

Michigan

Communications Field Operations Guide (MIFOG)

Version 1.3



State of Michigan

October 2016

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Introduction

The most current version of this guide is always available at:

www.michigan.gov/comuwg

The Michigan Communications Field Operations Guide (MIFOG) is a collection of technical reference material to aid Communications Unit personnel in establishing solutions to support communications during emergency incidents and planned events. The MIFOG includes information from the National Interoperability Field Operations Guide (NIFOG), material from each of the seven Michigan Regional Tactical Interoperable Communications Plans (TICP), and data from other Michigan communications documents; formatted as a pocket-sized guide.

The MIFOG contains local, state, and national interoperability channels. These channels should be programmed into all public safety radios in the appropriate frequency band. If geographic restrictions on some channels preclude their use within Michigan, they may offer an interoperability option when responding out of State where the restrictions do not apply.

We welcome contributions, corrections, or comments! Please direct them to: Jerry Nummer at nummerj@michigan.gov

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MIFOG Contacts

Michigan's Public Safety Communication System (MPSCS)

Network Communication Center (NCC)

Phone: 517-333-5050

Toll-Free: 1-888-554-4622

Fax: 517-333-5015

Available 24 hours per day, 365 days per year

Responsible for operational readiness and programming of the MPSCS

Michigan State Police Operations

Phone: 517-241-8000

Toll-Free: (Michigan call) 800-525-5555

Toll Free within USA 877-616-4677

TDD: 517-241-8000

Fax: 517-241-6815

Available 24 hours per day, 365 days per year

State-designated authority for requesting state assistance

CASM

The State of Michigan CASM administrator is Mr. Jerry Nummer, Michigan's Public Safety Communications System (MPSCS). For assistance with using CASM, or for help with CASM account access, contact Jerry Nummer.

Phone: 616-240-1585

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1. Interoperable Communications Commonalties

1.1 Common Issues

1. Incident using radio channels in more than one band (VHF, UHF, and/or 700/800 MHz)
2. Incident using different radio bands via console or gateway patches
3. Unable to communicate critical information due to radio congestion
4. Unfamiliar with radio system(s) or assigned radio functionality
5. Instructions and assignments not clear
6. Have no or inadequate communication with your crew members or supervisor
7. Dispatch to dispatch channel patching
8. Inadequate number of tactical channels available or assigned
9. Multiple conversations on the same talk group or channel
10. Ensure that the radio system that you are using for interoperability completely supports the incident with good radio coverage
11. High level of background noise (i.e. wind, generators, power tools, fire pumps)
12. Emergency button activation – who is receiving the notification, who is authorized to clear
13. Multiple agencies performing radio programming at the incident
14. Organizations in the system do not use the same vocabulary
15. Mobile gateway devices being used in a strategic (wide-area) rather than tactical (local) environment
16. Multiple mobile gateways available at the incident
17. Responding agencies have not identified a single Communications Unit Leader for the incident
18. Working in the deep interior of a building, parking garage, or underground.
19. Attempting to apply day-to-day operational communications practices to large scale incidents.

1.2 Agency Responsibilities and Rights

Agencies will retain the following responsibilities and rights

1. Agencies are responsible for complying with MOUs and Agreements developed through the State in coordination with their respective jurisdictions
2. Authorized representatives of agencies participating in this plan have the authority to request the use of equipment, including systems and mobile assets, in accordance with Standard Operating Procedures (SOPs)
3. Where applicable, agencies will be responsible for consistently maintaining testing and exercising connectivity to interoperable communications
4. Incident Commanders retain the right to decide how to utilize interoperable communications within established guidelines

1.3 Prioritization and Shared Use of Regional Interoperability Assets

The Incident Commander, or designee, in conjunction and/or cooperation with their counterparts in other involved agencies, will have the authority to request the use of interoperable assets. Once Incident Command has been established, Command Staff or the Communications Unit Leader (when designated) direct the further coordination and delegation of the interoperable communications assets assigned to the event or incident in question.

When the same resources are requested for two or more incidents, resource assignments should be based on the priority levels in accordance with the National Incident Management System (NIMS).

In the event of multiple simultaneous incidents within the same priority, the resources should be allocated according to NIMS.

In response to events or incidents which cross over jurisdictional boundaries, there potentially could be competing demands and priorities for interoperable communications assets. Agencies should activate needed interoperable communication assets to respond with effective efficiency, and to minimize any negative impact on surrounding agencies or jurisdictions. Specifically, interoperable communications should be established with the following techniques, listed in increasing order of complexity.

1. Utilize *face-to-face* communications wherever appropriate. For example, the co-location of all Command and General Staff at the Incident Command Post (ICP) provides the best direct communications and reduces the demand on interoperability resources
2. Employ local communications assets until such time as either those assets become taxed or inadequate based on the nature and or scope of the incident
3. If response agencies are users of a shared system, utilize that shared system to establish interoperable communications
4. If response agencies operate on disparate systems, utilize shared or mutual aid channels to establish interoperable communications
5. If response agencies do not share systems or channels, utilize a gateway solution to establish interoperable communications
6. Where interoperable communications cannot otherwise be established between response agencies, utilize swap or cache radios to establish operable communications for responders
7. If no other method of interoperability can be established, relay communications through staff members.

When the same resources are requested for two or more incidents, resource assignments should be based on the priority levels listed below:

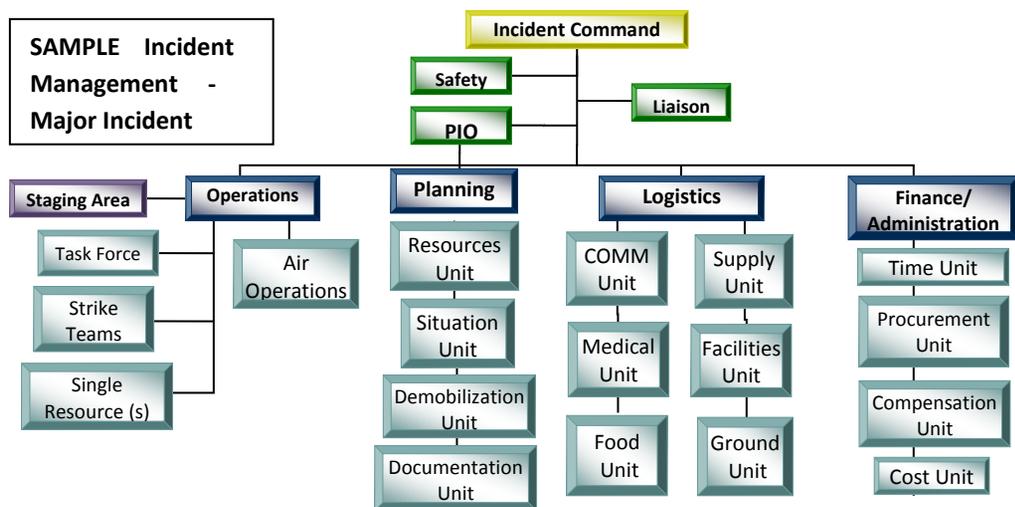
1. Disasters, large scale incidents, or extreme emergencies requiring mutual aid or interagency communications
2. Incidents where imminent danger exists to life or property
3. Incidents requiring the response of multiple agencies
4. Pre-planned events requiring mutual aid or interagency communications
5. Incidents involving a single agency where supplemental communications are needed for agency use
6. Drills, tests and exercises
7. In the event of multiple simultaneous incidents within the same priority level, the Incident Commander or Unified Command (if formed) shall have allocation authority and shall allocate resources with the following priorities in mind:

