States may use the Communications Asset Survey and Mapping (CASM) tool to conduct this assessment.	Appendix E Excerpt from the Inventory of Public Safety Communications Systems – Phase 2 Report: Radio Inventory Survey, February 2005 Incident Management Section 4.2 Technology Section 5.5 NIMS Compliance CASM tool use is a SCIP strategy in Section 5.4 Strategic Initiatives
2	5.2	Describe plans for continuing support of legacy systems, and developing interfaces among disparate systems, while migrating to newer technologies.	Section 4.2 Technology Section 5.4 Strategic Initiatives
2	5.2.1	Describe the migration plan for moving from existing technologies to newly procured technologies.	Section 4.2 Technology Section 5.4 Strategic Initiatives
2	5.2.2	Describe the process that will be used to ensure that new purchases comply with the	Section 4.2 Technology

		statewide plan, while generally allowing existing equipment to serve out its useful life.	Section 5.4 Strategic Initiatives
6. Standard Operating Procedures (SOPs)			
2	6.1	Include an assessment of current local, regional, and state operating procedures which support interoperability.	Section 4.3 SOP
3	6.2	Define the process by which the state, regions, and localities will develop, manage, maintain, upgrade, and communicate standard operating procedures (SOPs), as appropriate.	Section 4.3 SOP
3	6.3	Identify the agencies included in the development of the SOPs, and the agencies expected to comply with the SOPs.	Section 4.3 SOP
3	6.4	Demonstrate how the SOPs are NIMS-compliant in terms of the Incident Command System (ICS) and preparedness.	Section 4.3 SOP Section 2.1.1 NIMS/Multi-Agency Coordination Systems Section 5.5 NIMS Compliance
7. Training and Exercises			
3	7.1	Define the process by which the state will develop, manage, maintain and upgrade, or coordinate as appropriate, a statewide training and exercises program.	Section 4.4 Training and Exercise Plan
3	7.2	Describe the process for offering and requiring training and exercises, as well as any certification that will be needed.	Section 4.4 Training and Exercise Plan
3	7.3	Explain how the process ensures that training is cross-disciplinary.	Section 4.4 Training and Exercise Plan
8. Usage			
3	8.1	Describe the plan for ensuring regular usage of the relevant equipment and the SOPs needed to improve interoperability.	Section 4.5 Usage
9. Funding			
3	9.1	Identify committed sources of funding, or the process for identifying and securing short- and long-term funding.	Section 7 Funding
3	9.2	Include a plan for the development of a comprehensive funding strategy. The plan should include a process for identifying	Section 7 Funding

		ongoing funding sources, anticipated costs, and resources needed for project management and leveraging active projects.	
10. Implementation			
3	10.1	Describe the prioritized action plan with short- and long-term goals for achieving the objectives.	Section 6 Implementation
4	10.2	Describe the performance measures that will allow policy makers to track the progress and success of initiatives.	Section 6 Implementation
4	10.3	Describe the plan for educating policy makers and practitioners on interoperability goals and initiatives.	Section 6 Implementation
4	10.4	Describe the roles and opportunities for involvement of all agencies in the implementation of the statewide plan.	Section 6 Implementation
4	10.5	Establish a plan for identifying, developing, and overseeing operational requirements, SOPs, training, technical solutions, and short- and long-term funding sources.	Section 6 Implementation
4	10.6	Identify a POC responsible for implementing the plan.	Section 6 Implementation
4	10.7	Describe critical success factors for implementation of the plan.	Section 6 Implementation
4	PSIC #1	Describe how authorized nongovernmental organizations' interoperable communications needs have been included in the planning process and how their needs are being addressed, if applicable.	Section 3 Methodology
4	PSIC #2	Describe how tribal government entities' interoperable communications needs have been included in the planning process and how their needs are being addressed, if applicable.	Section 3 Methodology
4	PSIC #3	Describe how this methodology ensured that PSIC grant requests were considered in support of the statewide planning effort.	Section 3 Methodology

1. INTRODUCTION

Interoperability in the State of Michigan is primarily provided through the Michigan Public Safety Communications System (MPSCS). The State also supports interoperability with legacy and non-standards based systems through gateways, patches, and caches of radios. The State currently provides access to the MPSCS, a Statewide, standards based, state-of-the-art public safety communications system for all Michigan public safety agencies. The system provides intra-agency interoperability and facilitates the cost effective implementation and utilization of new communications technologies for the public safety agencies across the State. The ability to share information on demand in real time, whether voice or data, across agencies, is critical to first responders.

This Statewide Communications Interoperability Plan (SCIP) emanates from the initiatives of the Department of Homeland Security, the Homeland Security Grant Program, and the State of Michigan to establish and/or continue the national objective of seamless communications interoperability, using a collaborative, user-driven planning process. By aligning emergency responders at all levels on the future vision, the Strategic Plan serves as a roadmap for development of communications interoperability at the local and regional levels.

The Michigan Statewide Communications Interoperability Planning process is intended to support ongoing dialog between State authorities and local, tribal, federal, and nongovernmental public safety and emergency response agencies to share their communications needs, discuss solutions, share implementations and collaborate across disciplines and regions. The process also extends the benefits of public safety communications systems to all of these organizations.

The planning process seeks to focus direction and support a synchronized effort for gaining stakeholders' support, developing funding sources and deploying public safety wireless communications across Michigan.

As the provider of standards-based public safety communications interoperability, it is essential that the MPSCS remain current with new and important life-saving technologies. As technology evolves, so, too, must the infrastructure, procedures and policies of the MPSCS. Leveraging the significant efforts already invested in the MPSCS by the State and the public safety services providers throughout the State, the Strategic Interoperability Planning process builds on the inputs of our users and the previously developed Michigan Tactical Interoperable Communications Plan (TICP).

Providing systems and services that facilitate the sharing of information, ensuring ease of use and accessibility, security and protection of information, and promoting the use of central/shared systems fits the interoperable communications systems mission of the MPSCS. The Department of Homeland Security vision of a "system of systems" model for interoperability is also consistent with the communications interoperability solution for Michigan's public safety first responders through MPSCS. Out of the tactical plan development process, the MPSCC identified the following four primary goals to be accomplished to improve statewide interoperability:

- Establish and maintain interoperable communications systems Statewide
- Establish Statewide data capabilities
- Establish and maintain consolidated dispatch centers
- Develop and Maintain Statewide Pre-positioned Emergency Assets

These goals and the objectives that will allow the State to reach them are described in detail in Section 5 of the SCIP.

In submitting the Michigan SCIP, we present the commitment of public safety service providers from all levels of our State to advance our technologies and our processes, and training protocols collaboratively and uniformly. The support of the Department of Homeland Security, through funding and procedural guidelines, is an essential component contributing to our mutual success.

2. BACKGROUND

Statewide public safety communications interoperability in Michigan has been largely driven by the Michigan Public Safety Communications System (MPSCS). The system is a multi-site, dedicated public safety wireless communications network which enables all local, state, tribal, and federal agencies with radio on the system to communicate with each other in both routine and disaster situations. The communications features required by each public safety sector differ between agencies and often requires the use of separate systems. Accordingly, the State recognizes public safety communications interoperability must function as a system of systems.

MPSCS is managed by the Office of Michigan Public Safety Communications System, an organizational component residing within the Michigan Department of Information Technology.

The Michigan Public Safety Communications System Advisory Board was established and directed by Executive Order Number. 2005 – 8 (Appendix 1.0), signed by Governor Jennifer M. Granholm, as the governance structure to the Michigan MPSCS, providing leadership and operational support through its multi-disciplinary and multi-regional membership and the working group subcommittees. Additional discussion regarding the organizational structure and responsibilities is provided in Section 4.2, Governance Structure, of this report.

The establishment of the advisory board as the State Interoperability Executive Committee (SEIC) serves to ensure systems and services that facilitate the sharing of information, provide ease of use and accessibility, ensure security and protection of information, and promote the use of central / shared systems, across the public safety disciplines and regions of the State, benefiting the citizens and emergency services providers of Michigan.

MPSCS is a P25-based shared radio system which is available to provide two-way voice and data communications to all of the State's first responders: police, fire, and EMS. As the largest communications system in Michigan, the MPSCS forms the backbone of the State's approach to public safety communications interoperability. Construction on the system's infrastructure began in 1995 and was completed in 2002. It is used by nearly all State agencies and many county and municipal agencies in the State.

MPSCS provides tested mobile radio communication coverage to members, and utilizes automated performance standards and automated diagnostics that are monitored 24/7 to ensure a timely reactive response to system component outages or other system deficiencies. The system provides complete monitoring, inspection, and maintenance for all MPSCS tower sites and system infrastructure that meet or exceed manufacturer's recommendations. MPSCS also maintains a preventative maintenance system for all major components.

The objective of the MPSCS is to continuously strive for interoperability for first responders. MPSCS has identified four steps summarizing the overall system design philosophy:

- Define in times of emergency, who must talk to whom, when, and how
- Define the communication channels commanders and first responders will use during emergencies
- Assess the capability of MPSCS to support the emergencies situations

- Implement programs to close the gap

Achieving this vision demands continuous improvement to process and infrastructure. Upgrades are often driven by factors such as the prevailing industry software cycles, incompatibility with other systems, new and updated standards, and other lifecycle forces. Past upgrades have provided the MPSCS with a secure standards-based shared system. Integrated voice and data (utilizing only one radio for both voice and data) is now available, allowing statewide mobile wireless access to criminal justice information.

In February, 2006, Michigan began the process to develop a Statewide Tactical Interoperability Communications Plan (TICP). Among the specific requirements listed by the State were:

- Considerations related to regional differences among local and tribal governments
- Incorporation of NIMS, including incident command, multi-agency coordination systems, training, identification and management of resources, qualification and certification, and the collection, tracking, and reporting of incident information
- Identification of mutual aid agreements and memorandums of understanding to address regional communication protocols and comply with national interoperable communications standards and State procedures, including needs along state and international borders

In the process of developing the TICP, the State hosted a one-day interoperability conference for State public safety agency representatives and conducted a web-based survey of all public safety agencies within the State, collecting data concerning interoperability requirements; obstacles to interoperability; available interoperability equipment; governances; and interoperability initiatives. The report and analysis of the collected data is provided in Appendix 3.0(a).

Through the conference and survey processes, input regarding the full spectrum of interoperability capabilities, issues, concerns, goals, and future vision was obtained from the cross-disciplinary and statewide regional representatives. The culmination of this effort was the development of the Statewide TICP Operational Interoperability Planning Committee of the MPSCS Advisory Board.

The Michigan process has evolved from the bottom up in that the immediate need to ensure tactical interoperability has been addressed prior to establishment of the statewide strategy. In doing so, all public safety agencies and organizations and the regions have been engaged as stakeholders. Further, having established a baseline for tactical interoperability in the State, the MPSCS, its advisory board, and the remaining stakeholders have been positioned to identify the future vision and strategic direction for enhancing communications interoperability.

2.1. STATE OVERVIEW

Michigan, the 26th State, joined the Union on January 26, 1837. It is the 10th largest state when combining land and water areas. The State includes 58,110 square miles of land, 1,305 square miles of inland water, 38,575 square miles of Great Lakes water area, and it stretches 456 miles from the northwest corner to the southeast corner. There are over 11,000 lakes in Michigan.

Michigan is made up of two peninsulas of land separated by the Straits of Mackinac. It is bordered on the south by the States of Ohio and Indiana. Its northernmost border lies in Lake Superior north of the

shore of Isle Royale. Michigan is bordered on the west by Lake Michigan and Wisconsin and on the east by Ontario, Canada; Lake Huron; Lake Erie; the Detroit River, and the St. Clair River.

Due to its position with borders on four of the Great Lakes, Michigan has several significant ports. The four largest are Muskegon on Lake Michigan, Port Huron on Lake Huron at the St. Clair River, Detroit on Lake St Clair at the Detroit River, and Monroe at Lake Erie. The ports in Detroit and Port Huron have ports on the Canadian side in Windsor and Sarnia. Due to both of these cities being in such a close proximity with Canada, they are also locations for bridges and tunnels that connect the two countries.

Security for the ports of Michigan falls under the control of the U. S. Coast Guard. The Coast Guard has a three-level security alert system that is used at the ports.

Bridges and tunnels are used to connect Michigan to Ontario at several locations. The publicly-owned International Bridge connects Sault Ste. Marie, Michigan to Sault Ste. Marie, Ontario. The publicly-owned Blue Water Bridge connects Port Huron, Michigan to Sarnia, Ontario. Additionally, the publicly-owned Mackinac Bridge connects the upper and lower peninsulas of Michigan at the Straits of Mackinac.

Detroit is connected to Windsor via two privately-owned venues. Both the Ambassador Bridge and the Detroit-Windsor Tunnel are currently used as crossings between the two cities. The Ambassador Bridge is the number one crossing over the international boundary (U. S - Canadian border), with over 27 percent of all traffic between the two countries crossing here. The Detroit-Windsor tunnel is the number two crossing location over the international boundary. Due to this, a joint study is currently underway in attempts to build a third crossing in the Detroit – Windsor area.

There are also two railway tunnels between the two countries. The first is the Michigan Central Railway Tunnel that connects Detroit with Windsor. The second railway tunnel is the St. Clair Tunnel (also know as Paul M. Tellier Tunnel) that connects Port Huron with Sarnia. Consideration is being given to construct a new tunnel in the Detroit area for use by the railways and to convert the existing Michigan Central Railway Tunnel for use by transport trucks to alleviate the congestion at the other two area border crossings.

During times of emergency or elevated national alerts, the situation is monitored by the Michigan Fusion Center. Michigan is served by a single Fusion Center that has two nodes, one located in the eastern part of the state, the other located centrally in the state. Dependent on the severity of the situation, contact through the 9-1-1 centers, fusion centers and public safety radios would take place. Agencies that may be involved would include the U. S; Department of Homeland Security (U. S. Coast Guard, ICE, PSA) local first responders, and State resources. Additionally, in the Detroit area, the health care community is involved due to a significant amount of the medical staff living in Canada. A special agent from the State Department Diplomatic Security Services is involved with the joint terrorism task force and is the conduit for contact with the State Department in regards to international relations. The bridges, tunnel and port agencies, including those that are privately owned, are involved with the responses and have participated in drills and exercises.

2.1.1. Transit Systems

As in most states, Michigan's mass transit is located in the metropolitan areas of the State. There are counties that have no or very limited mass transit. In most cases, the mass transit serves the city and

the suburbs of that area. The largest transit agencies for metropolitan areas include those in Ann Arbor, Detroit, Flint, Grand Rapids, Kalamazoo and Lansing. In the Detroit area, there are also three Federal Tier II transportation agencies; the SmartBus, People Mover, and DDOT.

Inter-city bus systems are also identified by the Michigan Department of Transportation. Five inter-city bus services are identified and provide services to the major cities in the lower and upper peninsulas. (Figure 2.1[a])

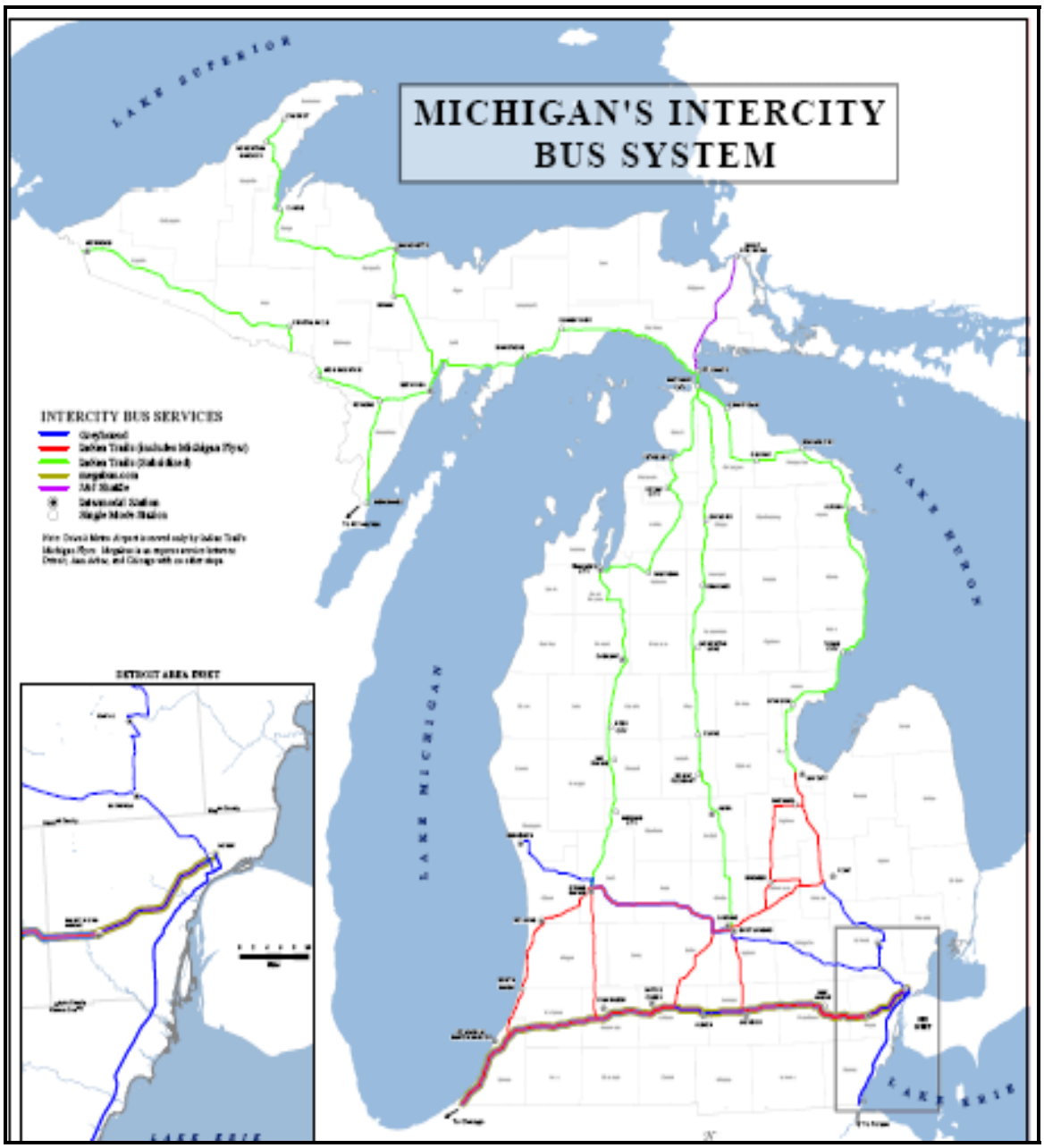


Figure 2.1(a)

There is also a limited intercity passenger rail system that services Michigan's Lower Peninsula. Most of the passenger rail system is located in the southern portion of the State, linking Detroit and Port Huron with routes to Chicago. (Figure 2.1[b])

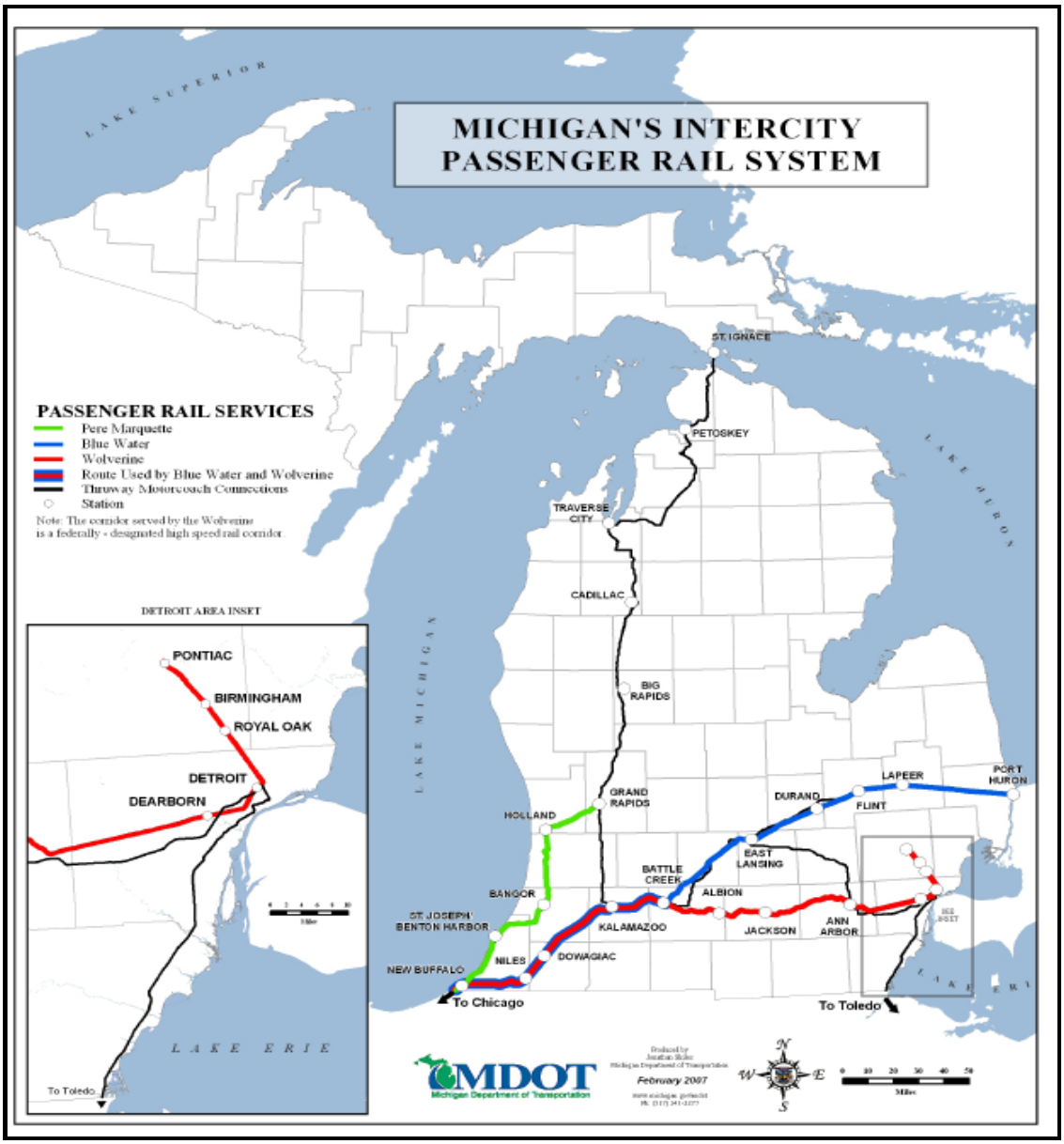


Figure 2.1(b)

Most of the State highway trunk lines comprising the 9,720.8-mile system are posted with either Interstate-, US- or M-numbered designations. Even though each of these different types of route designations has different route markers, they are marked and maintained by the Michigan Department of Transportation (MDOT).

Of the entire 46,567-mile Interstate highway system across the United States, 1,241 miles of that total are located in Michigan. To compliment the Interstate highway system, numerous Interstate business loops and business spurs help guide motorists from the Interstate highway and into or through the

center of cities. MDOT maintains the approximately 2,400 miles of U. S. highways (including business connections) within the State of Michigan. (Figure 2.1[c])

Michigan was the second jurisdiction in the world to both designate and sign a numbered system of State trunk line highways in 1918-19.

Figure 2.1(c) - Michigan Highway System

2.1.2. Demographics

According to the 2000 census, the population of Michigan is 9,938,444 (eighth in U. S. population). The cities with the largest population are listed in the following table:

1. Detroit	951,270
2. Grand Rapids	197,800
3. Warren	138,247
4. Flint	124,943
5. Sterling Heights	124,471
6. Lansing	119,128
7. Ann Arbor	114,024
8. Livonia	100,545

Today's population is a highly-centralized one:

- 35 of the 83 counties have populations of more than 50,000
- 20 Michigan counties have more than 100,000 people
- All but two of these counties are in the southern half of the Lower Peninsula.
- Wayne, Oakland and Macomb Counties alone account for more than 40 percent of the State's population

Michigan's population increased more in the 1990s than in the previous two decades combined, reaching nearly 10 million in the 2000 Census. The State's 6.9 percent growth during the 1990s represents a marked increase over growth rates of 4.4 percent in the 1970s and 0.4 percent in the 1980s. This higher rate of growth represents a strengthening of the State's economy relative to the rest of the nation.

Nevertheless, the most recent decade continues a pattern of slower growth in Michigan and the rest of the Midwest than in the nation as a whole. The nation's growth has recently been fueled largely by international immigration, which is highest in the western states and lowest in the Midwest. Michigan has grown more slowly than the nation as a whole since 1970.

There are 11 federally-recognized American Indian Tribes in Michigan. The reservations are dispersed throughout the State, five in the Upper Peninsula and six in the Lower Peninsula. Additional information regarding the Native American Tribes is provided in Section 2.1.9, Regions / Jurisdictions.

2.1.2.1. Geographic Differences in Population Growth

Population growth continues to be concentrated in areas outside city and village limits. The population of Michigan's cities and villages decreased by 0.4 percent during the 1990s while, the number of people in the remainder of the State increased by 17.4 percent. This continues a shift of

population from cities and villages which began in the 1970s, and it reflects a pattern experienced across the nation.

Despite numerous annexations, the number of people in Michigan's cities and villages decreased by 8 percent from 1970 to 2000, while the number of people in the remainder of the State increased by 52 percent. Cities and villages contained only 55 percent of Michigan's population in 2000, compared to 66 percent in 1970.

Appendix 2.1(c) provides population trend data by Michigan Counties, 2000-2006.

Northern Lower Peninsula
The northern half of the Lower Peninsula continues to be the fastest-growing portion of Michigan, increasing in population by 18 percent during the 1990s. The counties from Clare northward have led the State in growth since 1970. While the rate of population increase for these counties in the 1990s exceeded their 8.4 percent growth in the 1980s, it was far below their 29 percent growth in the 1970s.

Several factors contribute to the growth of this region:

- Land and housing costs are low in many areas.
- The northern Lower Peninsula has many outdoor recreational opportunities.
- This region offers more employment opportunities than in previous decades.
- Counties in the northern Lower Peninsula are less crowded than metropolitan counties.
- This region is experiencing return-migration of people who left in prior decades.
- Ownership of recreational property sometimes leads to permanent migration by people who had previously been seasonal residents of northern Michigan.

