Michigan's Public Safety Communications System
It's not just a radio. It's a partnership.

FACT SHEET

Importance of the MPSCS

The Michigan's Public Safety Communications System (MPSCS) is not just a radio. **It's a partnership.**

Highlights of the Michigan's Public Safety Communications System:

» Spanning from the shores of Lake Superior to the Ohio and Indiana borders

» Serves 2,614 state, local, federal, tribal, and private public safety agencies

» Includes 351 RF tower sites with 129 state and local public safety dispatch centers.

» Network communication center that serves 153,712 radios

» P25 compliant Motorola ASTRO trunked communication system

» Operates on the 800/700 MHz frequency range.

» Provides additional interoperability and backup to the trunked system with a 800 MHz Mutual Aid system at 179 of 351 RF sites across Michigan.

» Border interoperability with Indiana, Ohio, Wisconsin, and Canada.

» Network Communications Center (NCC) staffed 24/7/365 provides technical support for first responders, system monitoring, prompt response to failures, and assignment and activation of interoperable talkgroups.

System Security

» Member agencies control the use of their proprietary talkgroups. Sharing between agencies requires approval of the agency that controls the talkgroup.

» MPSCS insures that no unauthorized radio can use the system. Strict control of the system key has been established; a key is required to program radios for use on the system.

» System is compatible with DES-OFB, AES256 and ADP radio encryption. Over the Air Rekeying (OTAR) is available for DES-OFB and AES256 algorithms.

Emergency Communication

» The system is designed to provide multiple levels of disaster recovery in the event of a connection or hardware failure.

» If individual sites lose connectivity to the system, sites revert to "site trunking." During site trunking, subscriber units look for adjacent sites with acceptable signal levels that have wide area connectivity. Localized operations are maintained by the site with site trunking if a unit is unable to find a candidate.

» Simulcast systems (multiple tower sites acting in unison) that lose connectivity to the wide area system will enter into site trunking mode; however, the simulcast system will continues to provide trunking operations for sites within the simulcast.

» Deployable emergency resources are available including a six channel trunked portable site, various gateways and conventional resources for cross-system and cross-band interoperability, and satellite platforms for phone and data

MPSCS
BY THE NUMBERS
Numbers current as of April 2025

153,712
Mobile & Portable Radios on the System

17,406
Live & Pending Fire Pagers

2,614
State, Local, Federal, Tribal & Private Public Safety Agencies Served

351
RF Sites

129
911 Dispatch Centers
772 console positions

15
Million/month Push-to-Talks

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DTMB
Technology, Management & Budget

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Emergency Communication, continued:

» Emergency caches of radios are strategically positioned across Michigan for emergency deployment.

» MPSCS staff includes COMTs, radio and tower technicians, and radio engineers that are available to assist any member agency with emergency deployments.

Interoperability

» MPSCS provides interoperability between local, state, federal and private first responders.

» We support interoperability with legacy and non-standards based systems through gateways and patches.

» System radios contain event talkgroups which can be reserved and activated when required. Event talkgroups provide common talkgroups between all MPSCS radios.

» All system radios have 800MHz national channels for "off-system" interoperability.

» Agencies responding to emergencies or chases that span jurisdictions can easily coordinate on statewide or event talkgroups by switching talkgroups on their radio or via dispatchers through a console patch.

» MPSCS, in partnership with the MSP EMHSD, hosts the annual Michigan Statewide Interoperable Communication Training Conference.

Dispatch Services

» MCC 7500 dispatch consoles can be programed to support agency specific needs. This includes control of conventional resources, traditional two tone fire and 800 alert paging, and console resource patching — all of which simplify operations and enhance efficiency.

» In the event of overflow or dispatch center evacuation, member agencies can have dispatch redundancy at another member's location in as little as 30 seconds. By simply loading a console configuration, a backup dispatch location can have full dispatch capabilities.

» The MPSCS 800 alert paging solution for fire station alerting is available to provide a single system solution.

» Console aliasing is available allowing local control of radio ID naming for display on dispatch consoles. Instead of radio IDs being displayed when a unit transmits, aliasing allows linking usernames or unit IDs to the radio ID. This allows dispatchers to quickly see

who is calling — saving time when it counts.

Financial Overview

» One common question: *Who owns the infrastructure?* The State of Michigan owns 198 of the MPSCS sites. The remaining sites are property of the municipality, county or agency that purchased it. Agencies providing infrastructure when joining the system receive credit but retain ownership of infrastructure.