1. Incidents with the greatest level of exigency (e.g. greater threat to life or property, more immediate need, etc.) have priority over less exigent incidents
2. Agencies with single/limited interoperable options have priority use of those options over agencies with multiple interoperable options

When at all possible, agencies already using an interoperable asset during an event should not be redirected to another resource.

1.4 Incident Command System (ICS)

ICS is a key feature of NIMS. It is a widely applicable management system designed to enable effective, efficient incident management by integrating a combination of facilities, equipment, personnel, procedures and communications operating with a common organizational structure. ICS is used to organize on-scene operations for a broad spectrum of incidents/events and guides the process for planning, building and adapting that structure. ICS is based on the command principles of unity of command, chain of command, span of control, delegation of authority and division of labor. The five major functional areas of ICS are command, operations, planning, logistics and finance administration. The Incident Management – Major Incident flow can be found in the following page:



1.5 COMU Position Descriptions

At an Incident/Event

The Communications Unit is the Service Branch of the Logistics Section of the ICS. Listed below are the Communication Unit positions titles and responsibilities.

Communication Unit Leader (COML) manages the technical and operational aspects of the Communications Function during an incident or event. Develops National Incident Management System (NIMS) Incident Command System Form 205 Incident Radio Communication Plan and supervises the Communication Unit.

Incident Communications Technician (COMT) deploys advanced equipment and keeps it operational throughout the incident/event.

Technical Specialist (THSP) allows for the incorporation of personnel who may not be formally certified in any specific NIMS/ICS position. THSPs may include Local Agency Radio Technicians (as opposed to the COMT), Telephone Specialists, Gateway Specialists, Data/IT Specialists, and/or Cache Radio Specialists.

Incident Communications Center Manager (INCM) supervises the operational aspects of the Incident Communications Center (ICC) (Mobile Unit and/or Fixed Facility). During an incident, the ICC is designed to absorb incident traffic in order to separate that traffic from the day-to-day activities of the dispatch center. The ICC is typically located at the Incident Command Post (ICP) in a fixed site, tent, trailer, or mobile communications unit.

Radio Operator (RADO) staffs a radio at the ICC and is responsible for documenting incoming radio and telephone messages. Incident Dispatchers or Tactical Dispatchers are used as RADOs.

Dispatch Center or Emergency Operations Center (EOC)

Communications Coordinator (COMC) the COML will work with the COMC to coordinate communications with other dispatch centers and the incident communication plan. Locally, the jurisdictional dispatch center supervisor or dispatcher will act as the Communications Coordinator. Coordinators may also be located at the county, region, State and/or federal level

1.6 ICS Personnel Common Responsibilities

The following is a checklist applicable to all ICS personnel:

1. Receive assignment from your agency, including:
 - a. Job assignment, e.g. Strike Team designation, overhead position, etc.
 - b. Resource order number and request number
 - c. Reporting location
 - d. Reporting time
 - e. Travel instructions
 - f. Any special communications instructions, e.g. travel channel
2. Upon arrival at the incident, check in at designated Check-in location. Check-in may be found at:
 - a. Incident Command Post
 - b. Base or Camps
 - c. Staging Areas
 - d. Heli-bases
 - e. If you are instructed to report directly to a line assignment, check in with the Division/Group Supervisor
3. Receive briefing from immediate supervisor.
4. Acquire work materials.
5. Conduct all tasks in a manner that ensures safety and welfare of you and your co-workers.
6. Organize and brief subordinates.
7. Know the assigned channel(s) for your area of responsibility and ensure that communication equipment is working properly.
8. Use clear text and ICS terminology (no codes) in all radio communications. All radio communications to the Incident Communications Center will be addressed: "(Incident Name) Communications", e.g. "Webb Communications".

1.7 Area Commander Position Checklist

The Area Commander is responsible for the overall direction of incident management teams assigned to the same incident or to incidents in close proximity. This responsibility includes ensuring that conflicts are resolved, compatible incident objectives are established and strategies are selected for the use of critical resources. Area Command also has the responsibility to coordinate with local, state, federal, and volunteer organizations and agencies that are operating within the Area.

1. Obtain briefing from the agency executive(s) on agency expectations, concerns, and constraints
2. Obtain and carry out delegation of authority from the agency executive for overall management and direction of the incidents within the designated Area Command.
3. If operating as a Unified Area Command, develop working agreement for how many Area Commanders will function together.
4. Delegate authority to Incident Commanders based on agency expectations, concerns, and constraints.
5. Establish an Area Command schedule and timeline.
6. Resolve conflicts between incident "realities" and agency executive "wants".
7. Establish appropriate location for the Area Command facilities.
8. Determine and implement an appropriate Area Command organization.
9. Determine need for Technical Specialists to support Area Command.
10. Obtain incident briefing and Incident Action Plans from Incident Commanders.
11. Assess incident situations prior to strategy meetings
12. Conduct a joint meeting with all Incident Commanders.
13. Review objectives and strategies for each incident.
14. Periodically review critical resource needs.
15. Maintain a close coordination with the agency executive.
16. Establish priorities for use of critical resources.
17. Review procedures for interaction within the Area Command.
18. Approve Incident Commanders' requests for and release of critical resources.
19. Coordinate and approve demobilization plans.
20. Maintain log of major actions/decisions.

1.8 Incident Commander Position Checklist

The Incident Commander's responsibility is the overall management of the incident. On most incidents, a single Incident Commander carries out the command activity, however, Unified Command may be appropriate. The Incident Commander is selected by qualifications and experience.

The Incident Commander may have a Deputy who may be from the same agency or from an assisting agency. Deputies may also be used at section and branch levels of the ICS organization. Deputies must have the same qualifications as the person for whom they work for, as they must be ready to take over that position at any time.