Upper Peninsula
The slowest-growing portion of Michigan is the Upper Peninsula (U. P.), which grew by only 1.2 percent in the 1990s. The population of the U. P. has held fairly steady since 1910, alternating between decades of modest growth and decades of slight decline; it decreased by 2 percent over the 90-year period from 1910 to 2000. The long-term decline of the mining industry and a lack of employment opportunities for young people have contributed to a long-term out-migration from many counties of the U. P. As a result, many counties have few young families and a relatively large number of elderly residents. Thus, 14 out of 16 counties in the U. P. had more deaths than births from 1997 through 1999. This tends to mask a modest net in-migration in recent years that reflects the same factors listed above with respect to the northern Lower Peninsula.

Metropolitan Counties
Michigan's "central" metropolitan counties grew by 2.2 percent in the 1990s after declining slightly in population during the 1980s. These counties led the State in growth from 1900 to 1930, but they have grown more slowly than the State as a whole since 1950. The "fringe" metropolitan counties grew by 12.7 percent during the 1990s, following an increase of 6.4 percent in the 1980s. These counties led the State in growth from 1930 to 1970, and since 1970 they have surpassed the growth rate of the State as a whole. The non-metropolitan counties of the Lower Peninsula grew by 10 percent in the 1990s, continuing a pattern of moderate growth since the Census of 1930.

Appendix 2.1(d) provides population trend data by region, 2000 – 2006.

2.1.3. Government

Michigan's government follows the federal plan of three branches: executive, legislative and judicial. In both the executive and legislative branches, elected State officials are limited in the number of terms they can serve in particular positions. In addition to the governor and lieutenant governor, Michigan's voters elect two other executive branch officials Statewide: the secretary of state and the attorney general. While candidates for the governor's office are chosen in the August primary election, candidates for the others are nominated at the regular year between presidential elections (voters cast one vote jointly for governor and lieutenant governor). An amendment to the constitution adopted by the voters in 1992 limits these elected executives to two terms (eight years). This limitation applies to terms if office beginning on or after January 1, 1993.

Today's Legislature consists of 148 members, 110 State representatives and 38 senators, sent to Lansing by the voters of their separate districts.

2.1.3.1. Executive Branch

The Constitution of 1963 provided that the chief executive officer, the governor (and lieutenant governor), be elected for four years, and that the executive branch be grouped into no more than 20 administrative departments. The governor's chief responsibility is to enforce State laws and maintain order. The governor submits a suggested legislative program and a proposed budget to the Legislature and appoints certain officials to various State boards and commissions with the consent of the senate. Most State employees work under a comprehensive civil service plan.

2.1.3.2. Legislative Branch

Michigan's bicameral legislature consists of a 38-member senate elected for four-year terms and a 110-member house of representatives elected for two-year terms. The lieutenant governor acts as president of the senate; members of the majority party elect the speaker of the house. Because of the large number of bills introduced at each session, the legislature exercises its law-making function through a system of standing committees and with the assistance of the bipartisan legislative council.

2.1.3.3. Judicial Branch

The State Supreme Court is Michigan's highest court. It has final jurisdiction over other courts in the State. Immediately below it is the Court of Appeals, established by the Constitution of 1963 as an intermediate appellate court between the Supreme Court and lower courts.

Circuit courts have original jurisdiction over major civil and criminal cases. The State is divided into 57 judicial circuits, each of which consists of one to four counties. There are 78 probate courts, which handle juvenile matters, guardianships, wills and estates. Courts of limited jurisdiction such as the Court of Claims were provided for in the Constitution of 1963. Public Act 154 of 1968 established a district court system that replaced justices of the peace and most municipal courts. There are 104 district courts and five municipal courts (Michigan Manual 2003-2004).

2.1.4. Water Resources

Michigan's water resources provide the State with a mild climate, a ready source of power and transportation, and a growing tourist industry. The State's two peninsulas are almost surrounded by four of the Great Lakes: Huron, Michigan, Erie and Superior. Michigan has 11,037 inland lakes:

- The largest is Houghton Lake, with an area of 31.3 square miles.
- Torch Lake, the second largest, is also the deepest, reaching a 297-foot depth at one point.
- Lake Gogebic is the largest lake in the Upper Peninsula.

Michigan has 36,350 miles of rivers, most of which are not very long. Generally they flow through shallow valleys. In the Lower Peninsula, there are many rapids but only one major waterfall, Ocqueoc Falls. In the Upper Peninsula, where the streams flow over up thrust rocky strata, there are about 150 waterfalls, the largest being Tahquamenon Falls.

The Saginaw River is only 20 miles long, but with its tributaries is the largest drainage system in the State. The Grand River has the second largest drainage basin and is the longest in actual length. Other important streams include the Muskegon and the AuSable rivers, famed in logging days and now noted fishing streams. Three short rivers are vital to the economy of the State as they carry goods among the Great Lakes: Detroit River, St. Clair River and St. Mary's River, where the Soo Locks are located.

2.1.5. Forests

About 50 percent of the State's land is covered with 19.3 million acres of forests, two-thirds of which is birch, aspen and oak. Michigan timberland or forest lands capable of producing commercial timber, accounts for 18.6 million acres of forest land, representing the fifth-largest timberland acreage in the continental United States. Softwoods cover 25 percent and hardwoods 75 percent of the timberland. From an economic perspective, forest-based industries, recreation and tourism support 200,000 jobs statewide and contribute more than $12 billion to the State's economy.

2.1.6. Threats

The foundation for the State's emergency planning activities is the Michigan Hazard Analysis, which provides a comprehensive study of the major hazards that have confronted the State, as well as those that have the potential to occur. Emergency planning undertaken at the State level is based on the hazards identified in this document. This document is available from the Emergency Management and Homeland Security Division of the Michigan State Police.

Interoperable communications play a key role in responding to the identified threats. Thirty natural, technological, and human-related hazards (see list below) were examined in detail, with descriptive narrative and hazard maps provided to identify the overall potential threat to Michigan communities.

The following information is provided for each hazard:

1. An overview of the hazard
2. A listing of the significant disastrous incidents that have occurred as a result of the hazard
3. Programs and initiatives in place to address the negative consequences of the hazard
4. An analysis of the impacts of the hazard on the citizens and communities of Michigan

Some of the hazards are discussed in national or international context, in recognition that in many cases what happens across the United States and around the world has significant bearing on Michigan.

2.1.6.1. Michigan Hazard Analysis Hazards Identified

- Civil Disturbances
- Drought
- Earthquakes
- Energy Emergencies
- Extreme Temperatures
- Scrap Tire Fires
- Structural Fires
- Wildfires
- Dam Failures
- River Flooding
- Great Lakes Shoreline Flooding
- Fog
- Hazardous Material Incidents
- Infrastructure Failures
- Invasive Species
- Nuclear Attack
- Nuclear Power Plant Accidents
- Oil / Gas Well Accidents
- Petroleum / Gas Pipeline Accidents
- Public Health Emergencies
- Sabotage / Terrorism
- Subsidence
- Hail
- Lightning
- Severe Winds
- Tornadoes
- Transportation Accidents
- Ice / Sleet Storms
- Snowstorms

Additionally, one DHS Tier I Critical Infrastructure site and approximately 90 Tier II Critical Infrastructure sites have been identified in the State. Due to security concerns, the exact locations of these sites are not listed in the SCIP, but are available through the Michigan State Police Division of Emergency Management and Homeland Security.

The Michigan Department of Community Health (MDCH) has developed a Hazardous Chemical and Toxin Fact Sheet Matrix, providing easy access to online fact sheets and medical management guidelines. These documents are from respected sources including the Centers for Disease Control and Prevention (CDC), the Agency for Toxic Substance and Disease Registry (ATSDR), the New Jersey Department of Health and Senior Services Right to Know Program, e-Medicine, and MDCH.

Every county has an emergency response plan and a system for contacting emergency responders. First responders include specially-trained hazardous materials (HAZMAT) teams, fire fighters, police, and emergency medical technicians. They control access to the affected area, try to prevent the spread of contaminants, find and treat the injured, and collect criminal evidence. First responders

are trained to recognize chemical hazards and use appropriate protective equipment including respiratory protection devices and protective clothing.

2.1.7. Interoperability

It is the intent of the State of Michigan to facilitate statewide public safety communications for all Michigan public safety agencies. Such a system-of-systems will support intra-and inter-agency interoperability and facilitate the cost effective implementation and utilization of new communications technologies for those agencies and jurisdictions throughout Michigan. Currently there are approximately 80,000 public safety first responders from 800 agencies at the federal, State, tribal, and local governments in the State. Over 40,000 of these responders use the MPSCS as their primary communications system. Of these 40,000 users, more than 30,000 are agencies other than State agency users, showing the high level of acceptance of the State system by non-State level users.

Interoperability is a widespread concern due to past acts of terrorism and natural disasters in this country. Interoperability is a primary function of the Michigan Public Safety Communications System (MPSCS). At present, several interoperability options are available and in use in the MPSCS.

The system provides all current users with access to FCC designated mutual aid / tactical channels. These channels use analog modulation and are available to all user radios operating in the 800 MHz NPSPAC band, regardless of home-system type. An issue with these channels is the currently underway rebanding of 800 MHz. Interoperability with Canadian agencies may be lost depending on the final frequency agreements established between the U.S. and Canada.

Non-MPSCS users on compatible 800 MHz digital trunking systems may have their radios programmed to operate on selected talk groups in our system. Likewise, certain MPSCS users may have their radios programmed to operate on other compatible systems. Local public safety agencies maintain control of their own communications management functions.

Non-MPSCS users on incompatible analog or digital home systems, such as Oakland County's M/A-COM system, have access to the five common mutual aid / tactical channels.

A cache of MPSCS radios is also maintained at strategic locations around the State. These radios may be used in situations where other agencies do not use radios compatible with either of the previous options.

Finally, the MPSCS allows patches (interconnection via an appropriate interface circuit) to other radio systems in specific situations. This is not an optimal solution as it creates an additional load on the MPSCS resources and only operates effectively within the coverage area of the other agency's system. However, it is a popular option used by many small-to-middle-sized agencies operating on other frequency bands to provide interoperability with the MPSCS system.

A predecessor agency to MPSCS, the Michigan Public Safety Frequency Advisory Committee (MPSFAC) has been in existence since 1946. Historically, it has been the organization that has coordinated and promoted radio interoperability in the state of Michigan. It serves as the Region 21 (Michigan) coordinating body for the FCC to develop plans for 700 MHz and 800 MHz frequency coordination. The MPSFAC established and developed regulations for the Michigan Emergency Public Safety System (MEPSS) which consists of one VHF radio frequency - 155.865 MHz. This frequency was used extensively by law enforcement agencies throughout the State of

Michigan, including the State Police, prior to implementation of the MPSCS. It is still in use by police agencies for interagency communication using VHF conventional radio systems.

2.1.7.1. Regional Voice Interoperability Efforts

Detroit / Southeastern Michigan Urban Security Area Initiative (UASI)
As part of the Department of Homeland Security (DHS) grant program for 2006, funding was made available to urban areas to enhance security. One requirement of that funding effort was the development of Tactical Interoperable Communications Plans (TICP) for the urban areas. Detroit/ Southeastern Michigan were one of the urban areas selected for this funding. Under the guidance of the Michigan State Police Homeland Security Division, the Detroit / Southeastern Michigan TICP was expanded to include the six-county Emergency Management Region 2. The UASI TICP program resulted in the development of the Detroit / Southeastern Michigan Urban Area TICP. The plan was reviewed and tested by the DHS in fall of 2006. The interoperable resource data collected in the Detroit UASI TICP for Region 2 are included in this document.

2.1.7.2. Regional TICPs

As part of the federal Homeland Security Grant Program (HSGP) funding to the State of Michigan for FY 2005, each of the seven emergency management regions in Michigan are required to develop a TICP prior to March 2008. One of the objectives of this State-level TICP which was developed in 2007, is to provide guidance for the development of the regional TICPs. This will ensure compliance with the DHS interoperability model and promote consistency among the regions in their approach to tactical interoperable communications. Cross-regional interoperability planning will also be facilitated through the standardization of regional interoperability plans.

2.1.8. NIMS / Multi-agency Coordination System (MCS) Incorporation

Michigan continues to strive to achieve and maintain National Incident Management System (NIMS) compliance. On September 29, 2005, Governor Jennifer Granholm signed Executive Directive Number 2005-9, *Adoption of the National Incident Management System (NIMS) for Emergency Incident Management in Michigan*, adopting NIMS as the State standard for incident management (See Appendix 2.1.1[a]). Under the Michigan Constitution of 1963, each principal department of State government is under the supervision of the governor unless otherwise provided by the Constitution. Pursuant to the Emergency Management Act, 1976 PA 390, MCL 30.407a, the Michigan Department of State Police is responsible for coordinating within the State of Michigan the emergency management activities of county, municipal, State, tribal, and federal governments. The directive specifically required the following:

1. NIMS shall be the State standard for incident management in Michigan
2. State departments and agencies shall adopt NIMS within their departments and agencies and shall provide assistance as requested by the Department of State Police related to implementation and maintenance of NIMS
3. Consistent with the authority vested in the Department of State Police under the Emergency Management Act, 1976 PA 390, MCL 30.401 to 30.421, the Department of State Police is responsible within State government for implementing NIMS and monitoring compliance with

the Directive. When implementing NIMS, the Department of State Police shall do all of the following:

a. Incorporate NIMS into existing emergency management and disaster preparedness training programs and exercises

b. Ensure that federal preparedness funding, including, but not limited to, the Department of Homeland Security Grant Program and the Urban Area Security Initiative (UASI) funds, support the implementation and maintenance of NIMS at the State, local, and tribal levels in accordance with the eligibility and allowable uses of the federal preparedness funding

c. Incorporate NIMS into the Emergency Management Plan for the State of Michigan

d. Promote intrastate mutual aid agreements

e. Coordinate and provide technical assistance regarding NIMS to local and tribal governments

f. Institutionalize the use of the Incident Command System (ICS)

4. The Department of State Police, in consultation with the Homeland Protection Board and the Homeland Security Advisory Council created under Executive Order 2003-6, shall provide guidance on the implementation of NIMS by local and tribal government throughout Michigan.

5. The Department of State Police, in consultation with the Homeland Protection Board and the Homeland Security Advisory Council created under Executive Order 2003-6, shall develop processes and procedures to ensure the ongoing management and maintenance of NIMS by the State of Michigan and local and tribal governments located within the State.

6. The Department of State Police shall make adoption of NIMS a requirement, to the extent permitted by law, for the provision of emergency management or disaster preparedness assistance through grants, contracts, or other activities.

The Michigan Department of State Police has carried out this directive as outlined above.

On October 5, 2005, Captain Kriste Etue, Deputy State Director of Emergency Management and Homeland Security, Michigan State Police, notified all local and district emergency management coordinators, first responder agencies, and State agencies in the State of Michigan of the executive directive through the issuance of Emergency Management Division Informational Letter, Volume: 05-23 (see Appendix 2.1.1 [b]). The informational letter outlined the provisions of the governor's directive and indicated that the Emergency Management Division (EMD) of the State Police would be responsible for implementing NIMS and monitoring compliance with the governor's directive. Additionally, EMD will work in consultation with the Homeland Security Protection Board and the Homeland Security Advisory Council to provide guidance on NIMS implementation to local and tribal governments and to develop processes and procedures to ensure the ongoing management and maintenance of NIMS by State, local, and tribal governments. All State departments and agencies will provide assistance to EMD in the implementation of NIMS as requested.

The State Police Emergency Management Division presented training to local emergency management coordinators at Michigan's annual Homeland Security Summits in 2005 and 2006. This training included an overview of NIMS. It also reviewed the State's strategy for adopting NIMS for all emergency responders including the specific activities and objectives to be met during FY 2005 and FY 2006. The EMD has advertised and encouraged emergency responders to complete the following FEMA online ICS/NIMS courses:

- IS-100 Introduction to Incident Command System
- IS-200 ICS for Single Resources and Initial Action Incidents
- IS-700 National Incident Management System (NIMS)
- IS-800 National Response Plan (NRP)

During FY 2008, the EMD is sponsoring the following courses at various locations:

- ICS 300 – Intermediate ICS for Expanding Incidents
- ICS 400 – Advanced ICS Command and General Staff – Complex Incidents
- Incident Command System/Emergency Operations Center Interface
- Unified Incident Command System (UICS)
- Basic Public Information Officers Workshop
- Exercise Design & Development
- Exercise Evaluation & Improvement Planning
- Exercise Program Management

A complete listing of training programs can found in the Emergency Management and Homeland Security Training Class Dates for FY 2008 (see Appendix 2.1.1[c]).

2.1.8.1. NIMS / Multi-agency Coordination in Michigan's Emergency Management Plan

In achieving NIMS compliance, Michigan has established the framework to utilize NIMS and the National Response Plan (NRP) should federal resources be required in its emergency management planning process. NIMS and the NRP have been incorporated into the State's emergency management plan. The Michigan Emergency Management Plan (MEMP) is a comprehensive, all-hazard plan that coordinates the emergency management and homeland security activities of Michigan State Government. The MEMP is structured around eight Emergency Support Functions (ESFs) and 22 hazard-specific procedures sections that address the full range of natural, technological, and human-related disasters and emergencies – including weapons of mass destruction attacks and other terrorism threats. It incorporates the essential provisions of the National Incident Management System (NIMS) and National Response Plan (NRP) developed by the federal Department of Homeland Security. Although the MEMP addresses all phases of incident management, it is specifically oriented toward preparedness and response activities. The MEMP is a policy document developed and maintained by the Emergency Management and Homeland Division and signed by the Governor and the State Director of Emergency Management and Homeland Security (Director, Department of State Police) upon review and concurrence. The MEMP is too voluminous to be included with this strategic plan but is available for review through the Michigan State Police Emergency Management and Homeland Security Division.

2.1.8.2. NIMS / Multi-agency Coordination in Michigan TICP

The State's Tactical Interoperability Communications Plan (see Appendix 4.3[b]) has incorporated ICS and multi-agency coordination system (MCS) into the plans established policies and procedures to include:

- Common terminology
- Modular organization
- Management by objectives

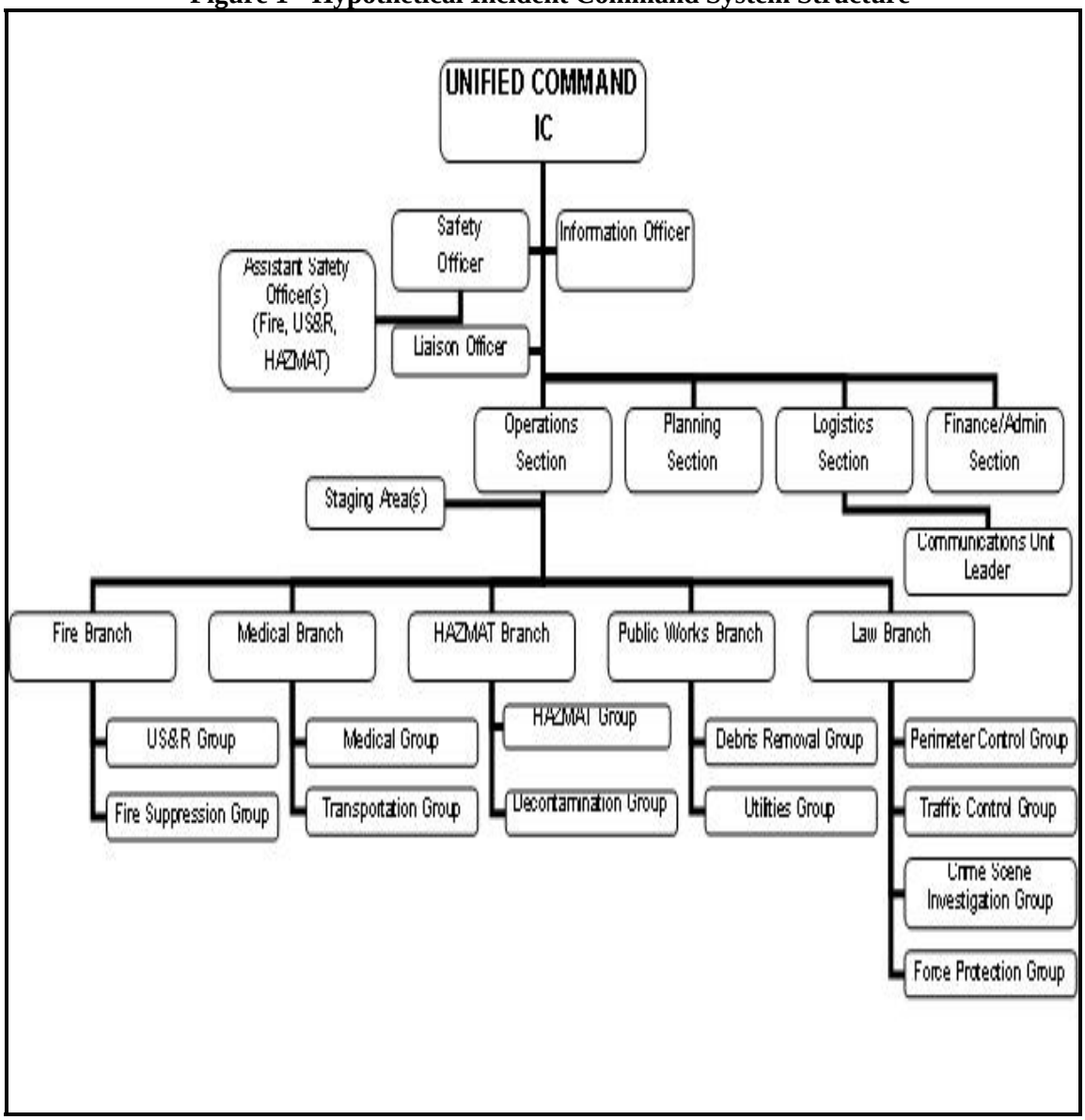
- Incident action planning
- Manageable span of control
- Pre-designated incident facilities
- Comprehensive resource management
- Integrated communications
- Transfer of command
- Unified command

The Incident Command System (ICS) is to be implemented for any suitable incident response. This is especially true for incidents involving various levels of government or various jurisdictions or several departments within the same jurisdiction. Incidents of this magnitude would require that a communications plan be implemented as part of the initial process. ICS is also utilized in drills and exercises to further familiarize individuals with the processes involved. Policies and operational procedures are established in the TICP for creating ICS-based Incident Communications Plans (ICPs).

Figure 1 shows a hypothetical ICS structure as set forth in the TICP:

The balance of this page has intentionally been left blank.

Figure 1 - Hypothetical Incident Command System Structure



2.1.8.3. NIMS / Multi-agency Coordination in Regional TICPs

The State of Michigan has mandated that all eight of its Emergency Management Regions develop Tactical Interoperability Communications Plans. The Detroit Urban Area Security Initiative (UASI) plan was developed for Emergency Management Region 2 (see Appendix 3.0[c]). The Detroit UASI TICP has been completed. This plan incorporates NIMS and multi-agency coordination. A multi-agency training exercise of this plan was conducted in August, 2006, and reviewed by the U.S. Department of Homeland Security. Emergency Management Region 8 has completed a similar TICP that incorporates NIMS and multi-agency coordination systems (see Appendix 3.0[d]). TICPs are currently being developed by the other six emergency management regions, and these plans will include provisions for NIMS and MCS as required by the State and outlined in the State TICP.

2.1.9. Regions / Jurisdictions

Michigan has 83 counties and 11 Native American Tribal entities. For purposes of emergency management and planning, the counties are grouped by regions, as shown below. Also listed in the regions are the Tribal entities.