» MIC fees, subscriber fees and user fees all refer to the same thing – the MPSCS fee structure. More info on our current fee structure can be found under policies and procedures at michigan.gov/MPSCS.

» Users are provided with newer technology without the aggravation of securing additional funds. MPSCS biannually performs system upgrades if a system component – the magic black box – is no longer supported or doesn't meet specifications. Upgrades incur no charge to our members.

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Executive Summary

The Department of Technology, Management and Budget (DTMB) is the responsible agent of the Office of Michigan's Public Safety Communications System (MPSCS) within the Bureau of Center for Shared Solutions (CSS). The MPSCS has a focused mission of providing statewide public safety communications solutions for state, local, federal, tribal, and private public safety agencies. The mission critical communications services were established over twenty five years ago and have seen steady growth through those years with an increased level of trust with the member partners. The MPSCS has developed additional integrated toolsets for enhanced options for current and prospective members to increase efficiency for public safety personnel. The MPSCS is based in Lansing yet has staff geographically located around the state to efficiently support the system and customer needs in all 83 counties. The use of traditional and social media outreach mediums are used to promote information sharing to the member and potential member community. The MPSCS has been nationally and internationally recognized as the standard for land mobile radio systems to be modeled. From the coverage capabilities to the number of agencies utilizing the MPSCS and the span of agencies using the single statewide system, interoperability is recognizably enhanced as each new member joins the MPSCS.

Services Plan

Mission critical integrated voice and data solution:

» The MPSCS is currently providing solutions to 2,614 local, state, federal, tribal and private public safety agencies.

Related Radio Support functions:

» The MPSCS provides all of the support services to bring an agency onto the MPSCS as a member or partner easing the burden to public safety agencies without expertise on hand to develop locally integrated solutions.

Integrated Public Safety Communications Tools:

» The MPSCS anticipates expansion of the integrated toolsets following the same methodology that has been successfully developed for mission critical radio communications. Once the toolsets mature at the state level, the toolsets will be offered to local agencies for use.

Marketing

The MPSCS marketing and outreach strategy rests on the belief that its services and offerings represent a value-added approach to public safety communications statewide. To implement this strategy, the MPSCS intends to continue efforts of outreach and collaboration that demonstrate a partnership with the State is the best fiscal and technological approach to replace failing or interoperable solutions in place across the state. Even if systems are not replaced, identifying ways to increase membership is a direct correlation to increasing interoperability.

Management

MPSCS staff have extensive knowledge of public safety communications and share a common mission of ensuring the system's reliability and broad availability. Expertise ranges from tower crew specialists supporting equipment on the tower to radio technicians maintaining the entire RF infrastructure from site to the user. Additionally, MPSCS engineers provide analysis, planning, and maneuvering through the federal policies and laws directing the network.

Financials

DTMB is working on securing an annual budget increase that will provide long-term critical infrastructure lifecycle replacement efforts. Major initiatives will be undertaken over the next decade to ensure current and future users of the MPSCS continue to leverage the reliability of the system that has garnered national recognition.

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Mission

The mission of DTMB's Michigan's Public Safety Communications System is to provide public safety agencies of all disciplines a standard's based statewide interoperable communications system and a suite of connected tool sets from voice to data communications.

Keys to Success

» Internationally recognized statewide interoperable communications system

» Effective management and technical leadership

» High quality service and support

» Partnerships and shared solutions

MPSCS Summary

DTMB's Office of MPSCS has been in operation since 2001 when IT was consolidated into a single state agency. Prior to the migration of the MPSCS to DTMB, the Michigan State Police was the responsible agent to develop a statewide MPSCS solution. The ideas and strategy for the MPSCS were initiated in the mid-1980s and were based on replacing a 40 year-old system that was nationally recognized. The contract was awarded in1995 and system construction continued for the next seven years with the completion of each phase seeing users migrated from a legacy system to the MPSCS. By 2002 the project was completed and, 152 agencies across the state were users of the system. Since MPSCS was the first statewide standards-based solution in the nation, funding for long-term operations, maintenance and technology lifecycle replacement was not funded in the same way as the system experienced during the construction phases. At this time, DTMB leadership in concert with the Department of Military and Veterans Affairs, Michigan State Police and the majority of the public safety fraternal organizations presented justification for such funding to the administration and legislature.

Over the next decade, DTMB will oversee the lifecycle remediation of key system equipment. In parallel to the lifecycle effort, the MPSCS has established a suite of applications that are closely integrated with the successful mission critical voice system that will expand capabilities, options and efficiencies for public safety agencies across the state.