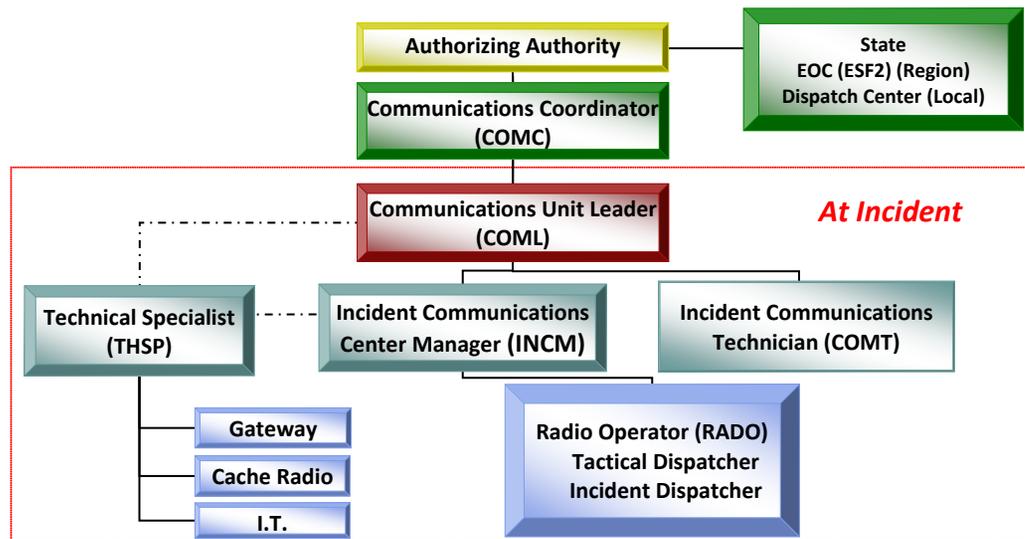
1. Review common responsibilities (Section 1.6).
2. Assess the situation and/or obtain a briefing from the prior Incident Commander.
3. Determine Incident objectives and strategy.
4. Establish the immediate priorities.
5. Establish an Incident Command Post.
6. Consider the need for Unified Command.
7. Establish an appropriate organization.
8. Ensure planning meetings are scheduled as required.
9. Approve and authorize the implementation of an Incident Action Plan.
10. Ensure that adequate safety and personnel accountability measures are in place.
11. Coordinate activity for all Command and General Staff.
12. Coordinate with key people and officials.
13. Approve request for additional resources or for the release of resources.
14. Keep agency administrators informed of incident status.
15. Approve the use of trainees, volunteers, and auxiliary personnel.
16. Authorize the release of information to the news media.
17. Ensure Incident Status Summary (ICS Form 209) is completed and forwarded to appropriate higher authority.
18. Order the demobilization of the incident when appropriate.
19. Maintain Unit/Activity Log (ICS Form 214).

1.9 Communications Unit Leader (COML) Position Checklist

TASK

1. Obtain briefing from the Logistics Section Chief or Service Branch Director.
2. Organize and staff unit as appropriate
 - a. Assign Communications Center Manager and Lead Incident Dispatcher.
 - b. Assign Message Center Manager and ensure adequate staff is assigned to answer phones and attend to fax machines.
3. Assess communications systems/channels in use; advise on communications capabilities/limitations.
4. Develop and implement effective communications procedures (flow) internal and external to the incident/Incident Command Post.
5. Assess Incident Command Post phone load and request additional lines as needed.
6. Obtain copy of Communications Resource Availability Worksheet (ICS Form 217A) which provides RF information for the applicable area. If ICS Form 217A has not been completed or is unavailable, it should be prepared.
7. Prepare and implement Incident Communications Plan (ICS Form 205):
 - a. Obtain current organizational chart.
 - b. Determine most hazardous tactical activity; ensure adequate communications.
 - c. Make communications assignments to all other Operations elements, including volunteer, contract, or mutual aid.
 - d. Determine command communications needs.
 - e. Establish and post any specific procedures for use of Incident Command Post communications equipment.
8. Include cellular phones and pagers in Incident Communications Plan (ICS Form 205T) if appropriate:
 - a. Determine specific organizational elements to be assigned to telephones.
 - b. Identify all facilities/locations with which communications must be established (shelters, press area, liaison area, agency facilities, other

- Governmental type entities' Emergency Operations Center [EOCs], etc.), and identify and document phone numbers.
- c. Determine which phones and what numbers should be used by specific personnel and their purpose. Assign specific telephone numbers for incoming calls, and report these numbers to staff and off-site parties such as other local jurisdictions, state and federal agencies.
 - d. Do not publicize OUTGOING call lines.
9. Activate, serve as contact point, and supervise the integration of volunteer radio organizations into the communications system.
 10. Ensure radio and telephone logs are available and being used.
 11. Determine need and research availability of additional nets and systems.
 - a. Order through Supply Unit after approval by Section Chief or appropriate official.
 - b. Federal systems.
 - c. Additional radios and other communications devices, including repeaters, radio-telephone interconnects and satellite down-link capabilities may be available through VDEM, FEMA or the National Interagency Fire Center (NIFC).
 12. Document malfunctioning communications equipment, facilitate repair
 13. Establish and maintain communications equipment accountability system.
 14. As required, provide technical information regarding:
 - a. Adequacy of communications system in use.
 - b. Geographic limitations of communications equipment
 - c. Equipment capabilities
 - d. Amount and types of equipment available
 - e. Anticipated problems in the use of communications equipment
 15. Estimate Unit needs for expected operations.
 16. As required, request relief personnel.
 17. Provide briefing to relief personnel on current activities and watch out or abnormal situations.
 18. Document all activity on Unit/Activity Log (ICS Form 214).



2 Interoperability Assets

Refer to the Michigan Standard Operating Guidelines for Mutual Aid Communications and the Regional/Local Tactical Interoperable Communications Plan (TICP) for policies and procedures on asset usage.

2.1 Requests for Communications Assets

The intent of the process to request communication assets is to make the process as efficient and responsive as possible and based on the premise that the Incident Command System has been established to address a public safety event.

1. The Incident Commander (IC) will designate a Communications Unit Leader (COML) who will prepare an Incident Radio Communications Plan (ICS Form 205).*
2. The COML will contact a peer COML from an adjacent community to request communication assets, if needed.
3. The requesting COML and the supporting COML will insure that the responding communication asset, the requesting jurisdiction dispatch center, and the on-scene commander all have a common mutual aid channel.
4. The responding asset will coordinate with Incident Command for staging of the asset or determine a reporting location.
5. The responding communications asset will establish communications with the EOC or dispatch center once on scene.
6. The ICS 205 will be provided to the communications asset.
7. If necessary, the IC will designate law enforcement personnel to provide security at the site of the communications asset.
8. The communications asset will prepare to activate interoperable communications necessary to support on-scene incident personnel.
9. The communications asset should be prepared to remain on scene, staffed by trained communications personnel, until released by the IC or designee.
10. If necessary, the IC will designate law enforcement personnel to provide security at the site of the communications asset.