Region #1

Clinton County	Jackson County
Eaton County	Lenawee County
Gratiot County	Livingston County
Hillsdale County	Shiawassee County
Ingham County	

Region #2

Macomb County	St. Clair County
Monroe County	Washtenaw County
Oakland County	Wayne County

Region #3

Alcona County	Lapeer County
Arenac County	Midland County
Bay County	Ogemaw County
Genesee County	Oscoda County
Gladwin County	Saginaw County
Huron County	Sanilac County
Iosco County	Tuscola County

Region #5

Allegan County	Kalamazoo County
Barry County	St. Joseph County
Berrien County	Van Buren County
Branch County	Pokagon Band of Potowatomi Nation
Calhoun County	Huron Potawatomi Nation
Cass County	

Region #6

Clare County	Montcalm County
Ionia County	Muskegon County
Isabella County	Newaygo County
Kent County	Oceana County
Lake County	Osceola County
Mason County	Ottawa County
Mecosta County	Saginaw Chippewa Tribe

Region #7

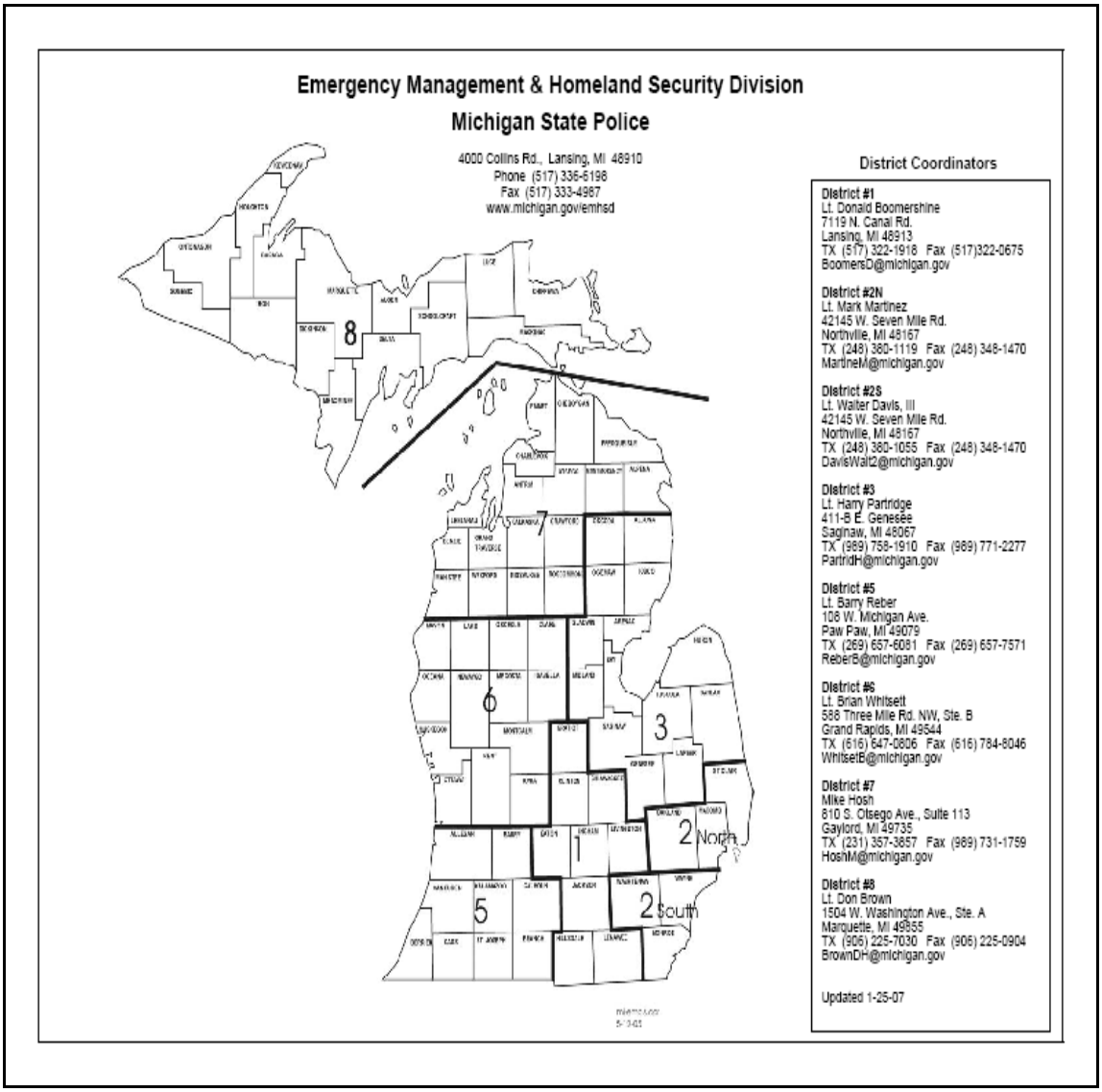
Alpena County	Manistee County
Antrim County	Missaukee County
Benzie County	Montmorency County
Charlevoix County	Otsego County
Cheboygan County	Presque Isle County
Crawford County	Roscommon County
Emmet County	Wexford County
Grand Traverse County	Little River
Kalkaska County	Bay Band of Ottawa Indians
Leelanau County	

Region #8

Alger County	Mackinac County
Baraga County	Marquette County
Chippewa County	Menominee County
Delta County	Schoolcraft County
Dickinson County	Keweenaw Bay Indian Community
Gogebic County	Hannahville Indian Community
Houghton County	Lac Vieux Desert of Community
Iron County	Bay Mills Indian Community
Keweenaw County	Sault Saint Marie Indian Tribe
Luce County	

In addition to the grouping related to emergency management and Homeland Security planning, counties are also arranged by Michigan State Police districts. With the exception of Region 2, which is divided into Districts #2 North and #2 South, the regions and districts overlap. Note there is no Region or District 4. Emergency response agencies, plans and equipment caches are listed in the Michigan Tactical Interoperability Plan, dated April, 2007.

The balance of this page has intentionally been left blank.



2.1.9.1. Native American Indian Tribes

Michigan is home to a total of 11 federally-acknowledged Native American tribes that enjoy a special status under federal law and treaties. Federally acknowledged tribes are not merely organizations of citizens who happen to be of Native American descent. Rather, they are sovereign governments that exercise direct jurisdiction over their members and territory and, under some circumstances, over other citizens as well. Tribal governments provide a wide array of governmental services to their members including lawmaking, tribal police and court systems, health and education services, and many more.

The State generally does not have legal authority over tribal governments and tribal members when they are inside the tribe's territory - those lands designated as the tribe's reservation or trust lands. Instead, the State interacts with tribes on a government-to-government basis. This has lead in recent years to a number of formal government-to-government agreements on a variety of subjects including such matters as treaty fishing rights, taxation, water quality issues, economic development, and casino gaming. The Tribal governments participate in the communications interoperability planning

through the homeland security regions wherein they reside. In Section 2.1.9, these Tribal Nations are listed in the Homeland Security Region that they reside in and participate with.

2.1.10. UASI Areas / TIC Plans

The Michigan State Police, Emergency Management and Homeland Security Division have been designated by the Governor as the State Administrative Agency (SAA) for the State of Michigan. As such, the Michigan State Police are responsible for applying and administering the annual Homeland Security Grant Program (HSGP). One component of the HSGP is the Urban Areas Security Initiative. Executive Order Number 2005-09 and the State TICP requires compliance with NIMS in all UASI and TIC plans in Michigan.

The Michigan UASI area includes the City of Detroit and the Counties of Wayne, Macomb, Monroe, Oakland, Saint Clair, and Washtenaw. The Region 2 UASI program provides the State of Michigan the opportunity to enhance regional preparedness through the region.

2.1.10.1. Detroit / Southeastern Michigan Urban Security Area Initiative (UASI)

As part of the Department of Homeland Security (DHS) grant program for 2006, funding was made available to urban areas to enhance security. One requirement of that funding effort was the development of Tactical Interoperable Communications Plans (TICP) for the urban areas. Detroit/ Southeastern Michigan were one of the urban areas selected for this funding. Under the guidance of the Michigan State Police Homeland Security Division, the Detroit / Southeastern Michigan TICP was expanded to include the six-county Emergency Management Region 2. The UASI TICP program resulted in the development of the Detroit / Southeastern Michigan Urban Area TICP. The plan was reviewed and tested by the DHS in fall of 2006.

As part of the federal Homeland Security Grant Program (HSGP) funding to the State of Michigan for FY 2005, each of the other seven emergency management regions in Michigan are required to develop a TICP during FY 2007. One of the objectives of this State-level TICP is to provide guidance for the development of the regional TICPs. This will ensure compliance with the DHS interoperability model and promote consistency among the regions in their approach to tactical interoperable communications. Cross-regional interoperability planning will also be facilitated through the standardization of regional interoperability plans.

The Region 2 point of contact is:

Mr. James P. Buford, Director
Wayne County Department of Homeland Security and Emergency Management
Office: 734-942-5289
Email: jbuford@waynecountyemd.com

During the TICP validation exercise in the fall of 2006, the UA encountered problems using gateways. Gateways could not be activated at Wayne County Emergency Operations Center or the Mobile Command Center.

2.2. PARTICIPATING AGENCIES AND POINTS OF CONTACT

The State of Michigan views the strategic and tactical components of emergency management and planning for communications interoperability as closely related and inclusive of activities between the Michigan State Police, the designated organization responsible for emergency management and homeland security, and the regions and agencies throughout the State.

The Michigan Public Safety Frequency Advisory Committee (MPSFAC) was established in 1946. Historically, it has been the organization that has coordinated and promoted radio interoperability in the State of Michigan. It has served as the Region 21 (Michigan) coordinating body for the FCC to develop plans for 700 MHz and 800 MHz frequency coordination. The MPSFAC established and developed regulations for the Michigan Emergency Public Safety System (MEPSS), which consists of one VHF radio frequency - 155.865 MHz. This frequency was used extensively by law enforcement agencies throughout the State of Michigan, including the State police, prior to implementation of the Michigan Public Safety Communications Services (MPSCS). It is still in use by police agencies for interagency communication using VHF conventional radio systems.

The MPSCS Advisory Board, which was established by the authority of Executive Order 2005-08, assumes the role of the Statewide Interoperability Executive Committee (SIEC) by providing governance and strategic planning for interoperability activities in the State. The advisory board consists of 19 members, nine from local public safety agencies, and 10 from State agencies. The executive order identifies agencies and disciplines to be represented and the term of office for each position. The executive order defines the process for selection of officers of the committee and the process for filling vacant positions. Refer to Appendix 1.0(a) for a copy of the Order.

The following table lists what agencies are represented on the Advisory Board, what their terms of office are, and who is currently on the Board.

The balance of this page has intentionally been left blank.

Agency	Term	Current Member
Michigan State Police Director	Standing	Col. Peter Munoz, Board Chair
Department of Information Technology Director	Standing	Ms. Teri Taki,
Department of Natural Resources Director	Standing	Mr. Terry Cook
Department of Transportation Director	Standing	Ms. Eileen Phifer
Department of Military and Veterans Affairs, Adjutant General	Standing	Gen. Michael McDaniel, Vice Chair
Department of Military and Veterans Affairs, Assistant Adjutant General for Homeland Security	Standing	Major Bill Wilcox
Department of Community Health Director	Standing	Dr. Jacqueline Scott
Michigan State Police Emergency Management Operations	Standing	Capt. Eddie L. Washington, Jr.
State Fire Marshall	Standing	Mr. Andrew Neumann
Department of Information Technology MPSCS Director	Standing	Mr. Michael Scieszka
Local Representative	4 years	Mr. James Buford, Wayne County Emergency Management
Local Representative	4 years	Chief William Dwyer, Farmington Hills, MI Police Department
Local Representative	4 years	Sheriff Dale Gribler, Van Buren County, MI Sheriff's Department
Local Representative	4 years	Ms. Brenda Ice, City of Detroit, MI Department of Homeland Security
Local Representative	4 years	Chief Fred Paquin, Sault Tribal Law Enforcement, Sault Ste. Marie, MI
Local Representative	4 years	Chief James Reed, Howell, MI Fire Department
Local Representative	4 years	Chief Tom Wibert, East Lansing, MI Police Department
Local Representative	4 years	Mr. Jeffrey Friedland, St. Clair County, MI Emergency Management
Local Representative	4 years	Vacant as of November, 2007

2.2.1. TICP Development

The MPSCS Advisory Board, acting pursuant to its authority under an Executive Order, appointed a standing Interoperability Planning Committee to develop a Statewide Tactical Interoperability Communications Plan (TICP). The Tactical Interoperability Planning Committee consisted of the following:

- Three active local government representatives of the MPSCS Advisory Board. The local government representatives includes at least one representing public safety answering points

(PSAPs) and at least one representing Emergency Management. One of these representatives is appointed to chair the Tactical Interoperability Planning Committee

- One representative from each of the State agencies participating in the plan:
  - Michigan State Police
  - Michigan Public Safety Communications System
  - Michigan Department of Community Health (Office of EMS and Trauma Systems)
  - Michigan Department of Community Health (Office of Public Health Preparedness)
  - Michigan Department of Natural Resources
  - Michigan Department of Transportation
  - Michigan National Guard
  - Michigan Department of Corrections
  - State Fire Marshal
- One representative from each of the Emergency Management regions is nominated by the regional board. Detroit / Southeastern Michigan has a representative from both Districts 2N and 2S.
- These committee members rotate every two years. To ensure representation from each of the emergency responder disciplines of law enforcement, fire, and EMS, the chairperson of the Interoperability Planning Committee requests regional boards to nominate representatives from a specific discipline so as to achieve equal representation by discipline on the committee.
- A full listing of participating agencies, points of contact, and their data is provided in Appendices E through L of the Michigan Tactical Interoperability Communications Plan, dated April, 2007. The Statewide TICP was approved in April of 2007.

The State-level agencies listed below participated in the Michigan Tactical Interoperable Communications Plans (TICP) and are participants in the development of the Michigan SCIP. Some of the agencies are first responders, while others will be secondary responders to an emergency. Michigan Department of Community Health (MDCH) has communications policy-making responsibilities for the State's emergency medical services, while the MPSCS is a communications service provider to all levels of emergency responders.

The balance of this page has intentionally been left blank.

Table 2.2(a) - State of Michigan TICP Participating State Agencies

Agency Name	Primary Jurisdiction	Discipline
Michigan Public Safety Communications System	State of Michigan	Public Safety Communications
Michigan State Police	State of Michigan	Law Enforcement
Michigan Department of Community Health, Office of Public Health Preparedness	State of Michigan	Public Health
Michigan Department of Community Health, Office of EMS and Trauma Systems	State of Michigan	Emergency Medical Services
Michigan Department of Natural Resources	State of Michigan	Law Enforcement/Fire
Michigan Department of Highways and Transportation	State of Michigan	Highways
Michigan National Guard	State of Michigan	National Guard
Michigan Department of Corrections	State of Michigan	Corrections

As part of the Department of Homeland Security (DHS) grant program for 2006, funding was made available to urban areas to enhance security. One requirement of that funding effort was the development of Tactical Interoperable Communications Plans (TICP) for the urban areas. Detroit/ Southeastern Michigan was one of the urban areas selected for this funding. Under the guidance of the Michigan State Police Homeland Security Division, the Detroit / Southeastern Michigan TICP was expanded to include the six-county Emergency Management Region 2. The UASI TICP program resulted in the development of the Detroit / Southeastern Michigan Urban Area TICP. The plan was reviewed and tested by the DHS in fall of 2006.

Currently, the remaining seven Homeland Security regions are developing regional TICPs. These are scheduled to be complete by March of 2008.

2.3. STATEWIDE PLAN POINT OF CONTACT

The primary point of contact for the State interoperability plan is Sergeant Michael Garland, Michigan State Police Division of Emergency Management and Homeland Security. Sergeant Garland has been designated as the State Interoperability Coordinator and is dedicated to enhancing and ensuring interoperability at the statewide level. Further, although a sworn member of the Michigan State Police, Sergeant Garland's representation to interoperability duties is not limited to the State Police, or to the law enforcement discipline. The assigned coordinator is committed to a multi-disciplinary, multi-jurisdictional approach to interoperability.

Name: Sergeant Mike Garland
Title: Training and Exercise Section, Michigan Department of State Police
Address: 4000 Collins Road, Lansing, MI 48910
Phone: 517-336-6359
Fax: 517-336-6482
Email: garlandm@michigan.gov

2.4. SCOPE AND TIMEFRAME

The SCIP is a dynamic plan. Funding and resource restrictions will define the ultimate scope of the activities the SCIP and will impose limitations on what interoperability initiatives are considered within scope. The scope will update and change as the on going statewide strategic planning process matures.

The currently defined scope of the SCIP is to address the goals that have been identified in the planning process. These goals are identified as:

- Establish and maintain interoperable communications systems Statewide
- Establish Statewide data capabilities
- Establish and maintain consolidated dispatch centers
- Develop and maintain Statewide pre-positioned emergency assets

Depending on the final release of the PSIC Grant funds, work is anticipated to begin after 1Q2008 to reach these goals; however much of the work is the continuation of efforts already started in the State. Work that is covered by the current PSIC Grant Program will be completed by the summer of 2010, per the requirements of the PSIC Grant. However, the SCIP is a long-term road map to enhanced interoperability in the State. Much of the work has already started under other initiatives of the State, and with the regular review and updating of the SCIP, the work will continue well past the completion date of the current PSIC Grant program.

The scope and timelines of specific projects being undertaken as part of the current PSIC Grant program are detailed in Section 6 of the SCIP. In this section, the specific objectives, responsible person, anticipated outcomes, measure of success, and completion schedule are listed.

In truly strategic view of interoperability in the State of Michigan, the Advisory Board plans the following milestones for interoperability in the State:

- Appointment of Interoperability Planning Committee members no later than the end of 1Q2008
- Commencing a study of new and innovative interoperability technologies by the summer of 2008
- Completion of the remaining regional TICPs by the end of March, 2008
- Review and update of the State TICP by the end of September, 2008
- Review and update of the SCIP by the end of December, 2008
- Completion of all current PSIC Grant activities by the summer of 2010

3. METHODOLOGY

The methodology and processes utilized by the MPSCS Advisory Board to produce this Statewide interoperability plan closely followed the SAFECOM methodology that calls for a locally-driven approach. Local, tribal, federal, and non-State public safety and initial responder agencies were offered an opportunity to participate in the development of, and share in the benefits of, enhanced Statewide communications interoperability. Their contributions to past efforts were, and will continue to be, important to statewide success. This plan includes strategies to further local, tribal and other State and non-State agency participation through regional and statewide planning and coordination activities.

The planning process for the Michigan SCIP began in 2006, with the development of the Detroit Urban Area Security Initiative (UASI) Tactical Interoperability Communications Plan (TICP). The State felt that there was a need for each homeland security planning region in the State to also develop a TICP but decided that the regions would need further guidance. To that end, the MPSCS Advisory Board began the development of a Statewide TICP that could be used as a model for the regional groups to follow. This TICP was approved by the Advisory Board in April, 2007. Out of the Statewide TICP, potential gaps in interoperability were identified, which the Advisory Board has adopted as specific goals to be accomplished as part of the SCIP. This SCIP is considered a living plan, which will be reviewed and updated on a regular basis to ensure that the changing requirements of the first responders of the State are addressed. The Advisory Board also realizes that the Public Safety Interoperable Communications (PSIC) Grant program currently being administered by the DHS and NTIA is only a step in addressing the interoperability needs of public safety in the State. The SCIP is intended to provide a road map to the future, looking to the interoperability requirements for the next five to ten years in the State.

3.1. REGIONAL PLANNING

In 1999 the Michigan State Police Emergency Management and Homeland Security Division (EMHSD) required the formulation of Local Planning Teams (LPT) in every county statewide. The LPTs were comprised of members from the first responder disciplines. By 2004, the teams had grown in size to include representatives from each of the emergency response disciplines and the private security sector, for a total of 12 disciplines. EMHSD is the State Administering Agency (SAA) for homeland security grant funds, and the LPTs are utilized for project development and implementation at the jurisdictional level under the Homeland Security Grant Program (HSGP).

In support of the national priority of Expanded Regional Collaboration and to achieve a greater return on investment of Homeland Security grant dollars, Michigan established Regional Homeland Security Planning Boards (RHSPB). Seven homeland security boards were created that mirrored the already established emergency management districts and the Office of Public Health Preparedness (OPHP) bio-defense network regions. Board members and alternates are elected by their LPTs. The RHSPBs were also encouraged to fill “at-large” positions on the boards with representatives from diverse sectors (e.g. large municipalities, tribal nations, non-profit, and non-governmental organizations) to ensure multi-disciplined representation. The boards became operational in mid 2006.

Since their conception, the RHSPBs have made great advancements in working collaboratively and strategically within the regional construct. The process facilitates multi-discipline coordination and has greatly improved communications among the jurisdictions. Due to the overall success of this process, the State of Michigan utilized the regional structure for solicitation of PSIC project proposals. One example of this collaborative effect is the current development of regional Tactical Interoperable Communications Plans (TICP) for the regions. One region has completed their plan, with the remaining scheduled for completion no later than March, 2008.

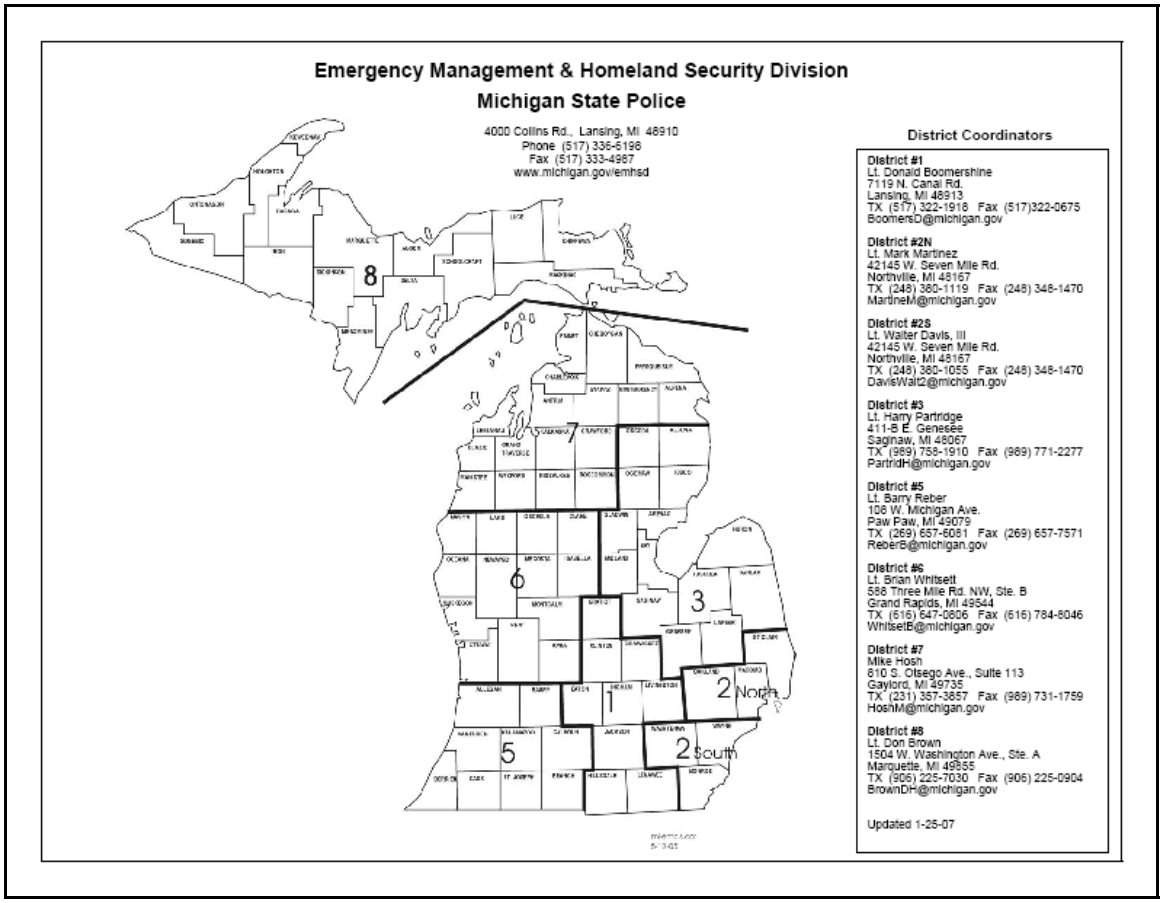


Figure 3.1 – Homeland Security Planning Regions

3.2. TICP DEVELOPMENT

Development of the Statewide TICP began in August, 2006. The State, working with a contractor, felt the need for input from all levels of government in the State was critical to the successful development of a plan. To this end, a comprehensive collection of data concerning the current interoperability capabilities of first responders across the State was undertaken. The State was participating with the Interoperability Communications Technical Assistance Program (ICTAP) at the time, and ICTAP offered the use of its Communication Asset Survey and Mapping (CASM) tool to collect this information; but the timeline to adequately train individuals across the State on how to enter the information was too long to meet the requirements of a grant that the Advisory Board was using to develop the TICP. Instead, a secure, web-based survey tool was developed and distributed

to emergency managers and emergency management coordinators across the State. The survey was conducted between October 18, 2006, and November 22, 2006. The response rate was 60 percent.

Trained staff and contractors also contacted agencies that did not respond to the survey to collect data. The results of this survey became the detailed inventory of communication assets that are provided in the current Statewide TICP. First response agencies at all levels in the State are aggressively inputting data into the CASM tool at this time; and between CASM and the original survey, a comprehensive picture of the interoperability capabilities and gaps in the State emerged. The summary of this data collection effort is provided as Appendix 3.0(b) of this document.

On November21, 2006, a day-long meeting was convened in Lansing, Michigan to further identify interoperability requirements, capabilities, and strategies. Represented at this meeting were:

- Homeland Security regions in the State, with each region representing any Tribal authorities in that region
- Participating State agencies
- Detroit UASI
- Participating Federal agencies in the State

This meeting was formatted to obtain as much input as possible. The morning session was a general session that described in detail the TICP process and how it would evolve into the SCIP process. During the afternoon, the meeting was broken down into two working groups:

- Technical Working Group
- Operational Working Group

The Technical Working Group focused on:

- Identifying current capabilities in the State
- Identifying potential new technologies
- Deciding on the group's priorities

The Operational Working Group focused on:

- Standard Operating Procedures (SOP) for interoperability
- Governance of the TICP
- Setting strategic objectives for interoperability

A summary of these meetings is provided as Appendix 3.0(a) of this Plan.

Out of these meetings and the data collection effort, a clearer picture of the interoperability gaps in the State emerged. The Statewide TICP and the Detroit UASI TICP can be found in Appendix 4.3(b) and Appendix 3.0(c), respectively, of this document. From these efforts, the primary goals of the SCIP were developed.

3.3. PUBLIC SAFETY INTEROPERABLE COMMUNICATIONS GRANTS

With the understanding that the Public Safety Interoperable Communications (PSIC) Grant program from DHS and NTIA is designed to support the goals of the SCIP, the State of Michigan developed a process for the distribution of PSIC funds. This program was designed to ensure access to PSIC funds to as many projects as possible, with the requirement that the projects support the goals of the SCIP. These goals are identified as:

1. Establish and maintain interoperable communications systems Statewide
2. Establish Statewide data capabilities
3. Establish and maintain consolidated dispatch centers
4. Develop and maintain Statewide pre-positioned emergency assets

Michigan is a State of great contrasts between highly urbanized areas and remote, rural areas. In order to make the distribution of PSIC funds as equitable as possible, each region receives a base-line amount of the available funds that are to be used for regional projects that support the goals of the SCIP. The remaining funds will be competed for at a statewide level with all local, tribal, and State agencies submitting projects in support of the goals of the SCIP.

Detailed guidance prepared by the State was distributed to all Homeland Security Planning Regions during September 2007. A process for reviewing the submitted projects was developed, with a selection committee being appointed by the MPSCS Advisory Board. Copies of these documents are provided in Appendix 3(a) of the SCIP. This committee consists of:

- Eight regional representatives[1]
- Seven state agency representatives

Through a thorough review and selection process, projects were selected and organized into specific investment justifications that support the goals of the SCIP. These projects are detailed in Section 6 – Implementation of this SCIP.

3.4. SCIP AND TICP REVIEW PROCESS

The MPSCS Advisory Board realizes that in order for the SCIP to be meaningful, regular review of its components and updates to its contents must be performed. The ongoing reassessment of the SCIP goals and objectives provide for the shift or adjustment of these plans to compensate for newly identified interoperability gaps or unforeseen variances in the plans.

As part of this ongoing process, the Advisory Board has authorized the establishment of the Interoperability Planning Committee at the State level. This committee will consist of representatives appointed from each region and will be divided into two working groups:

- **Operational Working Group -** This group is responsible for determining operational requirements, developing standard operating procedures (SOPs), and coordinating training. Specific work group responsibilities include:

[1] Region 2, which is the Detroit UASI, was split into two regions for the purpose of the PSIC Review Process. There is one representative from the northern section of the UASI, and one from the southern section.