MPSCS History

The implementation process of MPSCS began in 1984 when the Michigan State Police formed a committee to evaluate its 1940's era two-way radio system. The committee consisted of several state departments including State Police, Natural Resources, Transportation, Management and Budget, Military Affairs and representatives of the state House and Senate Fiscal Agencies.

The committee recommended building a new system. They further decided the new network would be large and flexible enough to support all state and local public safety agencies. In 1992, after several years of system design, planning and cost studies, specifications for a Request for Proposal were finalized and sent to potential vendors. In June 1994, the Michigan Legislature approved the funding for the new system and Motorola was awarded the contract to build the MPSCS.

Milestones

In September 1995, Michigan celebrated the achievement of the system's first major milestone when the state broke ground on Phase One construction. Phase One, which constitutes all of southeast Michigan, including the Detroit, Jackson and Lansing areas, was officially completed in 1997. In 1998, the second major milestone was reached when Phase Two, which includes all of southwest lower Michigan, was brought online. The completion of Phase Three, the northern Lower Peninsula followed in 2000. In the fall of 2002, the original construction of the system was completed by providing 800 MHz digital radio coverage to the entire Upper Peninsula.

Michigan's Public Safety Communications System
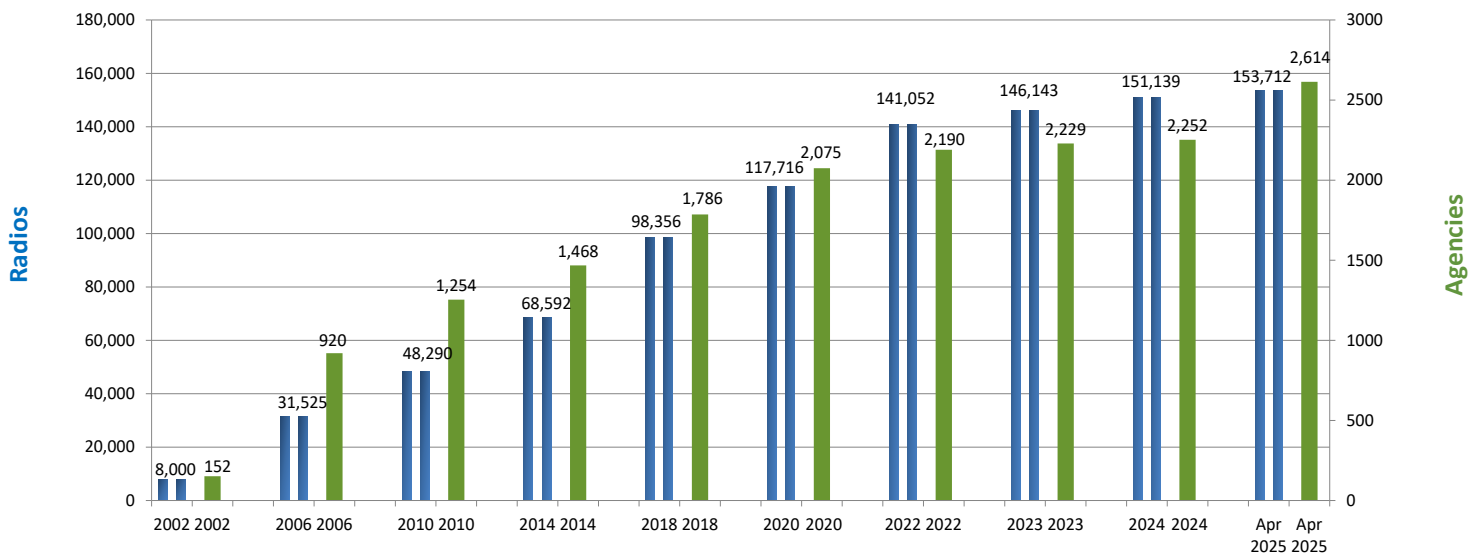### It's not just a radio. It's a partnership.

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Serving Michigan First Responders

The attack on the Twin Towers on September 11, 2001 brought to the forefront the need for interoperable communications. MPSCS responded to this need by providing a state-of-the-art statewide interoperable communications system. Today, local first responders are integrating simulcast sub-systems into the MPSCS system. This is a win-win for the new local users who experience the benefits of MPSCS system interoperability and core system management as well as current MPSCS subscribers who receive enhanced radio coverage.