***If no COML is designated, these duties fall to the IC.**

2.2 General Rules of Use

1. **National Incident Management System** – implement an Incident Based Command System (ICS) compliant with the National Incident Management System (NIMS) when using any regional interoperability resource.
2. **National Response Framework** – use the appropriate ICS forms needed to document a given incident, in accordance with the National Response Framework (NRF).
3. **Plain Language** – avoid using radio codes, acronyms, and abbreviations as they may cause confusion between agencies. Ensure that all verbal requests for assistance or backup specify the reason for the request.
4. **Unit Identification** – announce your home agency prior to announcing your unit identifier during interoperate communications situations (i.e. “Command, this is Troy Fire Department Unit.....”)
5. **Called Party First** – It is recommended that when attempting to contact another unit by radio, the unit initiating the contact states the call sign of the unit being called followed by the call sign of the calling unit – “Unit 6 from Unit 2”

Applies to Gateways

1. **Encryption** – all encrypted radio users must operate in a “clear” mode when a gateway is used unless otherwise arranged in advance. **Never assume encryption carries across the gateway.**
2. **Patching** – gateway devices should not patch frequencies assign by the FCC to local and state government to military frequencies.
3. **Monitoring** – the Incident Commander or designee will ensure that each activated patch is monitored consistently while in use.
4. **Technical Support** – qualified gateway technical specialists (THSPs) or communications technicians (COMTs) must be available for on-scene support during the deployment of mobile gateways.

Applies to Radio Caches

1. **Charging** – cache radios shall be deployed with charged batteries, limited use batteries, or "AA" battery clamshell adapters. . Portable radio caches shall include extra batteries and battery chargers to support extended deployments.
2. **Radio Identification** – each radio in a radio cache will have a unique identification number (e.g., serial number, owner applied number, etc.) for inventory tracking. The cache shall provide a method of tracking radios issued for accountability.
3. **Technical Support** – qualified radio cache THSPs or COMTs must be available for on-scene support during the deployment, if the requesting agency cannot act in this capacity.
4. **Equipment Return** – the requesting agency is responsible for the return of any cache radios/MCU's/equipment in the condition that they were issued and received. Responsibility for lost or damaged equipment lie with the appropriate agency as dictated by existing Memoranda of Agreement (MOAs)

Applies to Mobile Command Units/Deployable infrastructure

1. **Equipment Return** – the requesting agency is responsible for the return of any MCU in the condition that it was received and/or is dictated by existing Memoranda of Agreement.
2. **Resource Modifications** – the requesting agency is not allowed to change anything in the MCU without written permission of the owning agency. Should a modification need to be made, (i.e. changing an electric end) the requesting agency will incur the costs of any modification or restoration.
3. **Operational Expenses** – responsibility for operational expenses should be decided upon ahead of time or within an MOU.

2.3 Non-Federal National Interoperability Channels

The convention calls for frequency lists to show four digits after the decimal place, followed by either an "N" or a "W", depending on whether the frequency is narrow or wide band. Mode refers to either "A" or "D", indicating analog or digital (e.g. Project 25) or "M", indicating mixed mode. All channels are shown as if programmed in a control station, mobile, or portable radio. Repeater and base stations must be programmed with the RX and TX reversed. Unless stated otherwise, all frequencies are MHz except CTCSS tones, which are in Hz. All national interoperability channels above 150 MHz are to be utilized in the narrow band configuration.

2.3.1 VHF Low Band Discipline Specific Channels

Channel Configuration	Channel	Eligible Users	Mobile RX Freq	N/W	RX NAC	Mobile TX Freq	N/W	TX Tone/NAC	Mode A/D/M	Notes
Duplex	LLAW1	Law Enforcement	39.4600	W	156.7	45.8600	W	156.7	A	
Simplex	LLAW1D	Law Enforcement	39.4600	W	156.7	39.4600	W	156.7	A	
Duplex	LFIRE2	Fire	39.4800	W	156.7	45.8800	W	156.7	A	
Simplex	LFIRE2D	Fire	39.4800	W	156.7	39.4800	W	156.7	A	
Duplex	LLAW3	Law Enforcement	45.8600	W	156.7	39.4600	W	156.7	A	
Simplex	LLAW3D	Law Enforcement	45.8600	W	156.7	45.8600	W	156.7	A	
Duplex	LFIRE4	Fire	45.8800	W	156.7	39.4800	W	156.7	A	
Simplex	LFIRE4D	Fire	45.8800	W	156.7	45.8800	W	156.7	A	

2.3.2 VHF High Band

Interoperable Tactical Channels

VCALL10 is a dedicated interoperability calling channel. VTAC channels are reserved for interagency communications and primarily incident-based operations. Analog narrowband is standard for VCALL and VTAC channels.

All fixed, mobile, and portable radios should be programmed to transmit using the 156.7 Hz CTCSS code. All mobile and portable radios should be programmed to receive using the 156.7 Hz CTCSS code and the radios should have the capability to operate in the carrier squelch mode by activating a user control function.

A Network Access Code (NAC) of \$293 should be used instead of the standard CTCSS codes in cases where digital operation is also permitted on the national interoperability channels in regional or statewide interoperability plans.

VTAC33-38 recommended for deployable tactical repeater user only (FCC Station Class FB2T).

VTAC 36-38 are preferred. VTAC 33-35 should be used only when necessary due to interference

The VMED28 EMS mutual aid channel is utilized for ambulance to hospital communications. Each hospital is assigned a separate CTCSS code according to the Michigan MEDCOM Requirements.

2.3.2 VHF High Band Interoperable Tactical Channels

Channel Config	Channel	Eligible Users	Mobile RX Freq	N/W	RX//TON E NAC	Mobile TX Freq	TX Tone/ NAC	Mode A/D/M	Notes
Simplex	VCALL10	Any Public Safety	155.7525	N	156.7	155.7525	156.7	A	Calling/Hailing
Simplex	VTAC11	Any Public Safety	151.1375	N	156.7	151.1375	156.7	A	Tactical Simplex
Simplex	VTAC12	Any Public Safety	154.4525	N	156.7	154.4525	156.7	A	Tactical Simplex
Simplex	VTAC13	Any Public Safety	158.7375	N	156.7	158.7375	156.7	A	Tactical Simplex
Simplex	VTAC14	Any Public Safety	159.4725	N	156.7	159.4725	156.7	A	Tactical Simplex
Duplex	VTAC33	Any Public Safety	159.4725	N	136.5	151.1375	136.5	A	Tactical Repeater
Duplex	VTAC34	Any Public Safety	158.7375	N	136.5	154.4525	136.5	A	Tactical Repeater
Duplex	VTAC35	Any Public Safety	159.4725	N	136.5	158.7375	136.5	A	Tactical Repeater
Duplex	VTAC36	Any Public Safety	151.1375	N	136.5	159.4725	136.5	A	Tactical Repeater
Duplex	VTAC37	Any Public Safety	154.4525	N	136.5	158.7375	136.5	A	Tactical Repeater
Duplex	VTAC38	Any Public Safety	158.7375	N	136.5	159.4725	136.5	A	Tactical Repeater

CSQ should be added to the RX or add the not Default operation should be carrier squelch receive. If user can enable/disable without reprogramming the radio, the indicated CTCSS tone could be programmed for receive.