  - Review existing SOPs and apply as appropriate to anticipated incidents
  - Develop formal written guidelines and checklists (SOPs) for critical events
  - Ensure that SOPs and checklists follow Incident Command System (ICS) / NIMS standards
  - Coordinate with agencies participating in NIMS COML training
  - Coordinate with Technical Working Group as appropriate to include technical guidelines and checklists into written plans
  - Provide input into the update of the State TICP based on any updates to the regional TICPs

- **Technical Working Group -** This group is responsible for identifying, developing and overseeing technical solutions. Specific work group responsibilities will include:
  - Identify existing technical solutions, including appropriate and available equipment
  - Evaluate alternative solutions (either available or that can be purchased) with regard to potential incident types
  - Review potential solutions with the Operational Working Group to identify the most appropriate ones for anticipated types of incidents
  - Evaluate solutions through exercises (tabletop up to full-scale) to ensure selected solutions are workable in the field
  - In conjunction with Operational Working Group, prepare solution recommendations and budgets for adoption by the MPSCS Advisory Board
  - Provide input into the update of the state TICP based on any updates to the regional TICPs

This Committee reports directly to the Advisory Board and provides local and regional input into the planning process. The charter for this committee has been drafted by the Advisory Board; a copy is included with this document in Appendix 4.1(a) and appointments are anticipated in the first quarter of 2008.

As another part of the ongoing planning process, the Advisory Board is working with the Homeland Security Planning Regions in the development of a TICP for each region. Currently, the TICPs for the Detroit UASI and Region 8 (see Figure 3.1) are complete. The UASI Plan has been exercised and revised. All other regions are required to have approved TICPs submitted to the Advisory Board no later than March 31, 2008. While the regional TICPs will be reviewed at least semi-annually, a review may be triggered by many circumstances, such as these milestones:

- Changes to technologies used in a region
- Changes in personnel at local agencies
- Results of training exercises (i.e., best practices, lessons learned)
- Results of actual usage of the TICP

The State Interoperability Coordinator will be responsible for making sure that these plans are exercised and reviews are conducted as required, under the authority of the Advisory Board. The Interoperability Coordinator will also be responsible for seeing that the State TICP and SCIP are reviewed and updated accordingly. The Statewide TICP will be reviewed at least semi-annually, based on inputs from the revised regional TICPs. The SCIP will be reviewed no less than annually from the original date of its acceptance.

The Interoperability Coordinator will directly promote and oversee the continued use of the CASM database tool to ensure that information is up-to-date and correct. Reports derived from the tool will be used to provide input into the updates of the Statewide TICP and the SCIP.

4. CURRENT STATEWIDE ASSESSMENT

4.1. BACKGROUND

Michigan Statewide communications interoperability emanates principally from the development of the Michigan Public Safety Communications System (MPSCS), a standards-based shared radio system, available to provide two-way voice and data communications to all of the State's first responders: police, fire, and EMS.

As the largest communications system in Michigan, the MPSCS forms the backbone of the State's approach to public safety communications interoperability. The Office of Michigan Public Safety Communications System, within the Michigan Department of Information Technology, manages the MPSCS. Construction on the system's infrastructure began in 1995 and was completed in 2002. It is used by nearly all State agencies and many county and municipal agencies in the State.

MPSCS provides a state-of-the-art statewide communications system. Local first responders have integrated simulcast subsystems into the MPSCS system, the largest of which is the City of Detroit. Local users have the benefits of the MPSCS system interoperability and core system management while current MPSCS subscribers receive enhanced radio coverage provided by local simulcast subsystems.

MPSCS is an Association of Public-Safety Communications Officials (APCO) Project 25 standards-compliant. P25 is a set of universal standards created by public safety officials for communications equipment. The objective of the standards is to enhance interoperability by assuring that a variety of radio equipment vendors manufacture products that will be compatible with any other P25-compliant system.

MPSCS guarantees 97 percent all-weather mobile radio coverage. While there is no guarantee of portable coverage, experience indicates the level of portable coverage usually surpasses that experienced with conventional analog systems. MPSCS personnel will work with any agency to assess coverage needs and achieve specific requirements. Local public safety agencies maintain control of their own communications management functions.

The system technology allows the radios to be programmed for statewide interoperability. The average radio on MPSCS is programmed in four tiers of talkgroups that include local, regional, Statewide and special event. Local talkgroups are normally used when public safety agencies communicate and support radio communications by a specific agency or the public safety officers in a county. Regional talkgroups are used by State agencies that are large enough to be broken into regions or districts. State Police units frequently use regional talkgroups.

Statewide talkgroups are used when an agency needs to communicate with another MPSCS member that is not in its region. Statewide talkgroups allow public safety agencies to communicate from one geographic corner of Michigan to the furthest point within the State. Special event talkgroups are set up by agency request and are used during critical emergencies or special events such as presidential visits and major sporting events. MPSCS' Network Control Center (NCC) operates the system on a 24/7 basis and provides members with emergency or planned activation of special event talkgroups.

In Appendix 4.3 of the SCIP, a complete listing of all talkgroups in use on the MPSCS can be found. This information is provided to illustrate the widespread acceptance and usage of the MPSCS by not only State agencies, but also local, tribal, and federal agencies.

4.1.1. Communications Interoperability Survey

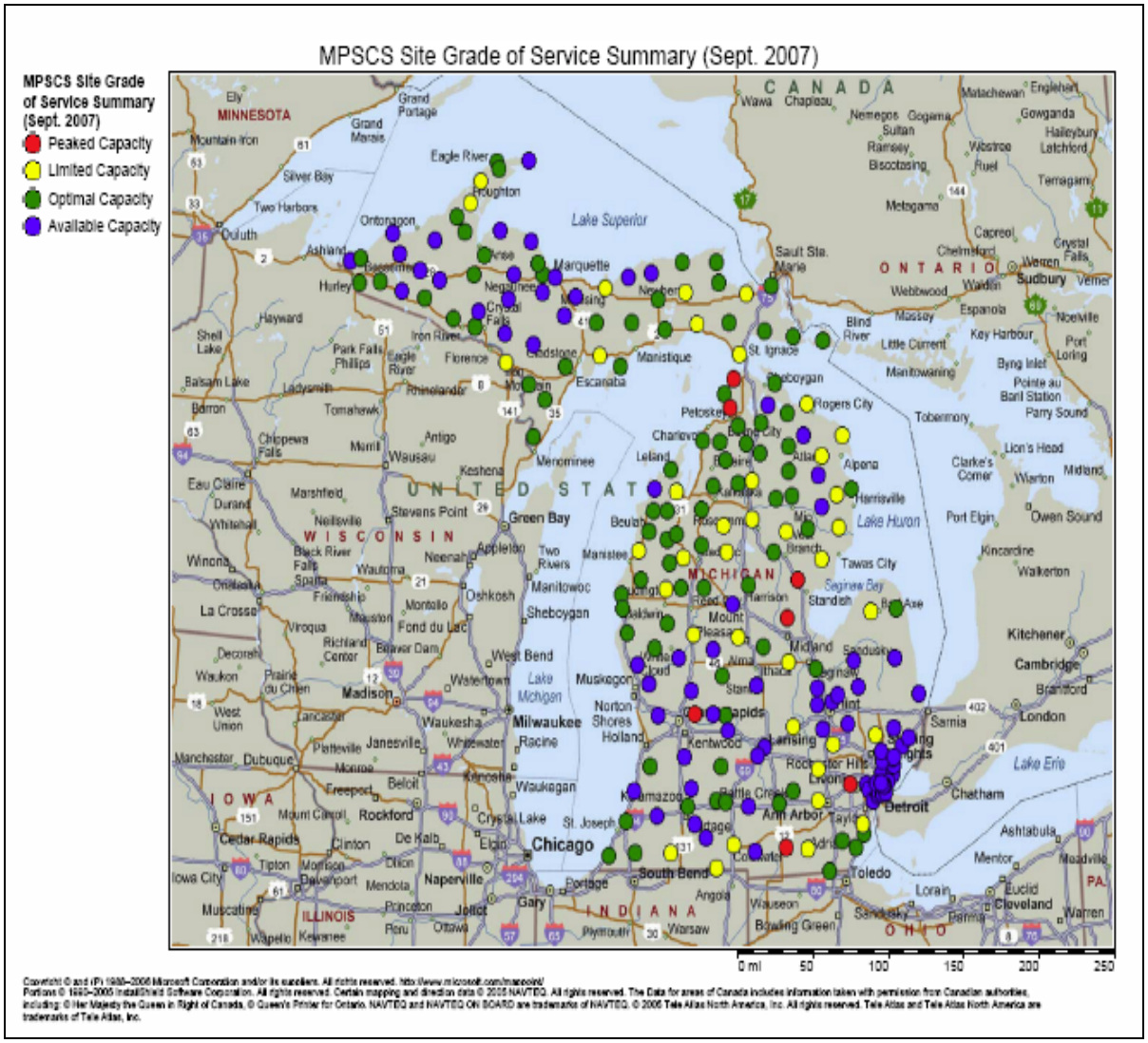
A web-based survey was distributed to State emergency managers / coordinators for an assessment of the current status of radio communications interoperability among emergency responders in the State of Michigan. The survey was conducted between October 18, 2006, and November 22, 2006.

As part of the capabilities assessment, responder organizations were queried regarding:

- Communications Interoperability Requirements
- Communications Interoperability Equipment Installed and Available
- Governance of Interoperability Programs
- Interoperability Initiatives Underway
- Policies and Procedures in Place

Data was collected and compiled through the survey data base. The complete findings of the survey are presented on Appendix 3.0(b). Highlights of the findings include:

- 46 percent of respondents indicate assessed current interoperability as excellent or very good. 54 percent rate interoperability as fair or poor.
- Nearly half of the respondents reported there were no formal agreements exist to address interoperability governance in their service area.
- Less than half of respondents indicated there were any interoperability initiatives under way in their service area.
- Over half of respondents indicate no policies or procedures exist for the use of shared channels used in their area for interoperability.
- Less than half of the responding agencies maintain radio caches; most of those agencies do not have written procedures governing the radio caches.
- Slightly more than two-thirds of responding agencies have a local shared system; of the agencies that do have a shared system, most do not have governing procedures.
- Very few agencies reported having developed written procedures to govern console patches; even fewer have procedures for gateways and mobile interoperable gateways.
- There are parts of the State where there are issues with the coverage and capacity of the MPSCS that could limit interoperable communications
- Gaps were identified in the availability of on-scene interoperability between agencies that use different radio systems
- The availability and use of mobile data to first responders is very limited



4.2. GOVERNANCE STRUCTURE

4.2.1. Executive Authority

The State of Michigan established a governance structure for interoperability planning when Governor Jennifer M. Granholm, issued Executive Order No. 2005 – 8 (Appendix 1.0[a]). That order created the MPSCS Advisory Board. The Order directs that the MPSCS Advisory Board will be responsible for the "…development and implementation of Michigan's interoperable communications plan…." The MPSCS Advisory Board is, therefore, the governing body for the State of Michigan's Interoperability Communications Plan and functions as the State Executive Interoperability Committee.

The MPSCS Advisory Board bylaws are provided in Appendix 4.1(a). The Board meets bi-monthly.

4.2.2. Overview of Governance Structure

The MPSCS Advisory Board, acting pursuant to its authority under the executive order, appoints a standing Interoperability Planning Committee. The Interoperability Planning Committee shall consist of two working groups: an Operational Working Group and a Technical Working Group.

4.2.2.1. Operational Working Group

The group is responsible for determining operational requirements, developing standard operating procedures (SOPs), and coordinating training. Specific work group responsibilities will include:

- Review existing SOPs and apply as appropriate to anticipated incidents
- Develop formal written guidelines and checklists (SOPs) for critical events
- Ensure that SOPs and checklists follow Incident Command System (ICS)/NIMS standards
- Coordinate with agencies participating in NIMS COML training
- Coordinate with Technical Working Group as appropriate to include technical guidelines and checklists into written plans

4.2.2.2. Technical Working Group

The group will be responsible for identifying, developing and overseeing technical solutions. Specific work group responsibilities will include:

- Identify existing technical solutions, including appropriate and available equipment
- Evaluate alternative solutions (either available or that can be purchased) with regard to potential incident types
- Review potential solutions with the Operational Working Group to identify the most appropriate ones for anticipated types of incidents
- Evaluate solutions through exercises (tabletop up to full-scale) to ensure selected solutions are workable in the field
- In conjunction with Operational Working Group, prepare solution recommendations and budgets for adoption by the MPSCS Advisory Board

The balance of this page has intentionally been left blank.

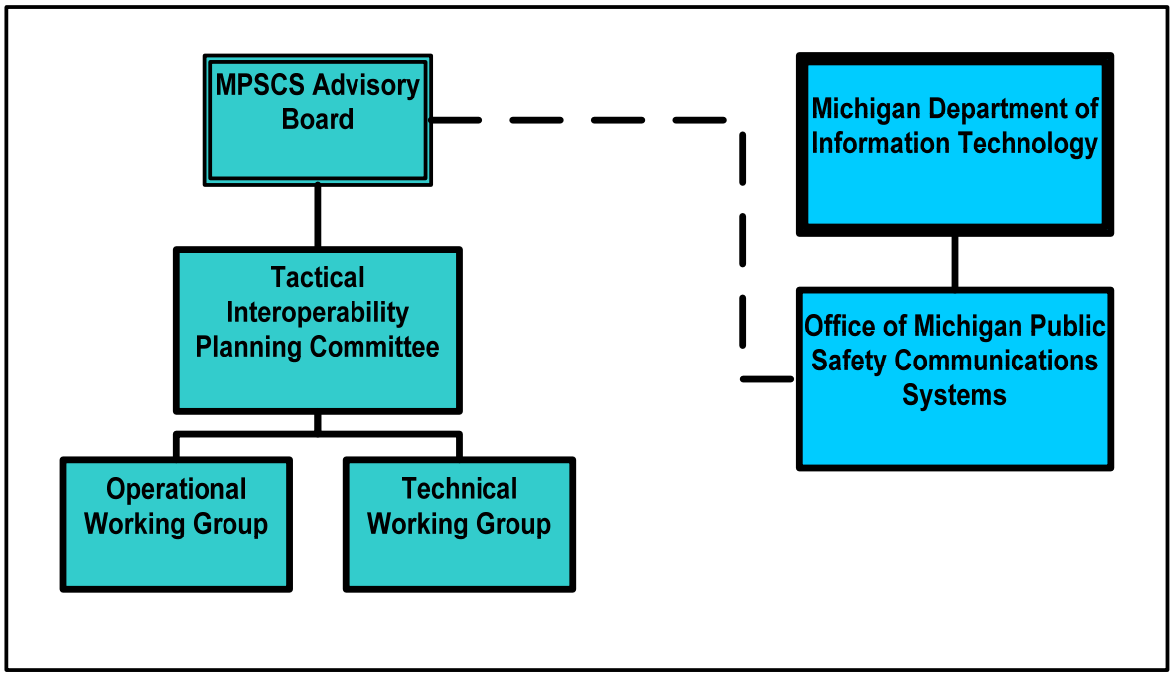


Figure 4.1(a)

The mandated membership of the Advisory Board ensures representation from all relevant emergency response disciplines and regions. Representation includes:

- Nine members representing local emergency first responders
- The following ex-officio, voting members:
  a. The Director of the Department of State Police, or his or her designee who shall be an officer or employee of the Department of State Police
  b. The Director of the Department of Information Technology, or his or her designee who shall be an officer or employee of the Department of Information Technology
  c. The Director of the Department of Natural Resources, or his or her designee who shall be an officer or employee of the Department of Natural Resources.
  d. The Director of the Department of Transportation, or his or her designee who shall be an officer or employee of the Department of Transportation
  e. The Adjutant General, or his or her designee who shall be an officer or employee of the Department of Military and Veterans Affairs
  f. The Assistant Adjutant General for Homeland Security in the Department of Military and Veterans Affairs
  g. The Director of the Department of Community Health, or his or her designee who shall be an officer or employee of the Department of Community Health
  h. The officer or employee within the Department of State Police who has the principal responsibilities for Michigan's emergency management operations as designated by the Director of the State Police
  i. The State Fire Marshal

j. The officer or employee within the Department of Information Technology who has been designated by the Director of the Department of Information Technology as having principal administrative responsibilities for the MPSCS

Additional representation of disciplines and regions is provided through the membership of the Tactical Interoperability Planning Committee, including:

- Three active local government representatives of the MPSCS Advisory Board. The local government representatives will include at least one representing public safety answering points (PSAPs) and at least one representing Emergency Management. One of these representatives will be appointed to chair the Tactical Interoperability Planning Committee.
- One representative from each of the State agencies participating in the plan:
  - Michigan State Police
  - Michigan Public Safety Communications System
  - Michigan Department of Community Health (Office of EMS and Trauma Systems)
  - Michigan Department of Community Health (Office of Public Health Preparedness)
  - Michigan Department of Natural Resources
  - Michigan Department of Transportation
  - Michigan National Guard
  - Michigan Department of Corrections
  - State Fire Marshal
- One representative from each of the Emergency Management regions nominated by the regional board. Detroit / Southeastern Michigan will have a representative from Districts 2N and 2S. These committee members shall rotate every two years. In order to ensure representation from each of the emergency responder disciplines of law enforcement, fire, and EMS, the chairperson of the Tactical Interoperability Planning Committee will request regional boards to nominate these representatives from a specific discipline so as to achieve equal representation by discipline on the committee.

The balance of this page has intentionally been left blank.

Members of the MPSCS Advisory Board

Mr. James P. Buford, Secretary
Director, Wayne County, Department of Homeland Security and Emergency Management

Terry Cook
Communications Section Manager – RAP Room
Michigan Department of Natural Resources

Chief William J. Dwyer
Farmington Hills Police Department

Mr. Jeffrey Friedland, Director
St. Clair County Emergency Management/Homeland Security

Sheriff Dale Gribler
Van Buren County Sheriff's Department

Ms. Brenda Ice, Director
Office of Homeland Security & Emergency Mgt.
City of Detroit

General Michael McDaniel, Vice-Chair
Assistant Adjutant General
Michigan Department of Military and Veterans Affairs

Colonel Peter C. Munoz, Chair
Director, Michigan State Police

Chief Fred Paquin
Sault Tribe Law Enforcement Division

Ms. Eileen Phifer
Michigan Department of Transportation

Mr. Mike Scieszka, Acting Director
Michigan Public Safety Communications System

Mr. James Reed, Fire Chief
Howell Fire Department

Dr. Jacqueline Scott
Director, Ofc. of Public Health Preparedness
Michigan Department of Community Health

Ms. Teri Takai, Director
Department of Information Technology

Capt. Eddie L. Washington, Jr.
Director of Homeland Security and Emergency Management
Michigan Department of State Police

Chief Tom Wibert
East Lansing Police Department

Major Bill Wilcox
Michigan Dept. of Military and Veterans Affairs, Michigan Army National Guard

4.2.3. Meeting Schedule

The Interoperability Planning Committee shall meet a minimum of two times each year to review and update the plan as necessary. Any recommended changes to the plan shall be forwarded to the MPSCS Advisory Board for inclusion on the Board's agenda at its next regularly scheduled meeting.

4.2.4. Agreements for Decision Making and Sharing Resources

The rights and responsibilities of individual agencies participating in the State of Michigan Interoperability Communications Plan include:

- Agencies agreeing to this plan have the authority to request use of systems. Dispatch agencies and emergency communications centers of participating agencies have the authorization to request use of the systems.
- Where applicable, agencies will be responsible for maintaining, testing, and exercising connectivity to interoperable communications systems.
- Agencies retain the right to decide when and where to participate in interoperable communications. For example, agencies will retain the right to accept or decline a patch to a gateway to provide interoperable communications during an incident.

- Agencies participating in the State of Michigan Interoperability Communications Plan may participate in regional plans and may enter into regional Memorandums of Agreements / Understandings as necessary. By entering into a Memorandum of Agreement, agencies indicate their willingness to participate in compliance with Standard Operating Procedures established through the MPSCS Advisory Board and it committees.

4.3. TECHNOLOGY

Interoperability is a widespread concern due to past acts of terrorism and natural disasters in this country. At present, several interoperability options are available and in use in the State. They are described in the following sections.

The State of Michigan has based much of its statewide interoperability effort on the development of the Michigan Public Safety Communications System (MPSCS). The MPSCS is available to all agencies, both governmental and non-governmental, that play key roles in the response to disasters and incidents in the State.

MPSCS is a standards-based shared radio system that is available to provide two-way voice and data communications to all of the State's first responders: police, fire, and EMS. As the largest communications system in Michigan, the MPSCS forms the backbone of the State's approach to public safety communications interoperability. The Office of Michigan Public Safety Communications System, within the Michigan Department of Information Technology, manages the MPSCS. Construction on the system's infrastructure began in 1995 and was completed in 2002. It is used by nearly all State agencies and many county and municipal agencies in the State.

MPSCS provides a state-of-the-art statewide communications system. Local first responders have integrated simulcast subsystems into the MPSCS system, the largest of which is the City of Detroit. Local users have the benefits of the MPSCS system interoperability and core system management, while current MPSCS subscribers receive enhanced radio coverage provided by local simulcast subsystems.

MPSCS is an Association of Public-Safety Communications Officials (APCO) Project 25 (P25) standards compliant. P25 is a set of universal standards created by public safety officials and equipment manufacturers for communications equipment. The objective of the standards is to enhance interoperability by assuring that a variety of radio equipment vendors manufacture products that will be compatible with any other P25-compliant system.

MPSCS guarantees 97 percent all-weather mobile radio coverage. While there is no guarantee of portable coverage, experience indicates the level of portable coverage usually surpasses that experienced with conventional analog systems. MPSCS personnel will work with any agency to assess coverage needs and achieve specific requirements.

Local public safety agencies maintain control of their own communications management functions. Currently, there are over 800 local, State, tribal, and federal public safety agencies with over 40,000 radios on the system.

The system technology allows the radios to be programmed for statewide interoperability. The average radio on MPSCS is programmed in four tiers of talkgroups that include local, regional,

Statewide and special event. Local talkgroups are normally used when public safety agencies communicate and support radio communications by a specific agency or the public safety officers in a county. Regional talkgroups are used by State agencies that are large enough to be broken into regions or districts. State Police units frequently use regional talkgroups. Statewide talkgroups are used when an agency needs to communicate with another MPSCS member that is not in its region. Statewide talkgroups allow public safety agencies to communicate from one geographic corner of Michigan to the furthest point within the State. Special event talkgroups are set up by agency request and are used during critical emergencies or special events such as presidential visits and major sporting events. MPSCS' Network Control Center (NCC) operates the system on a 24 / 7 basis and provides members with emergency or planned activation of special event talkgroups.

MPSCS radio coverage can be enhanced by a variety of methods. Solutions range from the addition of antennas and amplifiers to buildings to the construction of additional tower sites in a region. Portable coverage enhancement equipment is purchased at the expense of the requesting agency and is managed by MPSCS personnel. For example, if an agency wishes to add a tower to the system to enhance in-building portable radio coverage, the agency pays for the construction of the tower and then integrates the tower into MPSCS. Members pay a small fixed maintenance fee and enjoy superior radio coverage at a much lower cost and level of effort than managing a standalone radio system.

While the MPSCS provides the highest level of interoperability through the use of a shared system, the MPSCS Advisory Board also realizes that many local agencies will not be able to join the system for various reasons, such as legacy systems, disparate systems, and individual agency policies. The Advisory Board has provided a focus to allow such agencies to be able to patch into the MPSCS on an "as-needed" basis through a variety of means, such as radio caches, console patches, control stations and gateway systems. These methods are described in detail later in this section.

4.3.1. Michigan Department of Community Health MEDCOM Requirements

The Michigan Department of Community Health (MDCH) has regulatory authority over emergency medical services in Michigan, including the authority to establish radio communications requirements for these services. The MDCH has published Medical Communications (MEDCOM) requirements that establish various frequencies for statewide use by emergency medical service providers.

Pursuant to the MDCH regulations, all basic, limited, and advanced life support vehicles must have vehicle-to-hospital voice communications capable of transmitting and receiving voice communication in 90 percent of the agency's primary geographic service area 90 percent of the time. In addition, these vehicles must be equipped to communicate on very high frequency (VHF) 155.340 megahertz (MHz) Hospital Emergency Radio Network (HERN) channel for:

- Medical direction and control related to patient care and transport
- Contact with hospitals and department-approved facilities receiving emergency patients outside of the life support agency's primary geographic service area
- Disasters
- Primary system failure back-up

Vehicles licensed and in service prior to April, 2004, and which were not equipped for operation on 155.340 MHz during that time period, are exempt from the above requirement. All newly licensed or

replacement vehicles at the basic, limited, and advanced life support levels must be equipped to communicate on 155.340 MHz. All basic, limited, and advanced life support vehicles must be equipped for operation on 155.355 MHz. This frequency is designed for on-scene coordination purposes and is restricted to mobile and portable use only. In addition, the MDCH has authorized the use of 155.400 MHz to be utilized as a secondary HERN frequency as well as for disaster coordination purposes in the following counties:

- St. Clair
- Macomb
- Oakland
- Wayne
- Monroe
- Washtenaw
- Livingston

This frequency may not be used for dispatching purposes in those counties.

The MDCH has the responsibility under Federal Communications Commission (FCC) rules (47 CFR §90.20) to coordinate use of frequencies specified in the rules as reserved for "Emergency Medical" use and listed in FCC frequency allocation tables with the designation "PM." The standards contained in the Michigan MEDCOM requirements are used to determine eligibility of an applicant for use of these frequencies.

In its regulations, the MDCH has encouraged the use by EMS agencies of the national mutual aid channels.[2]

4.3.2. Michigan State Fire Emergency Radio Frequency

In Michigan, radio frequency 154.295 MHz has been designated as an interagency fire coordinating system known as the State Fire Emergency Radio Frequency. A portion of the Michigan fire service community is served by the emergency fire coordinating communications system on 154.295 MHz. The control and overall responsibility of this system is vested in a State Network Governing Board. This is a representative board whose members represent fire entities that use the system and are appointed from the following organizations:

- Michigan State Police
- Michigan Department of Natural Resources
- Michigan State Firemen's Association
- Michigan Association of Fire Chiefs
- Michigan Fire Frequency Coordinator

The Statewide use of this emergency channel is intended to provide the following:

- Improved command and control communications to supervisory personnel in situations where fire agencies from multiple jurisdictions respond to mutual aid requests or other emergencies
- Direct mobile / portable-to-mobile / portable emergency communications between fire units from different jurisdictions.