The August 2003 blackout, which was the largest in United States history, proved the value of MPSCS. While commercial wireless carriers were failing due to overuse and lack of emergency power systems at their tower sites, MPSCS continued to provide dependable, uninterrupted communications to its users. MPSCS also played a role to State of Michigan Emergency Management through the Network Communications Center by identifying the blackout area through its alarm and control capabilities. MPSCS has provided interoperable communications to support multiple public safety agencies for large scale events like the 2024 NFC Championship, NCAA events, searches for lost children, apprehension of escaped criminals, and natural disasters such as flooding, tornadoes and forest fires.

» MPSCS is a 700/800 MHz radio network that utilizes state-of-the-art trunked technology to provide statewide interoperability in digital clarity to its members throughout Michigan.

» MPSCS is APCO (Association of Public-Safety Communications Officials) Project 25 standard-compliant. APCO 25 is a set of universal standards created by public safety officials for communications equipment. The objective is to enhance interoperability by assuring that a variety of radio equipment vendors manufacture a product that will be compatible with any other APCO 25-compliant system. This ensures that any APCO Project 25 compliant mobile or portable radio meeting the standard and with the MPSCS validation will work on the statewide infrastructure. Currently 7 of the major manufacturers have 23 mobile and 31 portable radio models approved for use on the MPSCS.

» MPSCS guarantees 97% all-weather street level mobile radio coverage and has found the level of portable coverage usually surpasses conventional analog systems.

» Local public safety agencies maintain control of their own communications management functions.

» Currently, there are 2,614 federal, state, local, tribal, and private public safety agencies with 153,712 radios on the system. See Table 1: Agency and Radio Growth

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Products and Services

MPSCS is an established statewide interoperable integrated voice and data land mobile radio system (LMR). Other Public Safety toolsets have been added to provide state agencies with more efficiencies and increased benefits statewide. As the services become established and mature, MPSCS expects to expand the offerings for additional public safety toolsets to non-state agencies.

The following is a list of products and services offered by DTMB's MPSCS:

1. **Land Mobile Radio.** DTMB offers mission critical voice communications via the statewide land mobile radio network for public safety agencies. This is a service that is available 24/7/365 for agencies that use the MPSCS as a primary communications system and also for those agencies that use it as secondary or when their respective systems are not available for interoperable communications.

2. **Land Mobile Radio Template Design and Radio Programming.** The MPSCS will work with the member to develop the template for their radios to include designing a communications plan for the agency/jurisdiction while assessing Grade of Service probability for the member service area. The effort will also identify optional items within a template consistent with MPSCS standard operating practices and assist with radio programming and ongoing template maintenance.

3. **Network Communications Center (NCC), Network Monitoring.** The MPSCS will monitor 24/7/365 all MPSCS and integrated MPSCS sub-systems and sites for member agencies. The NCC also provides a single access point for emergency provisioning of system access and talkgroup grooming on the system based on member need(s).

4. **Co-location.** A public safety organization, either a MPSCS member or non-member, is allowed to place antennas and equipment on MPSCS towers and property to expand the communications capabilities without having to construct a new tower site.

5. **RF Engineering Services.** MPSCS engineering staff can aide in sub-system design or other communications additions to the MPSCS for expanded communications capabilities within member service areas. Analysis for grade of service and other system anomalies are supported by the engineering team to meet member and partner interoperability solutions.

6. **Computer Aided Dispatch (CAD) for state agencies.** CAD is a suite of software used to initiate public safety calls for service, dispatch, and maintain the status of responding resources in the field. It is generally used by state agency emergency communications dispatchers, call-takers, and 911 operators in centralized, public-safety call centers, as well as by field personnel utilizing mobile data computers (MDCs). The solution is a model that streamlines public safety technology at the state level to a single secured solutions and is used by multiple public safety state agencies.

7. **In-Car CAD for state agencies.** The integrated solution that connects the vehicle or mobile office to the dispatch center that enables silent dispatching and integration of other agency or discipline specific applications for greater in-field public safety agency efficiencies.

8. **Automatic Resource Locator (ARL)/Automatic Vehicle Locator (AVL) for state agencies.** The solution that allows the geographic locating of a vehicle and public safety professional with a connected portable radio or portable GPS enabled device. The solution integrates into CAD for a full featured use or can be used as a standalone solution for agencies that may not require CAD.

9. **MPSCS Site Maintenance for Local Sites.** Maintains the MPSCS sites and any integrated local sites or subsystems to the MPSCS. The team supports all non-RF aspects of the sites such as physical plant, tower lighting, generators, HVAC, and grounds.