2.3.3 VHF Public Safety Mutual Aid and Common Channels – Discipline Specific Channels

Channel Configuration	Channel	Eligible Users	Mobile RX Freq	N/W	RX?TONE NAC	Mobile TX Freq	TX Tone/ NAC	Mode A/D/M	Notes
Simplex	VFIRE21	Fire Mutual Aid	154.2800	N	156.7	154.2800	156.7	A	Tactical
Simplex	VFIRE22	Fire Mutual Aid	154.2650	N	156.7	154.2650	156.7	A	Tactical
Simplex	VFIRE23	Fire Mutual Aid	154.2950	N	156.7	154.2950	156.7	A	Tactical
Simplex	VFIRE24	Fire Mutual Aid	154.2725	N	156.7	154.2725	156.7	A	Tactical
Simplex	VFIRE25	Fire Mutual Aid	154.2875	N	156.7	154.2875	156.7	A	Tactical
Simplex	VFIRE26	Fire Mutual Aid	154.3025	N	156.7	154.3025	156.7	A	Tactical
Simplex	VMED28	EMS Mutual Aid	155.3400	N	156.7	155.3400	156.7	A	Tactical
Simplex	VMED29	EMS Mutual Aid	155.3475	N	156.7	155.3475	156.7	A	Tactical
Simplex	VLA31	LE Mutual Aid	155.4750	N	156.7	155.4750	156.7	A	Tactical
Simplex	VLA32	LE Mutual Aid	155.4825	N	156.7	155.4825	156.7	A	Tactical
Simplex	VSAR16	SAR Common	155.1600	N	156.7	155.1600	156.7	A	Tactical

CSQ should be added to the RX or add the not Default operation should be carrier squelch receive. If user can enable/disable without reprogramming the radio, the indicated CTCSS tone could be programmed for receive

2.3.4 UHF Band - Interoperable Tactical Channels

Although not extensively used throughout Michigan, UHF MHz National Interoperability channels are recommended to be programmed in all public safety mobile and portable radios operating in the UHF band.

The use of these channels is covered by a blanket authorization per FCC 00-348, Third Memorandum Opinion and Order and Third Report and Order, WT Docket No. 96-86.

Default operation should be set to transmit and receive using CTCSS code 156.7. Mobile and portable radios shall be programmed to permit the operator to select carrier squelch receive.

2.3.4 UHF Band Interoperable Tactical Channels

Channel Configuration	Channel	Eligible Users	Mobile RX Freq	RX/TONE NAC	Mobile TX Freq	TX Tone/ NAC	Mode A/D/M
Duplex	UCALL40	Any Public Safety	453.2125	156.7	458.2125	156.7	A
Simplex	UCALL40D	Any Public Safety	453.2125	156.7	453.2125	156.7	A
Duplex	UTAC41	Any Public Safety	453.4625	156.7	458.4625	156.7	A
Simplex	UTAC41D	Any Public Safety	453.4625	156.7	453.4625	156.7	A
Duplex	UTAC42	Any Public Safety	453.7125	156.7	458.7125	156.7	A
Simplex	UTAC42D	Any Public Safety	453.7125	156.7	453.7125	156.7	A
Duplex	UTAC43	Any Public Safety	453.8625	156.7	458.8625	156.7	A
Simplex	UTAC43D	Any Public Safety	453.8625	156.7	453.8625	156.7	A

CSQ should be added to the RX or add the not Default operation should be carrier squelch receive. If user can enable/disable without reprogramming the radio, the indicated CTCSS tone could be programmed for receive.

2.3.5 700 MHz Band

700 MHz National Interoperability Channels are recommended for all public safety radios operating in the 700/800 MHz band that are capable of operating on the 700 MHz channels. VHF is preferred in limited non-800 MHz areas of Michigan and bordering states.

The Michigan Public Safety Frequency Advisory Committee has designated 32 of the 700 MHz interoperability channel as a minimum capability for Michigan. These channels are identified by *

700 MHz interoperability channels are ALL to be programmed in P25 mode using a common NAC of \$293.

Before adopting 700 MHz channels, ensure your radios are 700 MHz capable and that subscriber radios have 700 MHz compatible antennas.

Channel names ending "D" are for direct unit to unit communications.

2.3.5 700 MHz Band Interoperable Tactical Channels

Channel Configuration	Channel	Eligible Users	Mobile RX Freq	RX/tone NAC	Mobile TX Freq	TX Tone/ NAC	Mode A/D/M
Duplex	7CALL50*	Calling Channel	769.24375	293	799.24375	293	D
Simplex	7CALL50D*	Calling Channel	769.24375	293	769.24375	293	D
Duplex	7TAC51	General Public Safety	769.14375	293	769.14375	293	D
Simplex	7TAC51D	General Public Safety	769.14375	293	769.14375	293	D
Duplex	7TAC52	General Public Safety	769.64375	293	799.64375	293	D
Simplex	7TAC52D	General Public Safety	769.64375	293	769.64375	293	D
Duplex	7TAC53	General Public Safety	770.14375	293	800.14375	293	D
Simplex	7TAC53D	General Public Safety	770.14375	293	770.14375	293	D
Duplex	7TAC54	General Public Safety	770.64375	293	800.64375	293	D
Simplex	7TAC54D	General Public Safety	770.64375	293	770.64375	293	D
Duplex	7TAC55*	General Public Safety	769.74375	293	799.74375	293	D
Simplex	7TAC55D	General Public Safety	769.74375	293	769.74375	293	D
Duplex	7TAC56*	General Public Safety	770.24375	293	800.24375	293	D
Simplex	7TAC56D	General Public Safety	770.24375	293	770.24375	293	D

2.3.5 700 MHz Band Interoperable Tactical Channels

Channel Configuration	Channel	Eligible Users	Mobile RX Freq	RX /tone NAC	Mobile TX Freq	TX Tone/ NAC	Mode A/D/M
Duplex	7GTAC57	Other Public Service	770.99375	293	800.99375	293	D
Simplex	7GTAC57D	Other Public Service	770.99375	293	770.99375	293	D
Duplex	7MOB59*	Mobile Repeater	770.89375	293	800.89375	293	D
Simplex	7MOB59D*	Mobile Repeater	770.89375	293	770.89375	293	D
Duplex	7LAW61*	Law Enforcement	770.39375	293	800.39375	293	D
Simplex	7LAW61D*	Law Enforcement	770.39375	293	770.39375	293	D
Duplex	7LAW62	Law Enforcement	770.49375	293	800.49375	293	D
Simplex	7LAW62D*	Law Enforcement	770.49375	293	770.49375	293	D
Duplex	7Fire63*	Fire	769.89375	293	799.89375	293	D
Simplex	7Fire63D*	Fire	769.89375	293	769.89375	293	D
Duplex	7Fire64	Fire	769.99375	293	799.99375	293	D
Simplex	7Fire64D*	Fire	769.99375	293	769.99375	293	D
Duplex	7Med65*	EMS	769.39375	293	799.39375	293	D
Simplex	7MED65D*	EMS	769.39375	293	769.39375	293	D