[2] V-CALL, V-TAC 1-4, U-CALL, U-CALL 1-3, I-CALL, and I-TAC 1-4

The majority of fire departments using VHF radios throughout the State have updated their communication systems to include the State Fire Emergency Radio Frequency.

The Michigan State Police mobile command posts, which are activated for major emergencies and special events, are also equipped with this frequency.

The fire coordinating radio network is exclusively for portable and mobile service. Mobile installation must be limited to fire vehicles, in accordance with FCC rules and regulations for use of the frequency.

4.3.3. Michigan Public Safety Frequency Advisory Committee - Michigan Emergency Public Safety System (MEPSS)

The Michigan Public Safety Frequency Advisory Committee (MPSFAC) has been in existence since 1946. Historically, it has been the organization that has coordinated and promoted radio interoperability in the State of Michigan. It serves as the Region 21 (Michigan) coordinating body for the FCC to develop plans for 700 MHz and 800 MHz frequency coordination. The MPSFAC established and developed regulations for the Michigan Emergency Public Safety System (MEPSS) which consists of one VHF radio frequency: 155.865 MHz. This frequency was used extensively by law enforcement agencies throughout the State of Michigan, including the State Police, prior to implementation of the MPSCS. It is still in use by police agencies for interagency communication using VHF conventional radio systems.

4.3.4. Regional Voice Interoperability Efforts

4.3.4.1. Detroit / Southeastern Michigan Urban Security Area Initiative (UASI)

As part of the Department of Homeland Security (DHS) grant program for 2006, funding was made available to urban areas to enhance security. One requirement of that funding effort was the development of Tactical Interoperable Communications Plans (TICP) for the urban areas. Detroit / Southeastern Michigan was one of the urban areas selected for this funding. Under the guidance of the Michigan State Police Homeland Security Division, the Detroit / Southeastern Michigan TICP was expanded to include the six-county Emergency Management Region 2. The UASI TICP program resulted in the development of the Detroit / Southeastern Michigan Urban Area TICP. The plan was reviewed and tested by the DHS in fall of 2006. The interoperable resource data collected in the Detroit UASI TICP for Region 2 are included in this document.

4.3.4.2. Regional TICPs

As part of the federal Homeland Security Grant Program (HSGP) funding to the State of Michigan for FY 2005, each of the other six emergency management regions in Michigan are required to develop a TICP before the end of March 2008. One of the objectives of this State-level TICP is to provide guidance for the development of the regional TICPs. This will ensure compliance with the DHS interoperability model and promote consistency among the regions in their approach to tactical interoperable communications. Cross regional interoperability planning will also be facilitated through the standardization of regional interoperability plans.

4.3.5. Interoperability Equipment

This section describes all interoperable equipment maintained by the State of Michigan and interoperable systems that are available throughout the State.

4.3.5.1. Swap (Cache) Radios

"Swapping radios" refers to maintaining a cache of standby radios that can be deployed to support regional incidents. These radios may be from a regional cache or from a participating agency. These caches allow all responders to use a common, compatible set of radios during an incident. Specific caches within the State are listed in the table below. More detailed information on each radio cache is documented in Appendix 4.2(a) as well as radio caches maintained by local agencies in each emergency management region.

Table 4.2(a) - Radio Caches Maintained by State of Michigan Participating Agencies

Region	Jurisdiction	Agency	Units	Description
Statewide	State of Michigan	Michigan State Police	244	MPSCS
Statewide	State of Michigan	MPSCS	175	MPSCS (Emergency Radio Pool)
Statewide	State of Michigan	DNR-Law Enforcement	45-50	MPSCS – 4 to 5 radios at 10 district headquarters
		DNR-Forest, Mineral and Fire Management	10-12	MPSCS - Two locations-- Roscommon and Marquette)
		DNR-Parks (Up to 8 at larger parks)	Varies by park	MPSCS
Statewide	State of Michigan	Department of Corrections	Varies by facility	MPSCS

"Shared channels" refer to common frequencies, channels or talkgroups (such as those of a participating agency) that have been established and are programmed into radios to provide interoperable communications among agencies. Specific shared interoperable communications channels available within the state are listed in Table 4.2(b) below. More detailed information on each channel is documented in Appendix 4.2(a), as well as information about shared channels used in each emergency management region.

Table 4.2(b) - Shared Channels / Talkgroups Used Throughout the State of Michigan

Region	Primary Use	Name	Description	Frequency	CTCSS
Statewide	Statewide Interoperability	MPSCS	Event channels, 46 talkgroups	800 MHz trunked	N/A

Statewide	Nationwide Interoperability	I-CALL	NPSPAC Calling	866.0125/821.0125	156.7
			NPSPAC Tactical 1	866.5125/821.5125	156.7
		I-TAC1	NPSPAC Tactical 2	867.0125/822.0125	156.7
		I-TAC2	NPSPAC Tactical 3	867.5125/822.5125	156.7
		I-TAC3	NPSPAC Tactical 4	868.0125/823.0125	156.7
		I-TAC4			
		V-Call	VHF Calling	155.7525	CSQ
		VTAC1	VHF Tactical 1	151.1375	CSQ
		VTAC2	VHF Tactical 2	154.4525	CSQ
		VTAC3	VHF Tactical 3	158,7375	CSQ
		VTAC4	VHF Tactical 4	159.4725	CSQ
		U-CALL	UHF Calling	453.2125/458.2125	CSQ
		UTAC1	UHF Tactical 1	453.4625/458.4625	CSQ
		UTAC2	UHF Tactical 2	453.7125/458.7125	CSQ
		UTAC3	UHF Tactical 3	453.8625/458.8625	CSQ
Statewide	Fire Ground Communications	State Fire Emergency Radio Frequency	Fire Mutual Aid VHF	154.295	N/A
Statewide	Police Mutual Aid	MEPSS	Police Mutual Aid VHF	155.865	N/A
Statewide	Ambulance-to-Ambulance-to-Hospital	MEDCOM	Pre-hospital daily / emergency communications	155.340 155.355*	155.355 - 210.7 Hz

CTCSS – Continuous Tone Coded Squelch System
NPSPAC – National Public Safety Planning Advisory Committee
Note: NPSPAC and I-TAC/I-CALL are synonymous

*On-scene coordination

4.3.5.2. Gateways and Console Patches

"Gateway" systems interconnect channels of different systems (whether on different bands or modes) and allow first responders to use their existing radios and channels to be interconnected with the channels of other users outside of their agency. Console patches are a type of gateway device by definition. Console patches are considered separately below.

Gateway systems maintained by state of Michigan participating agencies are listed in Table 4.2(c) below.

Table 4.2(c). - Gateway Devices Maintained by State of Michigan Participating Agencies

Region	Jurisdiction	Agency	Type	Quantity	Fixed/ Mobile
Statewide	State of Michigan	MPSCS	ACU-1000	1	Fixed
Statewide	State of Michigan	MPSCS	ACU-1000	1	Mobile
Statewide	State of Michigan	Michigan State Police	ACU-1000	1	Mobile

More detailed information on the gateway systems is provided in Appendix 4.2(a), including those gateways maintained by local agencies by region.

Each Michigan State Police regional dispatch center has console patch capabilities. The systems patched depend upon the local radio systems to which the center has access. Console patches maintained by local agencies are listed with details of the patches in Appendix 4.2(a) by emergency management region.

Console patches used by the state of Michigan's participating agencies for interagency interoperability are listed in Table 4.2(d) below.

Table 4.2(d) - Console Patches Used for Interagency Interoperability in Michigan

Region	Jurisdiction	Agency	Type	Quantity	Fixed/Mobile
Statewide	State of Michigan	Michigan State Police	Console Patch	7	Fixed (Each MSP regional dispatch center)

"Shared systems" refers to the use of a single radio system infrastructure to provide service to several public safety agencies within a region or state. Shared systems maintained by State of Michigan agencies are listed in Table 4.2(e) below. Details on each system, as well as shared systems in each emergency management region, are provided in Appendix 4.2(a).

Table 4.2(e) - Shared Systems in the Michigan

Region	System Name	Contact Information	Service Area	Radio System	Public Safety Agencies Supported
Statewide	MPSCS Michigan Public Safety Communication System	Network Communications Center, 517-333-5050	Statewide	800 MHz Digital Trunked	MPSCS members, including City of Detroit

4.3.6. Supporting Legacy Systems; Developing Interfaces with Disparate Systems; and Migrating to New Technologies

4.3.6.1. Supporting Legacy Systems

Past upgrades have provided the MPSCS with a secure standards based shared system. Integrated voice and data (utilizing only one radio for both voice and data) is now available allowing statewide mobile wireless access to criminal justice information. Without upgrades, the system could not take advantage of all available P25 Standard. These standards are always evolving to better meet the needs of public safety. Additionally, the future may include High Performance Data (HPD) capability, which provides mobile access to bandwidth demanding public safety applications including mug shots, fingerprints, GIS mapping, and potentially real time video.

Future upgrades will take advantage of superior network design standards, including MPLS (MultiProtocol Label Switching) allowing greater data routing flexibility. New P25 standards will

bring IP consoles, which will facilitate the consolidation and regionalization of public safety dispatch operations. The MPSCS, with every upgrade, will adopt vital new technologies as new standards are developed. Phase II P25 standards will allow for both narrower banded FDMA technologies and TDMA technologies that conserve scarce public safety communications spectrum. The future will bring broadband data applications to the fingertips of the first responders and Personal Area Networks (PANs) will connect them back to the central network so that they are never without a critical communications link.

Coverage is a primary concern of potential and current users. All users want maximum coverage. However, there are economic tradeoffs. It is simply not possible to provide 100 percent coverage at reasonable cost. Providing indoor coverage for handheld radios adds several magnitudes of complexity and cost to the problem. There are techniques that can enhance coverage in specific situations.

Adding tower sites requires additional frequencies, site-linking infrastructure, site equipment, site maintenance, etc. It is expensive. Frequency availability is subject to many restrictions to avoid interference. There just may not be sufficient suitable frequencies available for a given location.

Adding sites and simulcasting them with existing sites is another approach to enhance coverage, especially in metropolitan areas. Simulcasting reuses the same frequency set at multiple sites. However, simulcasting requires additional equipment and a tighter maintenance regimen. Also, while simulcasting reuses existing frequencies, it does not alleviate the co-channel and adjacent channel interference restrictions. The additional coverage provided by simulcasting sites may impinge on other systems.

The MPSCS was designed for 97 percent mobile coverage. Depending on terrain, building construction, and distance from tower sites, handheld radio indoor coverage may not be acceptable. Additionally, certain low lying geographic areas such as lake shore lines and river channels may be shadowed from the nearest transmitter sites by natural features such as sand dunes or hills. There are several ways to provide in-building and geographic problem area coverage.

The addition of single channel fixed repeaters is one relatively low cost method. Fixed repeaters utilizing equipment designed as vehicular repeaters can enhance outdoor coverage, but they require additional frequencies and are limited to a single channel. They are suitable primarily for limited area, low message traffic areas such as parks, dams, fish hatcheries, etc. These repeaters require link frequencies separated from the trunking channels by several megahertz. This separation may not be easily realizable in the new 800 MHz band configuration. This could restrict use of these repeaters until 700 MHz band frequencies are available.

The use of bi-directional amplifiers is yet another coverage enhancement method, however, since there is a significant potential for interference with these devices, the FCC controls their usage through a number of regulatory limitations. They are generally limited to enclosed areas or small geographically isolated areas. There are two types of bi-directional amplifier.

When multiple channel access is necessary, and the area is physically enclosed such as a building or tunnel, a broadband bi-directional amplifier is an economical method to provide coverage enhancement. The broadband unit passes all signals within a given segment of spectrum. These units are relatively inexpensive, but must be used with caution to prevent interference to adjacent and interleaved services. They are also subject to FCC restrictions which require obtaining permission from each licensee whose signals are retransmitted by the amplifier.

A programmable frequency bi-directional amplifier allows selection of specific channels to be amplified and retransmitted, and reduces the potential for interference, but at significant additional cost and complexity. These units can avoid some of the FCC restrictions by limiting the retransmission of signals to specific channels, but are also intended primarily for in-building or limited geographic area usage.

4.3.6.2. Interfacing with Disparate Systems

The system provides all current users with access to FCC designated mutual aid / tactical channels. These channels use analog modulation and are available to all user radios operating in the 800 MHz NPSPAC band, regardless of home system type. This includes Canadian public safety agencies using 800 MHz systems. An issue with these channels is the rebanding of 800 MHz currently underway. Interoperability with Canadian agencies may be lost, depending on the final frequency agreements established between the U.S. and Canada.

Non-MPSCS users on compatible 800 MHz digital trunking systems may have their radios programmed to operate on selected talk groups in the system. Likewise, certain MPSCS users may have their radios programmed to operate on other compatible systems.

Non-MPSCS users on disparate analog or digital home systems, such as Oakland County's M/A-COM system, have access to the five common mutual aid / tactical channels.

A cache of MPSCS radios is also maintained. These radios may be used in situations where other agencies do have interoperability under either of the previous options.

Finally, the MPSCS allows patches (interconnection via an appropriate interface circuit) to other radio systems in specific situations. Although not an optimal solution, as it creates an additional load on the MPSCS resources and only operates effectively within the coverage area of the other agency's system, it is a popular option used by many small to middle-sized agencies operating on other frequency bands. This option is available at most dispatch centers Statewide.

As more and more public safety users join the MPSCS, system, system capacity must be closely monitored. When additional capacity is needed in certain areas, additional frequencies must be acquired.

4.3.7. Migration from Existing Technologies

Upgrades to the MPSCS take many forms. System-wide changes usually involve system software upgrades. Other upgrades tend to be localized infrastructure equipment changes necessitated by the addition of channels or sites or conversion of sites to simulcasting or a combination of these. Other equipment changes are necessitated by equipment obsolesce or failure.

The MPSCS currently operates in the 800 MHz NPSPAC band, which is quickly becoming full in high population areas. The 700 MHz band will be available for use by public safety in the future. Both 800 MHz and 700 MHz may be used in a single radio by purchasing equipment capable of operating in both bands. The 700 MHz band can, thus, be used to increase system capacity in areas where the 800 MHz band is congested.

Future improvements in technology will also help address system capacity concerns. Currently, the P25 Phase 2 standards for Time Division Multiple Access (TDMA) systems are in the development stages. Once implemented, the new TDMA standards would facilitate the manufacturing of equipment that would allow twice the capacity on each channel. This would, in turn, provide more than twice the capacity at each site using the same amount of frequency spectrum and equipment.

MPSCS currently uses Motorola's ASTRO Version 6.5 software. This version includes capability for Integrated Voice and Data (IV&D). However, this capability is only being tested by Van Buren County at present. Data capability is limited to 9.6 Kbps.

The next anticipated major system software upgrade is to ASTRO Version 6.9 software. This version software will enable the dispatch control consoles to utilize internet protocol (IP) and eliminate some system and console infrastructure equipment associated with that migration. This is critical because the system has reached capacity in regard to adding additional conventional dispatch consoles. This includes the removal of the console electronics banks (CEBs), and Ambassador Electronics Banks (AEBs). The AEB is the audio switch that previously directed dispatcher audio. The ASTRO version 6.9 software includes higher performance data capability. This allows 96 Kbps data in a 25 KHz channel. However, the channels at 800 MHz are normally 12.5 KHz bandwidth. High speed data will be limited to channels which have adequate clearance on each adjacent channel to allow the wider bandwidth.

Once that conversion has been made, the system can be prepared for the next stage upgrade, conversion to Version 7.0 software. This will include a new core network design utilizing MPLS (MultiProtocol Label Switching, allowing greater data routing flexibility and eliminate the Nortel Wide Area Network (WAN) switch.

Another important aspect of the upgrade process is the fact that installed equipment has a finite life cycle. It is necessary to replace aging equipment to maintain a continued level of performance and to obtain new capabilities and features implemented in the later design cycles of the equipment.

4.3.8. New System Compliance with Statewide Plan

The Michigan SCIP does not advocate replacing the current MPSCS system, but rather brings in new features and technologies that enhance the MPSCS' current capabilities. This is seen in the key focus areas (goals) that the Advisory Board selected for this plan. Again, these key goals are:

- Establish and maintain interoperable communications systems Statewide
- Establish Statewide data capabilities
- Establish and maintain consolidated dispatch centers
- Develop and maintain Statewide pre-positioned emergency assets

All projects that were selected for inclusion in the current PSIC grant process are required to address at least one of these goals. In this way, a clear course to the future is set. In Section 3 of this SCIP, a full explanation of the project selection process is detailed. More importantly, this SCIP sets the tone and direction of future work and projects. The current PSIC Program is only viewed as a starting point on the journey to enhancing interoperable communications in the State. With the regional TICPs being completed in the near future, and ongoing review and updates to the SCIP and the TICPs, this process will continue to address gaps that are identified in the future

4.4. STANDARD OPERATING PROCEDURES (SOPS)

4.4.1. Assessment of Current Operating Procedures Supporting Interoperability

Michigan has based much of its Statewide interoperability effort on the development of the Michigan Public Safety Communications System (MPSCS). The Office of Michigan Public Safety Communications System, within the Michigan Department of Information Technology, manages the MPSCS.

Executive Order Number 2005-8 established an advisory board as the governing body for the MPSCS, charged with "…development and implementation of Michigan's interoperable communications plan…." The governance model is based on the Department of Homeland Security model, which refers to a shared vision and an effective organizational structure to support any project or initiative that seeks to solve interoperability issues by providing guidance and support *through common policies, processes, and procedures (italics added).* The executive order defines membership of the advisory board to include nine members representing local emergency first responders. Refer to Appendix 1.0(a) for a review of Executive Order Number 2005-8. MPSCS Standard Operating Procedures are included in this plan in Appendix 4.3(a).

Through the work of the MPSCS and its advisory board, comprehensive policies and procedures have been established for communications interoperability. Policies include, but are not limited to radio caches, shared channels, NIMS compliance, agencies' responsibilities and rights, and problem identification and resolution. The policies and procedures promulgated by MPSCS relating to interoperability provide sound guidance to agencies using the system, across disciplines and geo-political boundaries. Each discipline and representatives of local and regional agencies participate in the process.

4.4.2. Developing, Exercising, Updating, and Maintaining Communications Plans and Procedures

An overriding goal of the directives management process is to continuously seek and implement compliance with known best practices. Accordingly, the process by which the State, regions, and localities will develop, manage, maintain, upgrade, and communicate standard operating procedures follow guidance from NIMS, National Interagency Fire Center, National Crime Information Center, the National Response Plan, the Commission on Law Enforcement Accreditation standards for PSAPs, APCO and the National Fire Protection Association and other nationally recognized bodies as they become available.

The Advisory Board, as part of its mandated responsibilities, is charged with making recommendations regarding best practices for implementing interoperability of wireless public safety wireless communication, including data, in Michigan on a local, regional, and Statewide basis; future trends in public and private sectors relating to public safety wireless communication, interoperability standards, and technology in support of providing public safety wireless services in the most effective and efficient manner; opportunities for effectively using the MPSCS as part of local, regional and Statewide mutual-aid agreements, 9-1-1 dispatch operations, and ICSs; best practices for using interoperability training on a local, regional and Statewide basis; and development and implementation of Michigan's interoperable communications plan.

Within the advisory board, an operational working group has been established. Specific work group responsibilities include:

- Review existing SOPs and apply as appropriate to anticipated incidents
- Develop formal written guidelines and checklists (SOPs) for critical events, review and update are needed
- Ensure that SOPs and checklists follow Incident Command System (ICS)/NIMS standards
- Coordinate with agencies participating in NIMS COML training
- Coordinate with technical working group as appropriate to include technical guidelines and checklists into written plans

SOPs also include the use of ICS forms necessary for communications, such as the Incident Radio Communications Plan (ICS205), Radio Requirements Worksheet (ICS216), and Radio Frequency Assignments Worksheet (ICS217). Fourteen Incident dispatchers are also frequently tasked with completing other ICS forms such as the Check-in List (ICS211), Demobilization Check-out (ICS221), and T-cards to track the status of resources.

The Michigan Tactical Interoperable Communications Plan (TICP) includes the policies and procedures for interoperable communications developed through the efforts of the MPSCS. The plan has been communicated to Michigan public safety responder community through the existing organizational channels. (See Appendix 4.3(b), Section 8 of the TICP for SOPs)

4.4.3. Agencies Participating in Policy Development/Expected Compliance with SOPs

Specific agency participation in the interoperability policy development process is established through the MPSCS governance structure. The Advisory Board appoints the Interoperability Planning Committee, consisting of the following:

- Three active local government representatives of the MPSCS Advisory Board - The local government representatives will include at least one representing public safety answering points (PSAPs) and at least one representing Emergency Management. One of these representatives will be appointed to chair the Interoperability Planning Committee
- One representative from each of the State agencies participating in the plan
  - Michigan State Police
  - Michigan Public Safety Communications System
  - Michigan Department of Community Health (Office of EMS and Trauma Systems)
  - Michigan Department of Community Health (Office of Public Health Preparedness)
  - Michigan Department of Natural Resources
  - Michigan Department of Transportation
  - Michigan National Guard
  - Michigan Department of Corrections
  - State Fire Marshal

- One representative from each of the Emergency Management regions nominated by the Regional board. Detroit / Southeastern Michigan will have a representative from both 2N and 2S. These committee members shall rotate every two years. In order to ensure representation from each of the emergency responder disciplines of law enforcement, fire, and EMS, the chairperson of the Interoperability Planning Committee will request regional boards to nominate these representatives from a specific discipline so as to achieve equal representation by discipline on the committee.
- The MPSCS advisory board will consider federal representation on the committee at a future date.

Agencies agreeing to this plan have the authority to request use of systems. Dispatch agencies and emergency communications centers of participating agencies have the authorization to request use of the systems. Where applicable, agencies will be responsible for maintaining, testing, and exercising connectivity to interoperable communications systems. Agencies retain the right to decide when and where to participate in interoperable communications. For example, agencies will retain the right to accept or decline a patch to a gateway to provide interoperable communications during an incident.

Agencies participating in the State of Michigan TICP plan may participate in regional plans and may enter into regional Memorandums of Agreements / Understandings as necessary.

4.4.4. Compliance with NIMS and ICS

The policies and operational procedures for tactical communications during an incident, as developed for and included in the Michigan TICP, are based on NIMS and ICS procedures and are mandated by Executive Order Number 2005-09.

Procedures include the utilization of a communications leader and outline the requirements and responsibilities of the communications leader. The NIMS / ICS forms for interoperable communications are included in Appendix N of the Michigan TICP.

4.5. TRAINING AND EXERCISES PLAN

The State of Michigan has a formal and robust statewide training program for interoperable communications that the Michigan State Police oversee. In Michigan, the State Police are the designated State agency that oversees emergency management activities. Training for interoperable communications is provided to cover two core areas:

- MPSCS Use and Operations
- Disaster and Incident Preparedness

Currently, plans are being developed to ensure that each of the regional TICPs, the State TICP, and the SCIP are exercised on a regular (i.e. annually) basis. As the regional plans are finalized, the State Interoperability Coordinator will be responsible for ensuring that the plans are exercised and updated accordingly. This process is further detailed in Section 3.4 of the SCIP.

4.5.1. MPSCS Use and Operations

As a condition of using the MPSCS as either a primary communications system or to facilitate interoperability, the MPSCS Advisory Board has instituted a policy that all users have received operational training on the use and capabilities of the MPSCS and appropriate subscriber equipment. This policy is documented in the MPSCS Membership Agreement, which is included in Appendix 4.4(a). Normally, this training is provided when an agency initially joins or begins using the capabilities of the system; however, the training can be scheduled as needed. This training is also available to local agencies that choose to patch local legacy systems to the MPSCS so the operational ramifications of the patch are understood.

The MPSCS training personnel are specially-trained in the operation of all MPSCS-compliant equipment. Training classes are scheduled at the convenience of the agency and are held at the location of choice.

4.5.2. Disaster and Incident Preparedness

To keep statewide public safety resources at a high-level of interoperability awareness and capabilities, the Michigan State Police Emergency Management and Homeland Security Division (EMHSD) provides structured training and guidance to personnel throughout the State. The mission of the EMHSD is to enhance public safety by improving Michigan's ability to protect, prepare for, respond to, and recover from all threats, emergencies and disasters that may face our communities. One of the main steps of preparedness is the education of emergency managers and their programs in an "all hazards approach." This training is provided to make ensure that first responders and planners across the State understand and use the concepts and practices that are required by ICS and NIMS.

The EMHSD coordinates a number of planning and training activities designed to improve the capabilities of State and local government to mitigate, prepare for, respond to, and recover from natural, technological, and human-related disasters and emergencies. Interoperable communication plays a key role in any emergency and is considered an integral part of the planning process. Collectively, these activities help to save lives; protect public health, safety and property; and ensure that needed assistance (in the form of personnel, equipment, facilities, materials, supplies, and financial aid) is provided to local governments, businesses, and individuals and families when incidents occur that overwhelm local capabilities. Disaster and Incident Preparedness planning is categorized into three major areas:

- Mitigation
- Preparedness and Response
- Recovery

The Division also develops and maintains an extensive series of guidance documents to provide vital emergency planning information and assistance to State agencies, local governments, tribal entities, non-governmental organizations, and private industry. These documents help facilitate the Statewide development of emergency operations plans, as well as supporting plans and procedures for such critical functions as damage assessment; public information dissemination; communications, warning, evacuation, and in-place sheltering; and site-specific hazardous material incident response. Typically, the documents contain both technical information and suggested language and a format to aid in developing the plan or procedure. These guidance documents are distributed statewide to emergency management audiences and are also available on the State of Michigan website for viewing and downloading.

Through these efforts, first responders across the State are introduced to key concepts in the areas of incident command that will allow them to better provide and manage communications at the scene of an incident or disaster. In Table 4.4.2(a), the courses that were provided in 2007 by EMHSD are documented.

The exercise and training process as designed ensure that training is cross-disciplinary through a variety of channels, including the MPSCS Advisory Board, the EMHSD, the Michigan Department of Community Health, and the Department of Military and Veteran's Affairs.

The balance of this page has intentionally been left blank.