2.3.5 700 MHz Band Interoperable Tactical Channels

Channel Configuration	Channel	Eligible Users	Mobile RX Freq	RX /tone NAC	Mobile TX Freq	TX Tone/ NAC	Mode A/D/M
Duplex	7MED66	EMS	769.49375	293	799.49375	293	D
Simplex	7MED66D*	EMS	769.49375	293	769.49375	293	D
Duplex	7DATA69	Mobile Data	770.74375	293	800.74375	293	D
Simplex	7DATA69D	Mobile Data	770.74375	293	770.74375	293	D
Duplex	7CALL70*	Calling Channel	773.25625	293	803.25625	293	D
Simplex	7CALL70D*	Calling Channel	773.25625	293	773.25625	293	D
Duplex	7TAC71	General Public Safety	773.10625	293	803.10625	293	D
Simplex	7TAC71D	General Public Safety	773.10625	293	773.10625	293	D
Duplex	7TAC72	General Public Safety	773.60625	293	803.60625	293	D
Simplex	7TAC72D	General Public Safety	773.60625	293	773.60625	293	D
Duplex	7TAC73	General Public Safety	774.10625	293	804.10625	293	D
Simplex	7TAC73D	General Public Safety	774.10625	293	774.10625	293	D
Duplex	7TAC74	General Public Safety	774.60625	293	804.60625	293	D
Simplex	7TAC74D	General Public Safety	774.60625	293	774.60625	293	D

2.3.5 700 MHz Band Interoperable Tactical Channels

Channel Configuration	Channel	Eligible Users	Mobile RX Freq	RX/tone NAC	Mobile TX Freq	TX Tone/ NAC	Mode A/D/M
Duplex	7TAC75*	General Public Safety	773.75625	293	803.75625	293	D
Simplex	7TAC75D*	General Public Safety	773.75625	293	773.75625	293	D
Duplex	7TAC76	General Public Safety	774.25625	293	804.25625	293	D
Simplex	7TAC76D	General Public Safety	774.25625	293	774.25625	293	D
Duplex	7TAC77	Other Public Service	774.85625	293	804.85625	293	D
Simplex	7TAC77D*	Other Public Service	774.85625	293	774.85625	293	D
Duplex	7MOB79*	Mobile Repeater	774.50625	293	804.50625	293	D
Simplex	7MOB79D*	Mobile Repeater	774.50625	293	774.50625	293	D
Duplex	7LAW81*	Law Enforcement	774.00625	293	804.00625	293	D
Simplex	7LAW81D*	Law Enforcement	774.00625	293	774.00625	293	D
Duplex	7LAW82	Law Enforcement	774.35625	293	804.35625	293	D
Simplex	7LAW82D*	Law Enforcement	774.35625	293	774.35625	293	D
Duplex	7FIRE83*	Fire	773.50625	293	803.50625	293	D
Simplex	7FIRE83D*	Fire	773.50625	293	773.50625	293	D

2.3.5 700 MHz Band Interoperable Tactical Channels

Channel Configuration	Channel	Eligible Users	Mobile RX Freq	RX/tone NAC	Mobile TX Freq	TX Tone/ NAC	Mode A/D/M
Duplex	7FIRE84	Fire	773.85625	293	803.85625	293	D
Simplex	7FIRE84D*	Fire	773.85625	293	773.85625	293	D
Duplex	7MED86*	EMS	773.00625	293	803.00625	293	D
Simplex	7MED86D*	EMS	773.00625	293	773.00625	293	D
Duplex	7MED87	EMS	773.35625	293	803.35625	293	D
Simplex	7MED87D*	EMS	773.35626	293	773.35625	293	D
Duplex	7DATA89	Mobile Data	774.75625	293	804.75625	293	D
Simplex	7DATA89D	Mobile Data	774.75625	293	774.75625	293	D

2.3.6 800 MHz Band Interoperable Tactical Channels

Channel Configuration	Channel	Eligible Users	Mobile RX Freq	RX /tone NAC	Mobile TX Freq	TX Tone/ NAC	Mode A/D/M
Duplex	8CALL90	Any Public Safety	851.0125	156.7	806.0125	156.7	A
Simplex	8CALL90D	Any Public Safety	851.0125	156.7	851.0125	156.7	A
Duplex	8TAC91	Any Public Safety	851.5125	156.7	806.5125	156.7	A
Simplex	8TAC91D	Any Public Safety	851.5125	156.7	851.5125	156.7	A
Duplex	8TAC92	Any Public Safety	852.0125	156.7	807.0125	156.7	A
Simplex	8TAC92D	Any Public Safety	852.0125	156.7	852.0125	156.7	A
Duplex	8TAC93	Any Public Safety	852.5125	156.7	807.5125	156.7	A
Simplex	8TAC93D	Any Public Safety	852.5125	156.7	852.5125	156.7	A
Duplex	8TAC94	Any Public Safety	853.0125	156.7	808.0125	156.7	A
Simplex	8TAC94D	Any Public Safety	853.0125	156.7	853.0125	156.7	A

800 MHz National Interoperability channels are recommended for all public safety radios operating in the 800 MHz band.

The use of these channels is covered by a blanket authorization per FC 00-348, Third Memorandum Opinion and Order and Third Report and Order, WT Docket No 96-86.

Default operation should be set to CARRIER SQUELCH receive unless needed to mitigate interference. If carrier squelch is selectable on the radio, the radio should be programmed to toggle carrier squelch on/off.