Table 4.4.2(a) - Incident Command/Emergency Management Training 2007

Course Name	Number of Times Offered
Basic Skills in Emergency Management, Modules 1,2, and 3	1
ICS/EOC Interface Course	1
Exercise Design and Development	2
Training for State Agency Fiscal and Administrative Officers	1
Damage Assessment Workshops	6
Professional Emergency Manager Certification Examination	2
Introduction to Emergency Management	5
Local Coordinators Workshop	1
Hazard Mitigation Comprehensive Plan Interface	1
Basic Public Information Officers Workshop	1
Developing Volunteer Resources	1
Nuclear Power Plant Drill Planning	2
Evacuation and Re-Entry Planning	2
Exercise Evaluation and Improvement Planning Course	2
Emergency Planning Course	2
Special Needs Planning	1
Disaster Response and Recovery Operations	1
Summit Conference	1
Training with Michigan Department of Community Health	1
Pandemic Planning for State Agencies	1
Emergency Management 101	3
State Staff Training	1

Courses planned by EMHSD during the latter part of 2007 and during 2008 are documented in Appendix 2.1.1(c).

4.5.3. Certifications

The current communications training programs are determined by various agencies that support the networks, exercises, and disaster responses utilized in the State. Training programs exist to support these needs.

The State of Michigan believes, through a program of established training curriculum and professional certification, emergency managers and first responders receive the proper training and stay current to new advances in operations and technology. To that end, certifications are granted by different groups in the State that move the State's first responder professional closer to that goal.

Training is provided and governed by various agencies in the State, based on their areas of responsibility. At all levels of first responder, basic communication skills are taught and certified by the various agencies and organizations. Currently, the training oversight is organized in the following manner:

- All law enforcement officers (LEO) are certified by the State through a process of academy, on the job, and in-service training. This training is overseen by the Michigan Commission on Law Enforcement Standards (MCOLES).
- Fire services are overseen by the Department of Labor and Economic Growth, Bureau of Fire Services, which sets training standards and certification for firefighters throughout the State.
- Training and certification for Emergency Medical Service (EMS) providers is overseen by the Department of Community Health.
- The training of emergency telecommunicators (i.e. dispatchers, call-takers) is overseen by the Emergency Telephone Service Committee (ETSC) of the Michigan State Police.

In the area of Emergency Management, over 20 years ago EMHSD developed the Professional Emergency Manager (PEM) designation to meet the needs of professionals to become leaders in emergency management. The nationally-recognized training curriculum is comprised of classroom discussions and activities, case studies, best practices, networking, web-based programs and current guidance. In a post-Katrina and post-September 11 world, courses are continuously being modified to meet the changing needs of emergency managers.

Michigan recognizes the importance of Communications Leader (COML) training and certification for all first response stakeholders in the State. The MPSCS Advisory Board plans to endorse and support any nationally recognized COML standards developed and promulgated through FEMA and the National Integration Center Incident Management Systems Division.

The State has not established special training or certification requirements applicable to Public Safety Interoperable Communications (PSIC) grant-funded equipment stipulated in this SCIP. Training or certification requirements are derived from the technological specifications of the newly acquired systems.

4.5.4. Exercises

Through the use of specific scenario training exercises and the ongoing day-to-day use of interoperable systems in the State, first responders will maintain a thorough working knowledge of interoperable communications technology and operations. Only through the routine use of interoperable solutions will the first responders be confident in the capabilities of the various systems and processes. Through the development of regional TICPs, and this SCIP, opportunities for these activities are created and will be documented.

4.5.4.1. Regional Tactical Interoperability Communication Plans

The MPSCS Advisory Board has directed each Homeland Security region to develop individual TICPs to be submitted to the Advisory Board by the end of March, 2008. Currently, the Detroit UASI and Homeland Security Region 8 have completed these plans. Copies of these plans are

included in Appendices 3.0(c) and 3.0(d) of this report. These TICPs will use the approved Statewide TICP as guidance.

Each TICP includes plans and Standard Operating Procedures (SOP) for both day-to-day operations, as well as incidents of various sizes and severity. As a requirement for approval, each TICP will be exercised by the region to ensure the practices and SOPs are sound and work. Each region is required to report back to the Advisory Board with the results of the exercise, as well as any modifications that may be made to the TICP, based on the exercise results. The Advisory Board anticipates all regional TICPs will be exercised by the end of 2008, with annual exercises of each plan after that. Through a program of ongoing exercises, review, and modification, the regional TICPs will be kept up to date and efficient. The State Interoperability Coordinator, working under the authority of the Advisory Board, is responsible for coordinating and collecting this information.

4.5.4.2. Specific Scenario Exercises

The State, through the EMHSD will develop specific scenario exercises that will be tested at both the regional and inter-regional level. These exercises will either be combined with the annual TICP exercises, or planned as stand alone activities. These exercises will be planned to address the following criteria:

- All exercises will require the establishment of interoperable communications, as needed, per the established regional and Statewide TICPs
- All exercises will be developed following any applicable federal Department of Homeland Security guidelines and requirements
- All exercises will require compliance with appropriate NIMS and ICS procedures and guidelines
- Exercises will be planned to address specific risks that have been identified in the State Hazard Analysis that is conducted by the EMHSD

The State of Michigan supports the process stipulated by the Homeland Security Exercise and Evaluation Program (HSEEP). HSEEP requires after action reviews by participants, after action reports and improvement plans vetted by jurisdiction. The interoperability coordinator monitors exercise after action reports submitted for homeland security requirements. The lessons learned from these exercises will be reviewed by the Interoperability Planning Committee of the State so that any required modifications to the affected TICPs or the SCIP may be completed.

4.6. USAGE

4.6.1. Plans for Tactical Communications During an Incident

Michigan has committed to the routinely practicing the principles, processes and procedures of the National Incident Management System (NIMS). Any incident requiring coordinated response, multi-disciplined response, multi-jurisdictional response, incidents involving various levels of government or various jurisdictions or several departments within the same jurisdiction triggers a recommendation for implementation of the Incident Command System (ICS). Incidents of this magnitude require a communications plan be implemented as part of the initial process. ICS is also utilized in drills and exercises to further familiarize individuals with the processes involved.

Policies and operational procedures are established for creating ICS-based Incident Communications Plans (ICPs). This section identifies the scope of general communications templates and those developed during actual incidents by listing the participating functional entities. Through the use of an ICS organization chart, the relationship of the functions can be seen. As part of the process, a communications unit is established in larger incidents. The role, use, and authority of the communications unit leader and communication coordinator are further defined below.

4.6.2. Participating Functional Disciplines

In response to an event, the functional disciplines involved in the initial incident-scene response are expected to include:

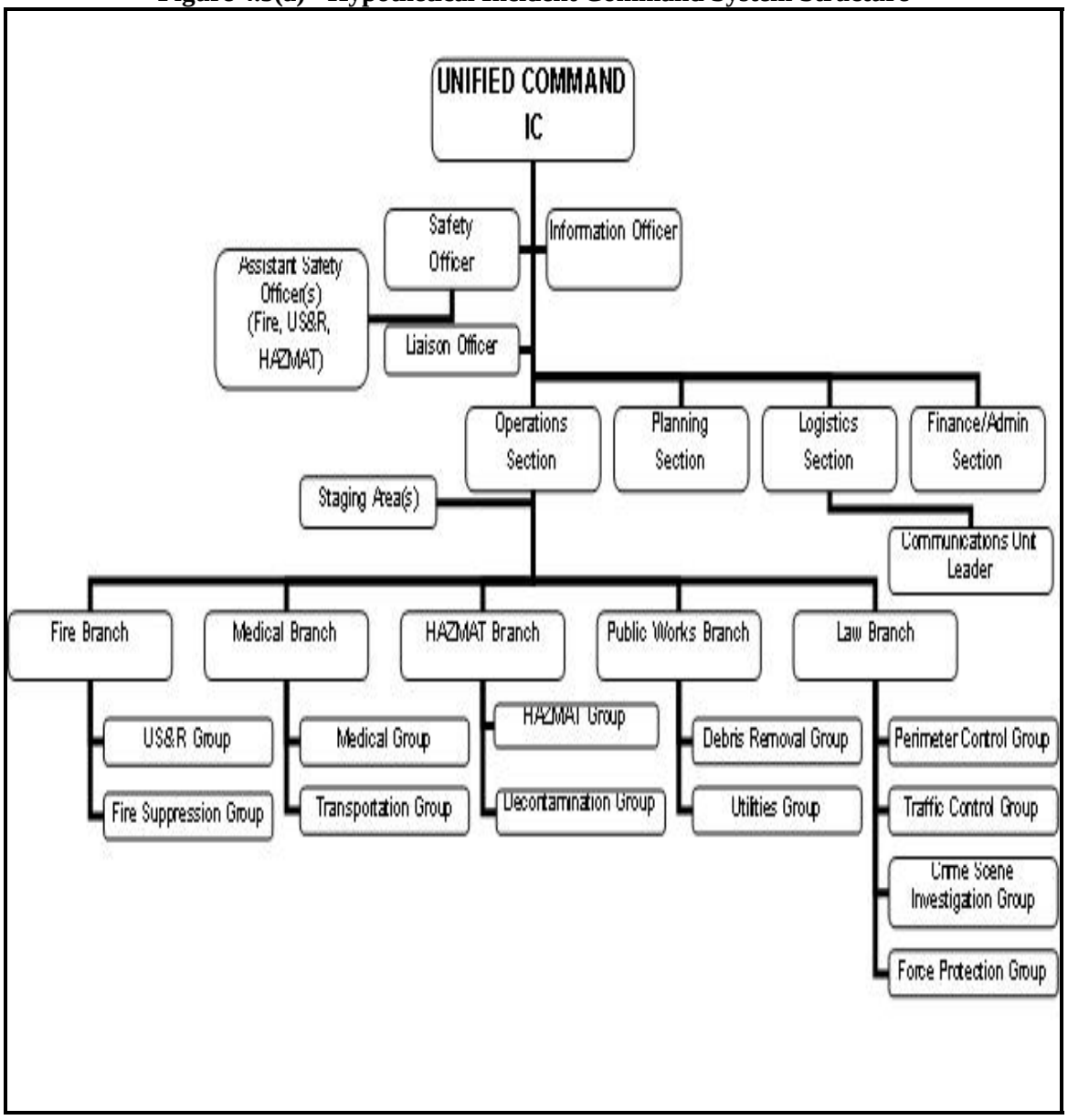
- Fire
- Law Enforcement
- Emergency Medical Services
- Emergency Management
- Explosive Ordinance Disposal (EOD)
- Hazmat
- Urban Area Search and Rescue Teams (USAR)
- Transportation
- Utilities
- Hospitals
- Public Health
- Medical Examiner
- Public Works

Additional disciplines that may be required to respond depending on the type and magnitude of the incident include:

- National Guard
- Federal Law Enforcement Agencies
- U.S. Coast Guard

Figure 4.5(a) shows a hypothetical ICS structure that would be generally appropriate for the level of incident addressed by this plan.

Figure 4.5(a) - Hypothetical Incident Command System Structure



4.6.3. The Communications Unit and Communications Unit Leader

As established under the ICS, communications and incident action plans will be integrated to capture management goals and operational objectives. Integration of supporting services and technologies is critical to effective incident response. Since responder safety and effectiveness are closely related to how well communications supports them, the capabilities and capacity of systems to support operations will be continuously taken into account during incident action planning.

Communications is integrated into the ICS-based management system used by the State of Michigan. This is accomplished through the early establishment of a communications unit during incidents and by involvement of the communications unit leader in incident action planning. This is not only to ensure that the response is well supported by communications but to reinforce chosen command structures and operating principles generally embodied in ICS, such as management span of control.

The communication unit will be established early in multi-agency and large-scale responses to support the integration effort. This is to bring all communications functions close to incident command rather than having them managed far from pressing operational considerations.

The communications unit is situated in the logistics section. It is managed by a unit leader. telecommunicators (radio operators) and communications technicians serving the incident will be part of the unit as needed.

The communications unit leader (abbreviated as COML within the NIMS) has the responsibility to assign resources, including radio channels / talkgroups, and equipment during an actual event, based on the circumstances, agencies involved and available resources. This is accomplished through the use of recommended ICS forms. The COML must be part of the planning process and determine the communication resources required to support the objective and tactics of the Incident Action Plan (IAP) as it develops.

Communications resources across a region, state, or even nationally are coordinated among various, potentially simultaneous, incidents by a communications coordinator (COMC) within NIMS.

4.6.4. Incident Communications Plan

This section contains a plan for tactical use of interoperable communications resources during a multi-agency incident. Because interoperable communications resources will be limited, a priority order must be established. The incident commander will have the authority to apply resources as the IAP requires. A COML should be assigned if needed to support the incident.

If not predetermined, all necessary interoperable communication may be accomplished by using any combination of the following:

- Responders at the highest level of command / operation control are users of a shared system using an interoperability channel or talkgroup (e.g., an MPSCS event talkgroup)
- State of Michigan MPSCS / MSP cache radios should be distributed for use by personnel without assigned MPSCS radios
- The use of the five national NPSPAC interoperability channels should be attempted to establish interoperable communications if participating agencies are using 800 MHz radios
- Gateway devices that can interconnect the disparate radio system of the agencies
- The use of any established State or regional interoperability channels should be attempted to establish interoperable communications if participating agencies all have the interoperability shared channels

4.6.5. Prioritizing Interoperable Communications

Because interoperable communications resources will be limited, a priority order must be established.

4.6.5.1. Priority Users

The incident commander will have the authority to apply resources as the IAP requires. The following list should be considered as a possible priority order of uses for interoperable communications:

- Highest level of operational command
- Command Staff and General Staff
- Medical Care Group
- Fire Suppression Group
- Law Enforcement Branch
- Hospital Coordination

4.6.5.2. Priority Assignment of Mutual Aid Channels

If all applicable agencies share communications on a common frequency or if a radio cache is being deployed to support the incident, the frequency assignments as shown in Table 4.5(a) should be used unless otherwise directed by the Incident Commander.

The balance of this page has intentionally been left blank.

Table 4.5(a) - Priority Assignment of Mutual Aid Channels

Priority User	800 MHz Channels	VHF Channels (38-170 MHz)	UHF Channels (460-470 MHz)
Highest Level of Operational Command	MPSCS Event Talk Groups Assigned as Incident Develops NPSPAC TAC1 (866.5125/821.5125)	N/A	N/A
Command Staff and General Staff	MPSCS Event Talk Groups Assigned as Incident Develops NPSPAC TAC2 (866.5125/821.5125)	N/A	N/A
Medical Care Group	MPSCS Event Talk Groups Assigned as Incident Develops NPSPAC TAC3 (866.5125/821.5125)	N/A	N/A
Fire Suppression Group	MPSCS Event Talk Groups Assigned as Incident Develops NPSPAC TAC4 (866.5125/821.5125)	Fire Ground Common (154.295 MHz)	N/A
Law Enforcement Branch	MPSCS Event Talk Groups Assigned as Incident Develops	MEPSS (155.865 MHz)	N/A
Traffic Control Group	MPSCS Event Talk Groups Assigned as Incident Develops	MEPSS (155.865 MHz)	N/A
Hospital Coordination	MPSCS Event Talk Groups Assigned as Incident Develops	HERN (155.340 MHz)	N/A

4.6.6. Event Interoperable Communications Requirements

4.6.6.1. Unified Command Staff

At the highest level of operational command, the operations section in this event will need interoperable communications among section members fire suppression, law enforcement, and medical care. This plan has identified this as the most critical need for interoperability because of the diversity of agencies involved.

If the incident commander has not already ordered deployment of a radio cache and activation of any applicable fixed or mobile gateways, one of the first actions by the operations section chief during a critical incident must be to ensure these resources are requested through the logistics section chief.

For the operations section chief and applicable group supervisors, branch directors, and unit leaders at the highest level of operational control, interoperable communications will be attempted in the following order:

A. If responders at the highest level of operational control are users of a shared system, the shared system will be used to establish interoperable communications.

B. If responders at the highest level of operational control do not have a common shared system, but operate on the VHF or 800 MHz frequency bands, use of a shared mutual aid channel should be attempted to establish interoperable communications.

C. If shared systems or common mutual aid channels above are not available to establish interoperable communications, a request should be made to make use of any gateway devices that can interconnect the disparate radio systems of the agencies involved at the highest level of operational command. Dispatch and the regional interoperability coordinator will identify any available resources.

D. If no other method is available, the operations section will wait for the arrival of the radio cache. When the radio cache arrives, the communications unit leader shall distribute radios and use the channel assigned for the highest level of operational control.

4.6.6.2. Operations Section Command and Branch Directors

In a critical incident, unless it is known that all responding agencies will be operating on the same shared communication system, the incident commander should immediately order deployment of a radio cache and activation of any applicable fixed or mobile gateways through dispatch. Dispatch will work with the regional interoperability coordinator to activate applicable resources.

Interoperable communications will be attempted in the following order:

A. Collocation of all command and general staff at the incident command post with face-to-face communications provides the best direct communications and reduces demand on interoperability resources.

B. If the command staff and general staff are users of a shared system, the shared system will be used to establish interoperable communications

C. If the command staff and general staff do not have a common shared system, but operate on the same frequency band, use of a shared mutual aid channel should be attempted to establish interoperable communications.

D. If none of the methods above are available, a request should be made to make use of any gateway devices that can interconnect the disparate radio systems of the command staff and general staff. Dispatch and the regional interoperability coordinator will identify any available resources. However, the highest level of operational command should be given first priority for available interoperable communications resources.

E. If no other method is available, the incident commander will wait for the arrival of the radio cache. When the radio cache arrives, the channel assigned will be used for the command staff and general staff.

F. If no other method of interoperability can be established, the command staff and general staff will relay communications through staff members.

4.6.6.3. Medical Care Group

The medical care group may need interoperable communications resources for directing triage, treatment and transport efforts. Interoperable Communications will be attempted in the following order:

A. If the medical care group agencies are users of a shared system, the shared system will be used to establish interoperable communications

B. If the medical care group agencies do not have a common shared system, but operate on the same frequency band, use of a shared mutual aid channel should be attempted to establish interoperable communications.

C. If none of the methods above are available, a request should be made to make use of any gateway devices that can interconnect the disparate radio systems of the medical care group agencies. Dispatch and the regional interoperability coordinator will identify any available resources.

D. If cache radios are available for distribution, the channel assigned will be used for the medical care group.

4.6.6.4. Fire Service Branch

The fire suppression group may need interoperable communications resources for directing fire suppression efforts. Interoperable communications will be attempted in the following order:

A. If the fire suppression group agencies are users of a shared system, the shared system will be used to establish interoperable communications

B. If the fire suppression group agencies do not have a common shared system, but operate on the same frequency band, use of a mutual aid channel should be attempted to establish interoperable communications.

C. If none of the methods above are available, a request should be made to make use of any gateway devices that can interconnect the disparate radio systems of the fire suppression group agencies. Dispatch and the regional interoperability coordinator will identify any available resources. However, priority for assignment of gateway resources should be followed.

D. If cache radios are available for distribution, the channel assigned will be used for the fire suppression group.

4.6.6.5. Law Enforcement Branch

The law enforcement branch may need interoperable communications resources for directing outer perimeter security, evacuation, explosive ordinance disposal, investigations, and traffic control efforts. Interoperable communications will be attempted in the following order:

A. If the law enforcement branch agencies are users of a shared system, the shared system will be used to establish interoperable communications

B. If the law enforcement branch agencies do not have a common shared system, but operate on the same frequency band, use of a shared mutual aid channel should be attempted to establish interoperable communications.

C. If none of the methods above is available, a request should be made to make use of any gateway devices that can interconnect the disparate radio systems of the law enforcement branch agencies. Dispatch and the regional interoperability coordinator will identify any available resources. However, priority for assignment of gateway resources should be followed.

D. If cache radios are available for distribution, the channel assigned will be used for the law enforcement branch.

4.6.6.6. Hospital Coordination

The medical care group will communicate with the hospitals using the following systems:

A. If the medical care group and area hospitals are users of a shared system, the shared system may be used to establish interoperable communications.

B. VHF MEDCOM HERN channel (155.340 MHz)

C. Other frequency or system used locally or regionally for routine ambulance-to-hospital communication.

4.6.6.7. Fallback Communications Methods

The following fallback methods will be used when no technical solution exists for interoperable communications:

Collocation Locating staff from all relevant agencies in a common area to receive and relay information

Runners Using personnel to relay messages between agencies

Joint Teams Forming teams that include at least one member of every other agency for which communications is required

4.6.6.8. Communications Unit Leader Responsibilities

This section contains a plan for tactical use of interoperability resources during an IED incident. The COML has the responsibility to frequencies and equipment during an actual event, based on the circumstances, agencies involved and available resources. The COML must be part of the planning process and determine the communications resources required to support the objectives and tactics of the incident action plan, as it develops.

5. STRATEGY

5.1. INTEROPERABILITY VISION

The purpose of the Statewide Communications Interoperability Plan is to establish a future vision for communications interoperability and align emergency response agencies with the goals, objectives, and initiatives for achieving the vision.

The MPSCS Advisory Board strategic vision is used to guide strategic planning efforts and to articulate the intent for the future state of communications interoperability in the State of Michigan .

Vision Statement: ***To provide Statewide, real time, on demand, interoperable communications for public safety agencies and State government agencies***

For purposes of the MPSCS Advisory Board vision, the following terms are defined as:

- **Real Time:** No noticeable delay between the time information is sent and when it is received
- **On Demand:** Immediately available when mission requires, under any circumstances

There are no special roles or solutions identified and/or targeted regarding PSIC grant-funded equipment. PSIC funded equipment will support the goal and objectives of this SCIP and projects will comply with the PSIC grant guidance.

5.2. MISSION

The mission of the Michigan Public Safety Communications System (MPSCS) Advisory Board is to enhance interoperability in the State by providing a Statewide, state-of-the-art, digital, trunked, open, P25-based communications system, and by continually maintaining, upgrading and expanding its current capacities and capabilities, to support interoperability with all first response communication systems in the State. This system, recognized as one of the world's premier public safety two-way radio communications systems, is open to all Michigan public safety agencies. The ability to share information on demand, in real time, when needed and as authorized, whether it is voice or data, is critical to the first responder. This synergy provides the ultimate in intra and inter-agency interoperability, and facilitates the cost effective implementation and utilization of new communications technologies for all State and local member agencies.

5.3. GOALS AND OBJECTIVES

The State of Michigan is consistently at the national forefront of fostering interoperable communications between public safety agencies at all levels of government. The establishment of the Michigan Public Safety Communications System (MPSCS), in the late 1990s, was well ahead of the rest of the nation and established a common, standards-based platform supporting interoperable communications. Additionally, the MPSCS has been open to local agency participation since its inception. This "open door" attitude fosters an atmosphere where cooperation between responders at all levels of government is encouraged. This can be witnessed by the many local agencies in the State that chose to join the MPSCS as their primary communications system. However, even with this cooperative attitude and long history of public safety agencies working together, more needs to be done to bring enhanced levels of interoperability to the citizens and first responders of the State. New technologies, demographic changes, funding needs, and the pressure of additional first responder agencies desiring to leverage the MPSCS will require the MPSCS to plan accordingly for the future. This "future vision" is developed in this section of the Strategic Communications Interoperability Plan.

To enhance interoperability in the State, key goals have been determined. At the State level, these goals are:

- Establish and maintain interoperable communications systems Statewide
- Establish Statewide data capabilities
- Establish and maintain consolidated dispatch centers
- Develop and maintain Statewide pre-positioned emergency assets

Each of these goals is described in the following paragraphs. Specific interoperability gaps that have been identified are addressed.

Work has begun on many of these goals through various efforts by different agencies and entities. The Advisory Board anticipates starting all PSIC sponsored activities as soon as funding in released, with all work completed by the Summer of 2008. Some of the initiatives outlined in this SCIP will continue on through future revisions, as the Advisory Board will always strive to enhance the interoperable communication capabilities in the state.

5.3.1. Establish and Maintain Interoperable Communications Systems Statewide (Goal 1)

The MPSCS has been established as a platform that can be used to foster interoperable communications between public safety agencies at all levels of government in the State. Notably, since the MPSCS initial deployment, the needs and requirements of those responders have continually changed, including:

- Demographic changes
- Additional agencies/regions of the State seeking participation with the MPSCS
- Changes to requirements for service levels and service areas (example, in-building coverage)

Additionally, local responders continue to use non-standards- based legacy systems that need to have the ability to inter-operate with the MPSCS users.

The following objectives have been established to achieve this goal:

- (Obj. 1-1)Expand, enhance, and maintain subscribers, infrastructure, and technology on the MPSCS

  Key areas of the State have been identified as having gaps in the MPSCS coverage and capacity. In order to integrate the additional infrastructure equipment that is required to address these gaps, an upgrade to the MPSCS system is required. These include the I-696 corridor, the state border with Ohio and Indiana, most of the northern part of the state, the Grand Rapids area, and the outlying areas north of Detroit. In many parts of the state, additional coverage and capacity will need to be added to support communications activities. These areas include the eastern Upper Peninsula, the "Soo" locks area, and the coastlines of the state, especially where tall sand dunes are present. Additional subscriber equipment is also needed to allow incident command and control to be coordinated on the common MPSCS platform. Region 6 of the state is an example of this gap.

- (Obj. 1-2)Interface disparate systems

  Presently, there are numerous disparate radio systems within the state, that often cannot directly interoperate with the MPSCS or other systems. It is imperative to link these systems not only with one another, but also with the statewide system, MPSCS. Currently, most disparate systems have at least a one-to-one hard patch between a MPSCS talk group and the main dispatch channel for the PSAP. However, this does not permit flexibility for statewide interoperability. If an MPSCS user from a different county needs to talk to another county that utilizes a disparate system hard patch, this may not be possible. These gaps exist statewide in every region. Potential solutions to this gap include gateway systems, patch upgrades, and dual mode radios.

- (Obj. 1-3)Support the enhancement of legacy radios to interoperable capabilities

  There are areas in every region in the state that utilize non-standards based and/or older wide band radios. These radios are not capable of interoperability with some systems due to their legacy technologies. The use of the new federal narrowband interoperability channels in various frequency bands is not available without enhancements to these legacy radios. Additionally, dual-mode radios are now available that will allow interoperability between non-standards based and standards based systems. This will allow seamless interoperability with established systems in several regions of the state.

- (Obj. 1-4)Support the transition to spectrally efficient standards based advanced technologies

  As stated in Obj. 1-3, areas in every region of the state are using older radios that are not capable of utilizing the new federal narrowband interoperability channels in various frequency bands. These older radios need to be enhanced in order to provide a sufficient level of interoperability to the users. Additionally, new technologies are becoming available that will address the future establishment of P25 Phase II. These radios can be put in place today and be ready for the future.

The state will also pursue emerging technologies that may enhance the spectral efficiency of interoperability.

- (Obj. 1-5)Develop, exercise, update and maintain communications plans and procedures

  Gaps were identified in the development of the Statewide TICP that indicated that there was a lack of interoperability planning and coordination, primarily at the local and regional levels. To address this, all regions of the state are required to develop regional TICPs by March 2008 that provide for planning, coordination, and exercising of the TICP. With the establishment of Standard Operating Procedures (SOP) in each region, the plans can be tested to assure that communications and Continuity of Operations (CONOPS) can be maintained. By addressing these gaps, first responders across the state will be better prepared to manage interoperable communications during times of need.

- (Obj. 1-6)Maintain compliance with current NIMS and ICS standards

  The state has mandated that NIMS and ICS standards are to be used throughout the state however; gaps have been identified in their implementation. Although much training has already been done, more is needed. Requirements, such as all agencies using plain language for radio communications, have not been implemented at all levels of government. NIMS and ICS training of all levels of first responders is under way, but has not been fully completed. Addressing these gaps will allow first responders to efficiently manage the communications and interoperability at incident scenes.

5.3.2. Expand Statewide Data Capabilities (Goal 2)

The MPSCS currently supports no use of data. As part of this goal, the objective of being able to support interoperable mobile data between an expanded subscriber base is a priority and the availability of advanced applications is critical. Interoperability of data is essential to first responders to allow them to maintain situational awareness and access vital information. While the expansion of the MPSCS envisioned in the first goal will expand the areas where mobile data is available, there is a need for additional data capable radios and mobile data computers (MDC). Equipment will also be required to allow users from different agencies to interoperate on their respective data networks. By the combined focuses of expanding the MPSCS infrastructure, acquiring equipment that allows users from different agencies to interoperate with their respective systems, and acquiring additional field subscriber units, the goal of expanded access to data services will be reached. The following objectives have been set to achieve this goal:

- (Obj. 2-1)Enhance MPSCS mobile data capabilities

  Mobile data availability is very limited in all of Michigan, mostly contained to the urban areas. The MPSCS system does not currently allow for mobile data, and needs to be upgraded to establish data capabilities. Additionally, in order to utilize mobile data, the local agencies in Michigan that use MPSCS for communications may need to replace older radios that do not support Integrated Voice and Data

(IV&D) to utilize mobile data services. They would also need to purchase Mobile Data Computers (MDC). The new radios would attain a degree of cost effectiveness by only needing one radio per vehicle for voice and data transmissions. By accomplishing an upgrade to the system and acquiring additional field subscriber equipment, mobile data will be available to a large number of MPSCS users.

- (Obj. 2-2)Expand mobile data capabilities Statewide

  As mentioned in the previous objective, mobile data capabilities are limited statewide. Currently, some local jurisdictions maintain their own mobile data systems because the MPSCS cannot provide broadband data transfer at this time. There is a need for agencies statewide to expand and enhance their present data capabilities to maintain and increase the levels of information that they can share. By acquiring additional equipment statewide, this level of data availability will be enhanced.

- (Obj. 2-3)Strengthen fixed data resources

  Few if any agencies have the ability to support fixed data resources that allow for streaming video and continuous information flow, including videoconferencing. By supporting advanced technologies, continuously updated information can be provided to critical locations, such as Emergency Operating Centers (EOC) and Emergency Coordination Centers (ECC).

5.3.3. Establish and Maintain Consolidated Dispatch Centers (Goal 3)

Consolidation of local public safety dispatch centers allows multiple public safety response agencies to operate out of a single facility. Consolidation reduces duplication of services in a geographic area, and greatly enhances the ability of agencies to interoperate with each other when multiple agencies are dispatched and serviced out of a single dispatch center. Common systems, including radio and mobile data, can be leveraged across multiple agencies, supporting the efficient use of resources, both human and fiscal. It also allows for a single connection to the MPSCS, to provide interoperability between State and out-of-area agencies. To this end, the goal of the formation and use of consolidated centers is encouraged as a means to enhance the interoperability capabilities of public safety agencies throughout the State. To achieve this goal, the following objectives have been set:

- (Obj. 3-1)Centralize Public Safety Answering Points (PSAP)

  The centralization of dispatch services is viewed as a means to provide more efficient use of resources as well as provide redundancy to the systems being used. In the state, regions including Region 7 and Region 8, have identified this as a gap in interoperability that needs to be addressed. Other areas of the state that may gain from this concept are Oakland County, Genesee County, Kent County, and Berrien County.

- (Obj. 3-2)Provide connectivity between incongruent systems

  Efforts are underway in several regions of the state to allow for the direct connection of PSAPs in a region to achieve both radio and data interoperability. The state

recognizes the efficiencies of such consolidation and would like to improve upon this consolidation. Plans to electronically link the dispatch centers to the greatest extent possible would greatly increase effectiveness and redundancy between centers. Systems that would be connected include radios, telephones, video, audio monitoring, CAD, records management, and digital mapping. This increased level of connectivity would also allow direct connection to the MPSCS backbone, allowing direct interoperability at the network level between different systems in the region. The ultimate goal of this type of objective will be to provide a robust, secure network statewide that will be able to support all levels of public safety activity and applications.

- (Obj. 3-3)Establish dispatch system redundancy

  The ability for PSAPs statewide to support each other if a PSAP cannot be operated due to catastrophic failures or events is severely limited. The state recognizes this gap. While most PSAPs have plans in place that address some facets of an evacuation, most do not provide for full services (i.e., radio, CAD, maps) to be taken over by a backup location. Efforts will be undertaken in Region 3, 6, and 8 to address this situation and allow for the highest level of redundant support possible.

- (Obj. 3-4)Support the enhancement of PSAPs through emerging technologies

  The use of common networks to enhance PSAP redundancy, centralization, and effectiveness, will also allow PSAPs to look at advanced applications and technologies such as Next Generation 9-1-1, advanced mapping and GIS, and Voice over Internet Protocol (VoIP) systems and applications. This objective will allow for the implementation of these advanced services.

5.3.4. Develop and Maintain Statewide Pre-positioned Emergency Assets (Goal 4)

Despite an established statewide system and effective communications planning, the unknown scope and timing of disasters and catastrophic events can result in the need to alter plans and utilize additional resources apart from those employed on a regular basis. Pre-positioned assets (i.e., radio caches, portable radio equipment) are often not available in a timely manner. To address this, the state will both enhance its current tools, as well as acquire new tools and equipment to assure effective communications. The following objectives have been identified to reach this goal:

- (Obj. 4-1)Develop supplemental infrastructure reserves to the MPSCS

  In the event that a fixed MPSCS site is destroyed, the state has limited capabilities to restore service into that area. The state has a small portable tower called Communications-on- Wheels (COW) that will provide limited communications capabilities, but will not restore full MPSCS capabilities. The COW provides basic, conventional radio coverage on the National Public Safety Policy Advisory Committee (NPSPAC) mutual aid channels, but cannot interface with the MPSCS. The state additionally has no way of providing MPSCS services into a region or area in the event that extra levels of capacity or coverage are required for a situation. To accomplish this, the state needs multiple portable trunked sites, called Sites-on-Wheels (SOW) to fully provide interoperable MPSCS support in the event of an emergency or site destruction.

- (Obj. 4-2)Establish and maintain redundant communication capabilities

  The availability of redundant communications networks is insufficient statewide. Although the MPSCS has many redundancies built into the system, in the event of a catastrophic failure, other forms of communication are needed to ensure that the command and control of an incident can be achieved. The state will explore satellite uplink communications, IP based connectivity, and other future technologies to ensure that mission critical communications can be maintained.

- (Obj. 4.3)Develop new and enhance existing strategic communications caches

  Although the state maintains a cache of MPSCS radios, additional MPSCS radios are needed to supplement the supply and support the lifecycle of existing caches. Additionally, some areas, specifically local jurisdictions, are without adequate MPSCS caches and often, the state would not be able to provide a MPSCS cache in ample time to address a critical situation. Caches of VHF and UHF radios do not exist within the state. These caches would provide support in the event of an emergency to non-MPSCS systems users and in the event the MPSCS fails to provide sufficient capacity in a large-scale response disaster situation due to high system loading.

5.4. STRATEGIC INITIATIVES

The MPSCS Advisory Board, which functions as the SIEC in Michigan, has set several strategic initiatives that have set the course for interoperability in the State. Working alongside the Michigan State Police Emergency Management Homeland Security Division (EMHSD), strategies have been put forth that guide emergency operations and communications at all levels of government.

The Advisory Board has identified key strategic goals that the SCIP addresses. All interoperability planning and activities will work to fulfill these strategic goals. These key goals are addressed in the initiatives that the Advisory Board has put forth. These goals are:

- Establish and maintain interoperable communications systems Statewide
- Establish Statewide data capabilities
- Establish and maintain consolidated dispatch centers
- Develop and maintain Statewide pre-positioned emergency assets

As described in Section 3 of the SCIP, the process to develop the SCIP has been a “bottom up” approach that has allowed for input from all levels of government and all stakeholder disciplines.

The Statewide TICP was developed to present a guideline to local regions as to how to develop their regional TICPs. The Statewide and UASI TICPs have identified processes and gaps in interoperability, which the SCIP attempts to rectify. The regional TICPs, when complete in March, 2008, will add to this base of knowledge. The TICPs and the SCIP will be reviewed on a regular basis to ensure that progress is being made on identified gaps, and that any new gaps are addressed effectively as possible.

5.4.1. MPSCS Usage

The MPSCS Advisory Board has long felt that the use of a shared communications system allows for the highest level of interoperability possible. To that end, the Board's long-standing strategic position has been that local, tribal, and federal agencies are encouraged to join the MPSCS network and use it as their primary communications system. The Advisory Board further feels that the eventual goal of having all command and control activities of coordinated incidents taking place through the MPSCS is attainable. Local and tribal entities have been able to join the MPSCS through several different methods:

- If they accept the existing radio coverage of the MPSCS, local and tribal entities can purchase approved subscriber equipment and have talkgroups established on the MPSCS. A minimal membership fee and annual fee is required. If these new members bring in a large number of new subscribers, MPSCS can request that the new members contribute to upgrades to system infrastructure to handle the load.
- If additional coverage is required by local or tribal entities, they can build out additional site(s) that are integrated into the MPSCS system, and then add on subscriber units. Again, new member and annual membership fees may apply.
- Local or tribal entities can build out local sub-systems that are compatible with the MPSCS and integrate them into the system. The local agencies are responsible for subscriber units and new member and annual membership fees may apply.

Additionally, the Advisory Board continues to support local and tribal agencies efforts to interface legacy and non-standards based systems to the MPSCS to allow for interoperable communications. A list of MPSCS Talkgroups is included in Appendix 4.3 of the SCIP. Additionally, a listing of all local, tribal, federal, and non-governmental agencies with points of contact information is included in Appendix 4.4 to demonstrate the wide breadth of users of the system, which provides the highest level of interoperability possible.

5.4.2. MPSCS Standards

The MPSCS is the primary means of interoperable communications in the State. While many local agencies and most State agencies use MPSCS as their primary communications system, local agencies with legacy or disparate systems are able to connect to MPSCS through various patches and gateway devices on the market. In order to provide the highest level of shared system capabilities, the Advisory Board has set forth equipment and facility standards that all users have agreed to. These standards are found in the accepted policies of the MPSCS Advisory Board and are included in this SCIP in Appendix 4.3(a). By allowing these legacy and disparate systems to connect, it allows for a logical migration of users to the MPSCS shared system. Examples of these standards include:

- Tower / Transmitter Site standards

- Subscriber equipment standards
- Network Infrastructure standards
- Patch and gateway equipment standards
- Procedures for testing new equipment
- Procedures for integrating existing legacy systems into the MPSCS

5.4.3. Interstate / International Coordination

Michigan shares borders with the States of Ohio, Indiana, and Wisconsin and an international border with Canada on the north and east. The ability to conduct effective communications with these entities is essential to providing public safety services to the citizens of the region.

The MPSCS currently has Memorandums of Understanding (MOU) with several counties in Ohio and Indiana where common tower sites are used for radio systems in the two states. In these cases, MOUs that allow access to interoperability talk groups on the MPSCS are in place. These MOUs are kept up to date in the MPSCS Director's office. Ohio and Indiana have similar systems to the MPSCS and allows subscriber units to be programmed with the systems from the entities that are required. Michigan currently has agreements with the following counties and agencies for the purposes of interoperability enhancement:

- Ohio
  - Toledo and Lucas Counties
- Indiana
  - State Police Districts 13, 21, 22 and 24
- Wisconsin
  - Local agreements between Dickinson County, Michigan and Florence County, Wisconsin

The MPSCS Advisory Board is constantly seeking opportunities to enhance the interoperable communications around the State. The Advisory Board is currently negotiating an MOU with the United States Army Corp of Engineers to allow the Corp of Engineers access to the MPSCS in the Sault Ste. Marie area, to provide interoperability in the "Soo" Locks system that connects Lake Superior to the rest of the Great Lakes.

Michigan is bordered by Canada on the north and the east. Today, interoperability is accomplished with Canada through swapping radios as units cross the border. Agreements that allow for mutual aid responses into both the United States and Canada are in place. The Royal Canadian Mounted Police (RCMP) has access to the MPSCS, but do not use it on a regular basis. These agreements are kept at the local jurisdiction level. The Advisory Board will continue to seek opportunities to work in a close manner with officials from Canada to provide the best possible public safety service to citizens on both sides of the border.

5.4.4. Data Interoperability

The MPSCS currently has no mobile data capability at this time. After the planned upgrade of the MPSCS Operating System, it will offer limited mobile data services to users through the use of Integrated Voice and Data (IV&D). This allows for only low speed data (e.g., 9.6 Kbps) that lets field users access databases such as the Department of Motor Vehicles, state warrant records, and federal warrant records. The P25 data standard, which is not complete at this time, will not support

higher data speeds that will be needed to accommodate such advanced services as live video and large mapping applications. Currently, many local jurisdictions use higher data speeds, through a combination of locally owned systems and commercial carriers. Where these services are available, State agencies have agreements with local governments to "piggy back" on their systems to take advantage of these enhanced capabilities.

As a strategic initiative, the MPSCS Advisory Board will be working on this issue from two fronts. First, the MPSCS system will be upgraded to allow for the highest rate of throughput possible to provide at least basic mobile data services across the State. Second, the Advisory Board will work with local jurisdictions to provide more opportunities for shared mobile data systems by procuring additional hardware and software. This is already working in many areas of the State, and will be pursued as it is deemed appropriate.

5.4.5. Catastrophic System Failures

The MPSCS Advisory Board has taken steps to ensure that the MPSCS is available by leveraging the inherent redundancy in the system, and setting standards for site development and equipment. These include:

- Leveraging inherent redundancy in the MPSCS System
  - System failure redundancy progression
    - If a site is "orphaned" from the larger system, the site will continue to function in "site trunking" mode, which allows for users registered to that site to continue to communicate with each other, without a connection to the main system
    - If a site controller fails, the site goes into "Failsoft" mode, where the site falls back to a conventional radio configuration that allows users at that site to have basic radio communications
  - Centralized Network Operating Center (NOC)
  - De-centralized MPSCS Staff spread across the State to respond to failures
  - Overlapping site coverage
  - Hot Stand-by microwave interconnectivity between sites
  - Standardized Site Equipment and Construction
    - Generators, Uninterruptible Power Supplies (UPS), Ballistic Shelters, Environmental alarms
  - Standardized Subscriber equipment
- Additional redundancy by utilizing National Public Safety Planning Advisory Committee (NPSPAC) conventional mutual aid channels to provide for interoperability.

Additionally, the Advisory Board as part of the establishment of the State's Strategic Technology Reserve (STR) will be adding a "Site on Wheels" (SOW) that will be available to act as a replacement site, or an additional site during times of disaster or need. This SOW will be able to interconnect with the MPSCS to act as a fill or capacity site, or operate as a stand alone site if the MPSCS has failed in a specific region. The SOW project is detailed in Section 6 of the SCIP. The state also plans to deploy a satellite uplink vehicle that will allow for continuity of operations if a critical fixed communications link is affected in the state.

5.4.6. Port, Transportation and Transit Systems

The MPSCS Advisory Board has in the past taken a proactive stance towards including the transportation resources of the State. Several parts of the State's transportation infrastructure are currently using the MPSCS as their primary means of communications, and the opportunity to allow patches and gateway connections are real. A description of this infrastructure can be found in Section 2 of the SCIP.

Currently, the Michigan Department of Transportation uses the MPSCS, as well as the local road commissions of many of the Counties that are MPSCS members. Additionally, the following are currently using the MPSCS for routine activities:

- Canadian Pacific Railroad
- Sault St. Marie "Soo" Locks Security
- Detroit-Wayne County International Airport
- Numerous local transit authorities

As stated earlier in the SCIP, the Advisory Board is currently in discussions with the U.S. Army Corp of Engineers to bring all "Soo" Lock operations onto the MPSCS. The Board will continue to be proactive in its inclusion of transportation activities into the Statewide Interoperability Plan.

5.4.7. Non-governmental Agencies

The MPSCS Advisory Board has taken a pro-active stance towards including appropriate non-governmental agencies that may assist in first responder activities throughout the State. Currently there are agreements with, and direct system talkgroups exist with:

- The American Red Cross
- Life-Net of Michigan (air ambulance)
- Midwest Medflight (air ambulance)
- Aero Med (air ambulance)
- West Michigan Aircare (air ambulance)
- Numerous local ambulance services
- Numerous local hospitals
- Western Michigan University, Wayne State University, Lake Superior State University

The MPSCS Advisory Board will continue to pursue opportunities in this sector to enhance overall response and interoperability across the State.

5.4.8. Military / Federal Agencies

The MPSCS supports key activities of Federal Law Enforcement and Homeland Security, as well as the Michigan National Guard, which plays a key role in response to local incidents and disasters. Currently, the following Federal agencies have agreements with the MPSCS and have assigned talked groups on the statewide system:

- Bureau of Alcohol, Tobacco, and Firearms
- U. S. Forest Service
- Drug Enforcement Agency
- U. S. Coast Guard

- U. S. Border Patrol
- U. S. Postal Inspectors
- Department of Homeland Security
- Department of Defense (U. S. Army Tank Command – Detroit)

All these agencies have purchased MPSCS capable radios and operate on the system as need be. Additionally, a statewide federal talkgroup is available for all federal agencies to use as a coordination channel in the event of an incident. Federal agencies also have access to caches of MPSCS radios that are located around the State.

The Michigan National Guard also uses the MPSCS to conduct routine operations and incident/disaster response. Guard units throughout the State are equipped with MPSCS radios and have access to appropriate response talk groups.

5.4.9. Training and Exercises

As detailed in Section 4.4 of the SCIP, the State of Michigan has an active and robust training system that provides first responders at all levels of government both fundamental and advanced training in a variety of topics that support the goals of enhancing communications interoperability. Training for first responders at all levels of government is overseen by various state agencies, which provide professional certification for successful completion of training. The State offers courses and workshops throughout the year at various locations to ensure that the programs are available to all.

While the MPSCS Advisory Board strongly feels that using interoperable communications technology and procedures on a day to day basis for routine operations is the most effective method for keeping users familiar with them, scenario training exercises are also a component of the State's training program. As described in Section 4.4, as the regional TICPs are completed, a requirement will be to regularly exercise the plan to ensure that potential gaps are identified. The Statewide Interoperability Coordinator will be responsible for tracking and documenting the lessons learned from these exercises.

5.5. NATIONAL INCIDENT MANAGEMENT SYSTEM (NIMS) COMPLIANCE

The National Response Plan (NRP) establishes a comprehensive all-hazards approach to enhance the ability of the United States to manage domestic incidents. It forms the basis of how the federal government coordinates with state, local, and tribal governments and the private sector during incidents. The NRP includes the provisions of Homeland Security Presidential Directive-5 (HSPD-5). HSPD-5 mandates the use of the National Incident Management System (NIMS) to provide a consistent, nationwide approach for federal, state, local, and tribal governments; the private sector; and nongovernmental organizations to work effectively and efficiently together to prepare for, respond to, and recover from domestic incidents, regardless of cause, size, or complexity. To provide for interoperability and compatibility among federal, state, local, and tribal capabilities, the NIMS includes a core set of concepts, principles, and terminology. HSPD-5 identifies these as the ICS; multi-agency coordination systems; training; identification and management of resources (including systems for classifying types of resources); qualification and certification; and the collection, tracking, and reporting of incident information and incident resources.

As discussed above in Section 2.1.8, the State of Michigan has adopted NIMS as the standard for emergency incident management within the State. On September 29, 2005, Governor Jennifer Granholm signed Executive Directive Number 2005-9, *Adoption of the National Incident Management System (NIMS) for Emergency Incident Management in Michigan*, adopting NIMS as the State standard for incident management (See Appendix 2.1.1[a]). That mandate was formally communicated to all emergency response personnel in the State of Michigan. On October 5, 2005, Captain Kriste Etue, Deputy State Director of Emergency Management and Homeland Security, Michigan State Police, notified all local and district emergency management coordinators, first responder agencies, and State agencies in the State of Michigan of the executive directive through the issuance of Emergency Management Division Informational Letter, Volume: 05-23 (see Appendix 2.1.1 [b]).

NIMS has been incorporated into the State's interoperability planning through adopting NIMS compliant Standard Operating Procedures (SOPs) at both State and local levels. Tactical Interoperability Plans, which have been developed at the State level and are being developed at the regional level, have adopted NIMS communications SOPs and have used the Incident Command System (ICS) for the development of tactical communications plans for incidents (see Appendix 4.3[b], Appendix 3.0[c], and Appendix 3.0[d]). These plans also call for the development of Communications Leaders (COMLs) as part of the ICS.

NIMS and the National Response Plan have been incorporated into the State's emergency management plan. The Michigan Emergency Management Plan (MEMP) is a comprehensive, all-hazard plan that coordinates the emergency management and homeland security activities of Michigan State Government. The MEMP is structured around eight Emergency Support Functions (ESFs) and 22 hazard-specific procedures sections that address the full range of natural, technological, and human-related disasters and emergencies – including weapons of mass destruction attacks and other terrorism threats. It incorporates the essential provisions of the National Incident Management System (NIMS) and National Response Plan (NRP) developed by the federal Department of Homeland Security.

As discussed in Section 2.18, the Michigan State Police Emergency Management Division has supported an aggressive training program to ensure that all of Michigan's emergency responders have training in NIMS and ICS.

NIMS is comprised of several components that work together as a system to provide a national framework for preparing for, preventing, responding to, and recovering from domestic incidents. These components include:

- Command and management
- Preparedness
- Resource management
- Communications and information management
- Supporting technologies
- Ongoing management and maintenance

This plan addresses specifically the Communications and Information Management component of the NIMS. Effective voice and data communication systems are one of the technological systems that provide the supporting capabilities essential to implementing and refining NIMS.

Key goals have been identified in this plan:

- Establish and maintain interoperable communications systems Statewide
- Establish Statewide data capabilities
- Establish and maintain consolidated dispatch centers
- Develop and maintain Statewide pre-positioned emergency assets

Each of these goals will assist the State of Michigan in providing the NIMS requirements for a standardized framework for communications, information management, and information-sharing support at all levels of incident management. These initiatives are calculated to enhance incident management and response by helping to ensure that decision-making is better informed.

The goals are intended to provide the technological support for interoperable communications for the State's first responders in both day-to-day emergencies as well as major incidents requiring expanded ICS structures to include unified command and area command. These initiatives will also provide the required communications support for federal coordination with State and local emergency responders pursuant to the NRP.

5.6. REVIEW AND UPDATE PROCESS

The MPSCS Advisory Board realizes that in order for the SCIP to be meaningful, regular review of its components, and updates to its contents must be performed. The ongoing reassessment of the SCIP goals and objectives provide for the shift or adjustment of these plans to compensate for newly identified interoperability gaps or unforeseen variances in the plans.

As part of this ongoing process, the Advisory Board has established the Interoperability Planning Committee at the state level. This committee will consist of representatives appointed from each region and will be divided into two working groups:

- **Operational Working Group**
  This group is responsible for determining operational requirements, developing standard operating procedures (SOPs), and coordinating training. Specific work group responsibilities include:
- **Technical Working Group**
  This group is responsible for identifying, developing and overseeing technical solutions. Specific work group responsibilities will include:

This Committee will be a sub-committee to the Advisory Board and provide local and regional input into the planning process. The charter for this committee has been drafted by the Advisory Board as part of the acceptance of the Statewide SCIP, and appointments are anticipated in the first quarter of 2008.

As another part of the ongoing planning process, the Advisory Board is working with the Homeland Security Planning Regions in the development of a TICP for each region. Currently, the TICPs for the Detroit UASI and Region 8 (see Fig. 3.1) are complete. All other regions are required to have approved TICPs submitted to the Advisory Board no later than the end of March, 2008. While the

regional TICPs will be reviewed at least semi-annually, a review may be triggered by many circumstances, such as these milestones:

- Changes to technologies used in a region
- Changes in personnel at local agencies
- Results of training exercises (i.e., best practices, lessons learned)
- Results of actual usage of the TICP

The State Interoperability Coordinator will be responsible for making sure that these reviews are conducted as required, under the authority of the Advisory Board. The Interoperability Coordinator will also be responsible for seeing that the state TICP and SCIP are reviewed and updated accordingly. The Statewide TICP will be reviewed at least semi-annually, based on inputs from the revised regional TICPs. The SCIP will be reviewed no less than annually from the original date of its approval.

The Interoperability Coordinator will directly promote and oversee the continued use of the CASM database tool, to ensure that information is up-to-date and correct. Reports derived from the tool will be used to provide input into the updates of the statewide TICP and the SCIP.