2.4 Michigan Mutual Aid Channels

Michigan's VHF Interoperability Template						
VHF High Band						
C H	Channel Name	Mobile Receive	Mobile Receive CTCSS	Mobile Transmit	Mobile Tx Tone	Description
1	VCALL10	155.7525	156.7 (5A) or CSQ	155.7525	156.7 (5A)	National Interoperability
2	VTAC11	151.1375	156.7 (5A) or CSQ	151.1375	156.7 (5A)	National Interoperability
3	VTAC12	154.4525	156.7 (5A) or CSQ	154.4525	156.7 (5A)	National Interoperability
4	VTAC13	158.7375	156.7 (5A) or CSQ	158.7375	156.7 (5A)	National Interoperability
5	VTAC14	159.4725	156.7 (5A) or CSQ	159.4725	156.7 (5A)	National Interoperability
6	VFIRE21	154.2800	156.7 (5A) or CSQ	154.2800	156.7 (5A)	Fire Mutual Aid
7	VFIRE22	154.2650	156.7 (5A) or CSQ	154.2650	156.7 (5A)	Fire Mutual Aid
8	VFIRE23	154.2950	156.7 (5A) or CSQ	154.2950	156.7 (5A)	Fire Mutual Aid
9	VFIRE24	154.2725	156.7 (5A) or CSQ	154.2725	156.7 (5A)	Fire Mutual Aid
10	VFIRE25	154.2875	156.7 (5A) or CSQ	154.2875	156.7 (5A)	Fire Mutual Aid
11	VFIRE26	154.3025	156.7 (5A) or CSQ	154.3025	156.7 (5A)	Fire Mutual Aid
12	VMED28/HERN	155.3400	Multiple or CSQ	155.3400	CSQ	EMS / Hospital
13	VMEDTAC	155.3550	210.7 (M2)	155.3550	210.7 (M2)	EMS Mutual Aid Tac

Michigan's VHF Interoperability Template						
VHF High Band						
C H	Channel Name	Mobile Receive	Mobile Receive CTCSS	Mobile Transmit	Mobile Tx Tone	Description
14	MEPPS	155.8650	CSQ	155.8650	CSQ	Law Statewide Mutual Aid
15	VLAW31	155.4750	156.7 (5A) or CSQ	155.4750	156.7 (5A)	Law Mutual Aid
16	VLAW32	155.4825	156.7 (5A) or CSQ	155.4825	156.7 (5A)	Law Mutual Aid
17	SWFIRE	154.2950	CSQ	154.2950	CSQ	Fire Statewide Mutual Aid
18	FMDTAC1	151.3250	CSQ	151.3250	CSQ	Fire Tac
19	FMDTAC2	159.2700	CSQ	159.2700	CSQ	Fire Tac
20	FMDTAC3	159.3450	CSQ	159.3450	CSQ	Fire Tac

2.4

Michigan Mutual Aid Channels

Michigan's MABAS VHF Template						
VHF High Band						
CH	Channel Name	Mobile Receive	Mobile Receive CTCSS	Mobile Transmit	Mobile Tx Tone	Description
1	IFERN	154.2650	210.7 Hz	154.2650	210.7 Hz	Response Coord.
2	IFERN 2	154.3025	67.0 Hz	154.3025	67.0 Hz	Response Coord.
3	FG-RED	153.8300	69.3 Hz	153.8300	69.3 Hz	Fireground
4	FG-WHITE	154.2800	74.4 Hz	154.2800	74.4 Hz	Fireground
5	FG-BLUE	154.2950	85.4 Hz	154.2950	85.4 Hz	Fireground
6	FG-GOLD	153.8375	91.5 Hz	153.8375	91.5 Hz	Fireground
7	FG-BLACK	154.2725	94.8 Hz	154.2725	94.8 Hz	Fireground
8	FG-GRAY	154.2875	136.5 Hz	154.2875	136.5 Hz	Fireground
9	VCALL10	155.7525	156.7 Hz	155.7525	156.7 Hz	Interoperability
10	VTAC11	151.1375	156.7 Hz	151.1375	156.7 Hz	Interoperability
11	VTAC12	154.4525	156.7 Hz	154.4525	156.7 Hz	Interoperability
12	VTAC13	158.7375	156.7 Hz	158.7375	156.7 Hz	Interoperability
13	VTAC14	159.4725	156.7 Hz	159.4725	156.7 Hz	Interoperability

2.4

Michigan Mutual Aid Channels

Michigan's MABAS VHF National Interoperability Template						
VHF High Band						
CH	Channel Name	Mobile Receive	Mobile Receive CTCSS	Mobile Transmit	Mobile Tx Tone	Description
1	VCALL10	155.7525	156.7 (5A) or CSQ	155.7525	156.7 (5A)	National Interop.
2	VTAC11	151.1375	156.7 (5A) or CSQ	151.1375	156.7 (5A)	National Interop.
3	VTAC12	154.4525	156.7 (5A) or CSQ	154.4525	156.7 (5A)	National Interop.
4	VTAC13	158.7375	156.7 (5A) or CSQ	158.7375	156.7 (5A)	National Interop.
5	VTAC14	159.4725	156.7 (5A) or CSQ	159.4725	156.7 (5A)	National Interop.
6	VFIRE21	154.2800	156.7 (5A) or CSQ	154.2800	156.7 (5A)	Fire Mutual Aid
7	VFIRE22	154.2650	156.7 (5A) or CSQ	154.2650	156.7 (5A)	Fire Mutual Aid
8	VFIRE23	154.2950	156.7 (5A) or CSQ	154.2950	156.7 (5A)	Fire Mutual Aid
9	VFIRE24	154.2725	156.7 (5A) or CSQ	154.2725	156.7 (5A)	Fire Mutual Aid
10	VFIRE25	154.2875	156.7 (5A) or CSQ	154.2875	156.7 (5A)	Fire Mutual Aid
11	VFIRE26	154.3025	156.7 (5A) or CSQ	154.3025	156.7 (5A)	Fire Mutual Aid

2.4

Michigan Mutual Aid Channels

Michigan's Public Safety Communications System	
Zone E	
Name	Description
STATW1	Statewide Region 1
STATW2	Statewide Region 2
STATW3	Statewide Region 3
STATW5	Statewide Region 5
STATW6	Statewide Region 6
STATW7	Statewide Region 7
STATW8	Statewide Region 8
AIRLZ1	Statewide Medical Evacuation Air Landing Zone 1
AIRLZ2	Statewide Medical Evacuation Air Landing Zone 2

2.4

Michigan Mutual Aid Channels

Michigan's Public Safety Communications System					
Zone F	Non-Federal 800 MHz National Mutual Aid				
Channel Name	Mobile Receive	Mobile Receive CTCSS	Mobile Transmit	Mobile Tx Tone	Description
8CALL90	851.0125	156.7 Hz	806.0125 (821.0125)	156.7 Hz	Calling
8CAL90D	851.0125	156.7 Hz	851.0125 (866.0125)	156.7 Hz	Calling - Direct
8TAC91	851.5125	156.7 Hz	806.5125 (821.5125)	156.7 Hz	Tactical
8TAC91D	851.5125	156.7 Hz	851.5125 (866.5125)	156.7 Hz	Tactical - Direct
8TAC92	852.0125	156.7 Hz	807.0125 (822.0125)	156.7 Hz	Tactical
8TAC92D	852.0125	156.7 Hz	852.0125 (867.0125)	156.7 Hz	Tactical - Direct
8TAC93	852.5125	156.7 Hz	807.5125 (822.5125)	156.7 Hz	Tactical
8TAC93D	852.5125	156.7 Hz	852.5125 (867.5125)	156.7 Hz	Tactical - Direct
8TAC94	853.0125	156.7 Hz	808.0125 (823.0125)	156.7 Hz	Tactical