6. IMPLEMENTATION

By authority of Executive Order 2005-8, the MPSCS Advisory Board is responsible for the implementation of a statewide communications interoperability plan (SCIP). This SCIP is a 5 year plan to address the identified gaps in interoperable communications. The SCIP will be reviewed annually to ensure that it is up to date and valid. Much work has already been done in the state in the area of interoperable communications, and the SCIP is seen as a long term plan to achieve the goals identified by the Advisory Board. While all PSIC related activities will be completed by the summer of 2010, many of the other activities will continue on, be replaced or modified to ensure the success of the SCIP in the future. At a high level, the Advisory Board anticipates the following timeline for implementation of SCIP activities:

- Appointment of Interoperability Planning Committee members no later than the end of 1Q2008
- Completion of the remaining regional TICPs by the end of March, 2008
- Commencing a study of new and innovative interoperability technologies by the summer of 2008
- Exercising of the Regional TICPs and the Statewide TICP by the end of September, 2008
- Review and update of the State TICP by the end of November, 2008
- Review and update of the SCIP by the end of December, 2008
- Completion of all current PSIC Grant activities by the summer of 2010

In order to successfully achieve the key goals that the State of Michigan has identified, specific investment justifications (IJ) categories have been developed. Each IJ category addresses an identified hurdle or gap to effective interoperable communications for public safety responders in a specific region or governmental unit of the State. These IJ categories are as follows:

- Regional Projects
    - Establish and maintain multi-disciplined interoperability in Southwestern and Central Michigan
    - Enhance voice and data interoperability and provide critical communications functions in Southeast Michigan
    - Enhance and promote advanced interoperability in Northern Michigan by expanding the statewide network and ensuring regional interoperable communications

- State Projects
    - Michigan Public Safety Communications System technology upgrade
    - Enhance voice and data interoperability between and within State agencies, as well as between State agencies and local jurisdictions
    - Establish a robust Strategic Technology Reserve (STR)

In each IJ category, specific projects that address the category are detailed.

As part of the implementation plan, a State IJ Coordinator (IJC) has been identified, who will be responsible for overseeing all selected projects for the duration of the period of performance.

Additionally, regional coordinators and local project managers (PM) will be identified for all funded projects. The IJC contact information is as follows:

Name: Mark Wesley, Planning Section Manager, Michigan State Police
Address: 4000 Collins Road
Lansing, MI 48910
Phone: 517-333-5023
Email: wesleym@michigan.gov

Local PMs are identified in each IJ.

The State IJC will be responsible for the following:

- Tracking progress on all projects that have been awarded funding.
- Compiling all information on all projects and providing the MPSCS Advisory Board with status reports at their bi-monthly meetings
- Educating policy makers and practitioners on interoperability goals and initiatives
- Providing guidance to funded projects to ensure they adhere to the SCIP
- Ensuring that all projects are managed effectively using established project management practices
- Ensure that sufficient records are kept to track and justify all expenditures
- Work with local PMs to develop project success criteria
- Provide assistance to the local PMs if required
- Provide documentation to State Grant Administrator to comply with Grant requirements
- Establishing a plan for identifying, developing, and overseeing operational requirements, SOPs, training, technical solutions, and short and long-term sources

For each funded project, a regional coordinator and local project manager (PM) will be identified. Under the guidance of the IJC, the local PMs and regional coordinators will be responsible for:

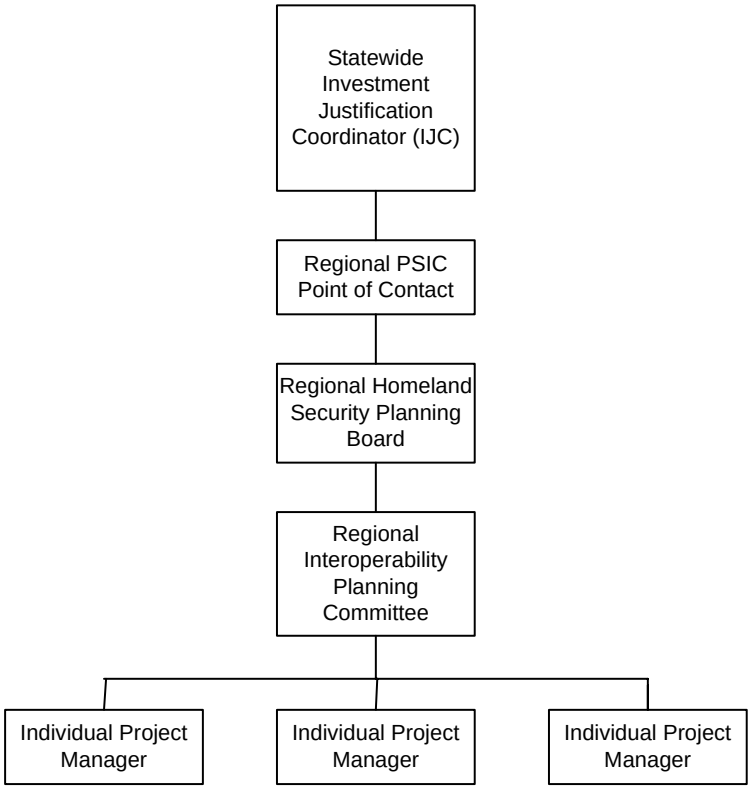
- Establishing a project plan
- Identifying and development of a risk mitigation plan
- Establishing an effective communications plan with all project stakeholders, including the IJC
- Developing and keeping updated a detailed project schedule
- Implementation at the local/regional level
- Reporting project status to the IJC on a monthly basis
- Seeking the assistance of the IJC if the success of the project is at risk
- Keeping records of the project sufficient to document all expenditures
- Tracking and documenting all issues that may affect the success of the project
- Determining what the specific critical factors for success of the project are

- Oversee and provide documentation for successful completion of the project

In order to manage and track the projects that are being pursued through the SCIP, a management structure has been created. Figure 6.1 illustrates this structure and who is involved. Each region will have a PSIC Point of Contact that will report directly to the State IJC on matters concerning SCIP activities. This structure will exist for each Investment Justification and the Homeland Security Planning Regions involved.

Figure 6.1

PSIC Investment Management Structure



6.1. INVESTMENT JUSTIFICATION CATEGORY PLANS

In the following sections, each of the IJ Categories is found. In each category, specific information is provided to show what projects are being proposed for each IJ. Detailed descriptions of the projects, including identified project manager and success criteria are provided in the PSIC Investment Justifications that are being submitted with the SCIP.

6.1.1. Establish and maintain multi-disciplined interoperability in Southwestern and Central Michigan (Regions 1,5,6)

6.1.1.1. Region 1 Activities

- Reprogram and/or replace radio equipment not capable of operating in the narrowband channels and establish gateway connectivity where applicable
- Equip 6 pre-existing trailers with radio equipment for on-scene interoperability in response to a major emergency or disaster
- Shiawassee County joining the MPSCS

6.1.1.2. Region 5 Activities

- Provide fire departments and all advance life support emergency medical units with a MPSCS radio
- Cass County joining the MPSCS
- MPSCS Tower construction in the vicinity of Berrien and Van Buren Counties

6.1.1.3. Region 6 Activities

- Provide interoperable capabilities between all dispatch centers
- Establish Command and Control interoperability on MPSCS

6.1.2. Enhance Voice and data interoperability and provide critical communications functions in Southeast Michigan (Regions 2 & 3)

6.1.2.1. Region 2 Activities

- Conduct a Needs and Technology Assessment
- MPSCS Tower construction in Wayne County
- MPSCS mobile and portable radio procurement
- Procure 2 Radio Control Manager (RCM) Units in Macomb County
- Enhancement of JPS Gateway
- Purchase of cache of dual mode M/A Comm radios that can be used on MPSCS

- Purchase of MPSCS cache radios for Macomb, Monroe, Washtenaw, and Wayne Counties

6.1.2.2. Region 3 Activities

- Hire a Coordinator and Planner (CAP) to oversee implementation of the PSIC activities
- MPSCS Tower construction in Bay County
- MPSCS mobile and portable radio procurement
- Purchase and installation of 3 in-building coverage solutions for Lapeer and Gladwin Counties for critical buildings
- Purchase of an interoperability gateway solution
- CAD to CAD system link for Huron and Tuscola Counties

6.1.3. Enhance and promote advanced interoperability in Northern Michigan by expanding the statewide network and ensuring regional interoperable communications (Regions 7 & 8)

6.1.3.1. Region 7 Activities

- MPSCS radio procurement for Emergency Medical units, Emergency Medical dispatch, Emergency Operations Centers, and hospitals
- Consolidation of up to 15 Public Safety Answering Points (PSAP)

6.1.3.2. Region 8 Activities

- Purchase and installation of microwave and repeaters to enhance MPSCS
- MPSCS radio procurement for Road Commissions, hospitals, and schools
- Purchase of mobile data computers and Integrated Voice and Data (IV&D) radio technology for law enforcement agencies region wide
- Linking/Consolidation of dispatch centers
- Procurement of VHF radio cache

6.1.4. State PSIC Justification – Enhance voice and data interoperability between and within state agencies, as well as with local jurisdictions

6.1.4.1. Specific agency activities

- Michigan State Police – Procure mobile data computers for law enforcement
- Department of Environmental Quality – Mobile radios and Mobile Data Computers for the Radiological Protection and Medical Waste Section, Teleconferencing and video equipment for the DEQ Cadillac and Gwinn offices
- Department of Natural Resources – Portable radios for the Parks and Recreation Division
- Michigan Department of Transportation – Mobile radios for County Road Commissions

6.1.5. State PSIC Justification – Michigan Public Safety Communications System technology upgrade

6.1.5.1. MPSCS Activities

- Upgrade MPSCS operating system from version 6.5 to version 6.9
- Enhance security of system through upgrade
- Enhance system capability to provide mobile data service
- Allows for installation of advanced Internet Protocol (IP) consoles on systems
- Includes ability to expand data to 700 MHz high speed channels

6.1.6. State PSIC Justification – Establish a robust Strategic Technology Reserve (STR)

6.1.6.1. DIT/MPSCS Activities

- Purchase Site On Wheels (SOW)
- Procure 3 portable IP dispatch consoles
- Enhance existing Communications On Wheels (COW) unit with E F Johnson trunking capabilities

6.1.6.2. Department of Military and Veterans Affairs Activities

- Purchase self contained satellite uplink communications vehicle (Rapid Response Communications Vehicle)

7. FUNDING

7.1. SHORT AND LONG-TERM FUNDING

Funding is an essential part of interoperability. In order to provide seamless and reliable interoperable communications throughout the State, there is a need for a reliable source of funding to support all levels and disciplines, including State and local agencies. To that end, the Michigan Public Safety Communications System Advisory Board, its representatives and the Statewide Interoperability Coordinator is proactively working to identify and pursue all applicable grant and federal funding programs, and working with the State legislature to establish a sustainable funding source for the MPSCS. These funding sources will assist State and local entities in providing planning, training, equipment, equipment life cycle replacement, and support to all applicable agencies and first responders, thereby facilitating more effective interoperable communications.

The challenge, however, lies in determining how to cover the immediate, short-term costs of providing interoperable communications, and sustaining that funding to support ongoing, long-term costs of providing this service.

The State of Michigan made a financial commitment to build and complete the MPSCS in the mid-1990s. To this end, the State provided almost $250 million through bond funds to the MPSCS. The local governments of the State have also provided in excess of $100 million to upgrade the system infrastructure to allow for higher levels of system use and coverage. The State pays approximately $17 million each year towards the bond debt package. These payments will continue through 2019 and are not included as part of the MPSCS operating budget.

The strategic funding needs for the MPSCS have been identified as follows:

- Operating system upgrades
- Operational staff
- System Infrastructure upgrades
  - Local system integration
  - Additional coverage, capacity, and capabilities
- Ongoing system maintenance
- Data and other applications

Historically, the MPSCS requires funding of approximately $12 million per year just to meet its operating and basic maintenance costs. This has not included any funding for the life cycle replacement of system infrastructure or operating systems upgrades. Any infrastructure upgrades or replacement have been funded by overall State budget surpluses, if they are available or grants. The following table shows the State estimate for the basic funding needs for MPSCS for the current year (2007/2008).

ITEM DESCRIPTION	COST
Operating Costs (Maintenance, Personnel, etc.)	$12,000,000
Infrastructure Lifecycle Replacement	$ 4,000,000
TOTAL ESTIMATED COST	**$ 16,000,000**

The MPSCS has determined the $16 million figure is a "bare bones" amount to keep the system operational by only maintaining the status quo. The current infrastructure, while reliable, has been in use in some places for almost 10 years and is reaching the end of its anticipated life cycle. Currently, the State typically uses a five-year technology refresh policy in the information technology area. Radio system infrastructure typically has a life cycle of 10 to12 years. The following table projects long term annual funding requirements, taking into consideration the recommended upgrades and replacements to the system.

ITEM DESCRIPTION	COST
MPSCS Operations (Personnel, Admin, Training, etc.)	$ 18,700,000
Local User Systems Integrations	$ 2,300,000
Infrastructure Life Cycle Replacement	$ 7,300,000
Subscriber Unit Replacement (Mobiles, Portables, Mobile Data Computers)	$ 3,700,000
TOTAL ESTIMATED COST	**$ 32,000,000**

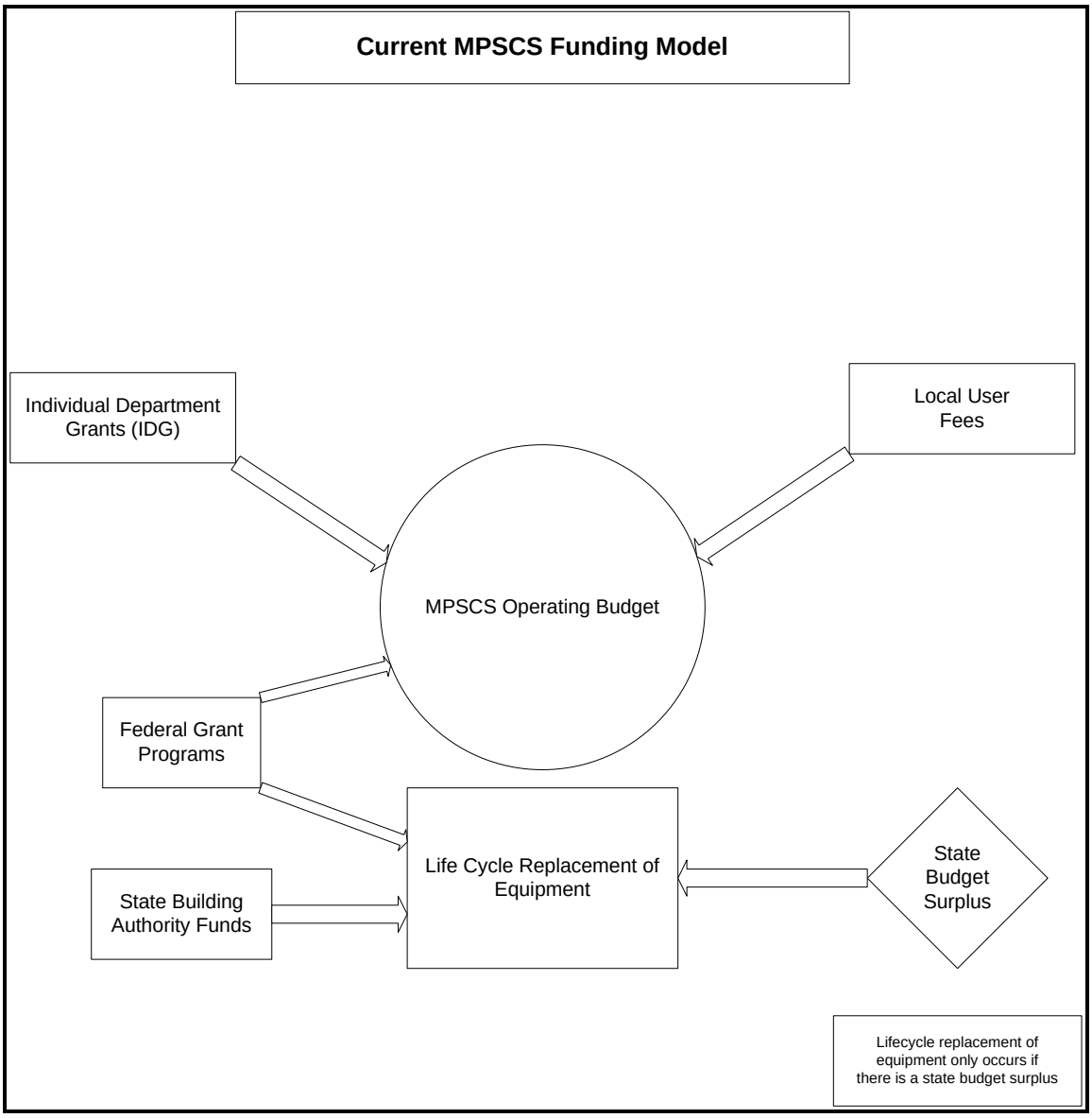
Currently, the MPSCS has only two primary sources of funding. These are Inter-Department Grants (IDG) and user fees.

- IDGs consist of funds that are provided by an individual State agency (i.e., State Police, Department of Natural Resources) to pay for its use of the MPSCS. These are budgeted at the "pleasure" of each individual agency and cannot be relied on as a stable source of funding for the long term.
- User fees consist of the annual "microphone" fees that are collected per radio from non-State government agencies that use the system. This includes county, municipal, township, tribal, and federal agencies. These funds also include the one-time new user system access fees that are charged to all new radios joining the system. Additionally, these fees can be "credited" back to a locality if that locality brings resources to the MPSCS such as tower sites or frequencies, thereby reducing the amount of fees collected. These fees can fluctuate based on the amount of new users joining the system each year and the number of non-State agency radios that operate on the system.

In the past, the MPSCS has also obtained funding from two other sources. These sources have been federal grants and the State Building Authority funds.

- Grant funding consists of any funds that the MPSCS is able to secure from various federal and State programs. This source of funding fluctuates based on availability of appropriate programs. These funds have been used for specific equipment projects and capital outlays. The Public Safety Interoperable Communications (PSIC) Grant program will provide funds for specific projects through October, 2010.
- The Building Authority funds have been used in the past to finance capital outlays such as new towers and other capital equipment (i.e., tower site equipment, subscriber radios). While these funds may be used again in the future, secure source of repaying the funds must be identified.

In the following figure, the current funding mechanism for the MPSCS is graphically represented.



As can be seen, these funding mechanisms are not stable and could potentially result in a funding shortfall. To that end, the MPSCS is working with the appropriate State leaders to secure a funding source that will allow for sustained, long term operations and upgrades. The following section outlines the short and long-term costs of providing interoperability and offers solutions for securing funding.

7.1.1. Short-term Funding

Short-term funding will be a critical component in ensuring that current and future radio systems in the State of Michigan achieve robust interoperability. In order to develop and improve current State and local public safety radio systems, significant investment will be needed. As a first step, the MPSCS Advisory Board, its representatives and the Statewide Interoperability Coordinator will identify all essential immediate, short-term costs of providing interoperability in the State. Some

examples of short-term costs that will impact interoperability include: equipment procurement, training, project planning, system design, and governance of physical infrastructure.

The MPSCS Advisory Board, as established by Michigan Executive Order Number 2005-8, and the Statewide Interoperability Coordinator will employ the following actions to identify and secure funding:

- Hold executive meetings to discuss short-term interoperable funding
- Hold public workshops for state and local entities
- Work with the appropriate leaders in the State Legislature and Executive Branch to identify sources of stable funding
- Work to eliminate local user fees by securing dedicated funding from the State Legislature
- Create subcommittees to pursue critical funding issues
- Develop methods of funding for technical project plans
- Facilitate communications between executive, legislative, partner governments, and agencies on crucial issues
- Assist local agencies in finding funding to support ongoing projects
- Identify and establish cost sharing mechanisms that encourage participation from all levels in the strategic initiatives and fairly provide benefits to each
- Actively monitor and ensure all stakeholders pursue all available federal grants and programs related to funding communications and interoperability related initiatives
- Collaboratively seek opportunities to combine State and local homeland security grant funding that will enable the fullest and fastest implementation of the strategic initiatives for public safety interoperable communications.

7.1.2. Long-term Funding

Sustaining funding over an extended period may perhaps be the most critical and challenging component of interoperability. Therefore, the State must identify all essential sources of funding that will not only support short-term costs but will be sustainable in the long-term as well. Examples of long-term costs include: equipment replacement, ongoing training, future project planning, system updates, and maintenance and operational costs.

In order to properly address long-term funding, the MPSCS Advisory Board will work to identify and address all sources of sustained funding to support interoperability initiatives throughout the State. As part of their normal duties, the advisory board will:

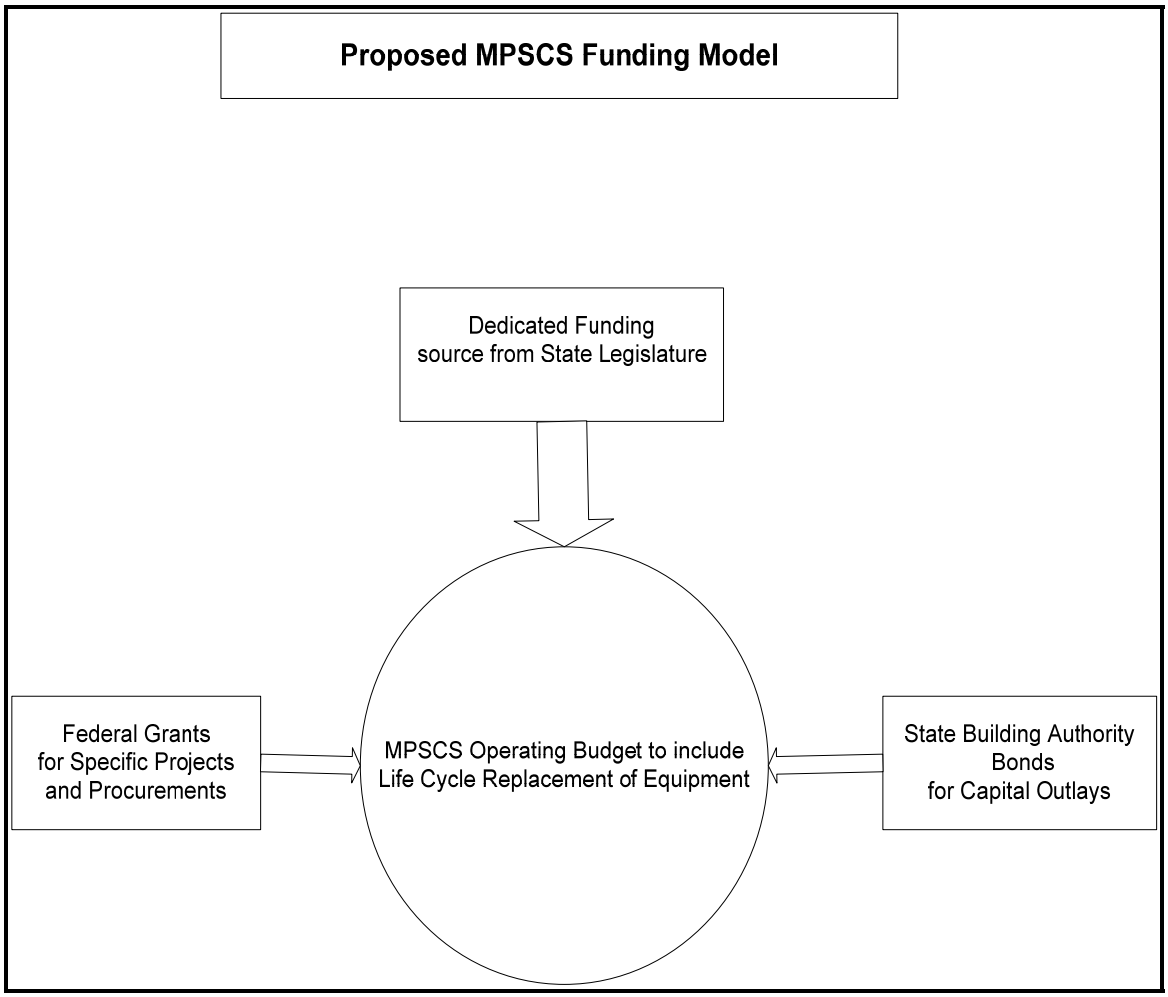
- Meet on a regular basis to discuss issues regarding the long-term funding of interoperability in the State
- Present all meeting minutes and notes at MPSCS executive meetings
- Provide funding guidelines for local agencies to follow in order to maximize funding
- Communicate and work with the State legislature to procure funding to support interoperability

- Conduct workshops and seminars for local agencies to attend to discuss critical long-term funding issues
- Assist local agencies in finding funding to support ongoing long-term projects

7.2. FUTURE FUNDING STRATEGY

Finding sources of sustainable funding to develop and implement critical technologies and programs can be strenuous, particularly on local agencies. Therefore, sources of funding must be identified and strategies must be in place to ensure that revenue is available to support state and local agencies in the advancement of interoperability throughout the State.

The MPSCS Advisory Board is working with the State legislature to develop a sustainable funding model for the MPSCS. The following figure depicts a proposed future funding strategy.



In this proposed model, dedicated funding would come from a fee or surcharge on a service that the State provides. The dedicated State funding would eliminate local agency subscriber fees; eliminate local agency tower maintenance fees; eliminate the need to charge a mobile data fee to local agencies

when the service becomes available; and provide savings of approximately $9 million to the State's general fund by eliminating inter-department grants.

8. CLOSE

The Statewide Communications Interoperability Plan provides the State of Michigan with a unique framework that provides seamless and ubiquitous interoperability solutions. These solutions will be achieved through the development and implementation of the strategic goals outlined in the plan. The Advisory Board established goals are:

- Establish and maintain interoperable communications systems Statewide
- Establish Statewide data capabilities
- Establish and maintain consolidated dispatch centers
- Develop and maintain Statewide pre-positioned emergency assets

It is the intention of the State of Michigan that this plan serves as the backbone for establishing, developing, upgrading and enhancing interoperable communications Statewide. This will open the door to providing the essential support in events that require advanced communications among State and local agencies. The Statewide interoperability plan facilitates the support and cooperation between state and local public safety and non-public safety entities, thus creating an environment that is optimal for success. The State feels that this SCIP is a long term "road map" to the future, which will guide the PSIC Grant program as well as any future programs that will allow for the enhancement of interoperability. Through regular reviews and revisions, the SCIP and the SCIP process will allow for the ultimate goal of seamless interoperability to be reached.