Michigan's Public Safety Communications System					
Zone F	Non-Federal 800 MHz National Mutual Aid				
Channel Name	Mobile Receive	Mobile Receive CTCSS	Mobile Transmit	Mobile Tx Tone	Description
8TAC94D	853.0125	156.7 Hz	853.0125 (868.0125)	156.7 Hz	Tactical - Direct
7CAL50D	769.2438	\$F7E	769.2438	\$293	Calling Channel *
7TAC51D	769.1438	\$F7E	769.1438	\$293	General Public Safety
7TAC52D	769.6438	\$F7E	769.6438	\$293	General Public Safety
7TAC53D	770.1438	\$F7E	770.1438	\$293	General Public Safety
7TAC54D	770.6438	\$F7E	770.6438	\$293	General Public Safety
7TAC55D	769.7438	\$F7E	769.7438	\$293	General Public Safety

2.4

Michigan Mutual Aid Channels

Michigan's Public Safety Communications System		
Zone G		Assigned by request to NCC
Ch	Name	Description
1	EVENT01	Special Event Talk Group
2	EVENT02	Special Event Talk Group
3	EVENT03	Special Event Talk Group
4	EVENT04	Special Event Talk Group
5	EVENT05	Special Event Talk Group
6	EVENT06	Special Event Talk Group
7	EVENT07	Special Event Talk Group
8	EVENT08	Special Event Talk Group
9	EVENT09	Special Event Talk Group
10	EVENT10	Special Event Talk Group
11	EVENT11	Special Event Talk Group

Michigan's Public Safety Communications System		
Zone G		Assigned by request to NCC
Ch	Name	Description
12	EVENT12	Special Event Talk Group
13	EVENT13	Special Event Talk Group
14	EVENT14	Special Event Talk Group
15	EVENT15	Special Event Talk Group
16	DYNRGRP	Dynamic Regroup

2.4

Michigan Mutual Aid Channels

Michigan's Public Safety Communication System		
Zone H		Assigned by request to NCC
Ch	Name	Description
1	EVENT16	Special Event Talk Group
2	EVENT17	Special Event Talk Group
3	EVENT18	Special Event Talk Group
4	EVENT19	Special Event Talk Group
5	EVENT20	Special Event Talk Group
6	EVENT21	Special Event Talk Group
7	EVENT22	Special Event Talk Group
8	EVENT23	Special Event Talk Group
9	EVENT24	Special Event Talk Group
10	EVENT25	Special Event Talk Group
11	EVENT26	Special Event Talk Group
12	EVENT27	Special Event Talk Group

Michigan's Public Safety Communication System		
Zone H		Assigned by request to NCC
Ch	Name	Description
13	EVENT28	Special Event Talk Group
14	EVENT29	Special Event Talk Group
15	EVENT30	Special Event Talk Group

2.4

Michigan Mutual Aid Channels

Michigan's Public Safety Communications System		
Zone I	Assigned by request to NCC	
Ch	Name	Description
1	EVENT31	Special Event Talk Group (Law Only)
2	EVENT32	Special Event Talk Group (Law Only)
3	EVENT33	Special Event Talk Group (Law Only)
4	EVENT34	Special Event Talk Group (Law Only)
5	EVENT35	Special Event Talk Group (Law Only)
6	EVENT36	Special Event Talk Group (Law Only)
7	EVENT37	Special Event Talk Group (Law Only)
8	EVENT38	Special Event Talk Group (Law Only)
9	EVENT39	Special Event Talk Group (Law Only)
10	EVENT40	Special Event Talk Group (Law Only)
11	EVENT41	Special Event Talk Group (Law Only)
12	EVENT42	Special Event Talk Group (Law Only)

Michigan's Public Safety Communications System		
Zone I		Assigned by request to NCC
Ch	Name	Description
13	EVENT43	Special Event Talk Group (Law Only)
14	EVENT44	Special Event Talk Group (Law Only)
15	EVENT45	Special Event Talk Group (Law Only)
16	EVENT46	Special Event Talk Group (Law Only)

2.4

Michigan Mutual Aid Channels

Michigan's Public Safety Communications System	
Zone J	Assigned by request to NCC
Name	Description
EVENT47	Special Event Talk Group
EVENT48	Special Event Talk Group
EVENT49	Special Event Talk Group
EVENT50	Special Event Talk Group
EVENT51	Special Event Talk Group
EVENT52	Special Event Talk Group
EVENT53	Special Event Talk Group
EVENT54	Special Event Talk Group
EVENT55	Special Event Talk Group
EVENT56	Special Event Talk Group
EVENT57	Special Event Talk Group
EVENT58	Special Event Talk Group

Michigan's Public Safety Communications System	
Zone J	Assigned by request to NCC
Name	Description
EVENT59	Special Event Talk Group
EVNET60	Special Event Talk Group
EVENT61	Special Event Talk Group
EVENT62	Special Event Talk Group

2.4

Michigan Mutual Aid Channels

Michigan's Public Safety Communications System	
Emergency Management	
Name	Description
AIRLZ1	Statewide Medical Evacuation Air Landing Zone 1
AIRLZ2	Statewide Medical Evacuation Air Landing Zone 2
EMMD1	Statewide Emergency Management Region 1
EMMD2	Statewide Emergency Management Region 2
EMMD3	Statewide Emergency Management Region 3
EMMD5	Statewide Emergency Management Region 5
EMMD6	Statewide Emergency Management Region 6
EMMD7	Statewide Emergency Management Region 7
EMMD8	Statewide Emergency Management Region 8

2.4

Michigan Mutual Aid Channels

Michigan's Public Safety Communications System	
Michigan MABAS Talk groups	
Name	Description
MABASDSP	MABAS Dispatch
MABAS1	MABAS Tactical Talk Group
MABAS2	MABAS Tactical Talk Group
MABAS3	MABAS Tactical Talk Group
MABAS4	MABAS Tactical Talk Group
MABAS5	MABAS Tactical Talk Group

2.4

Michigan Mutual Aid Channels

Michigan's Public Safety Communications System	
Michigan DNRE Emergency Management	
Name	Description
DNREEM1	Statewide Emergency Management Region 1
DNREEM2	Statewide Emergency Management Region 2
DNREEM3	Statewide Emergency Management Region 3
DNREEM5	Statewide Emergency Management Region 5
DNREEM6	Statewide Emergency Management Region 6
DNREEM7	Statewide Emergency Management Region 7
DNREEM8	Statewide Emergency Management Region 8

2.4

Michigan Mutual Aid Channels

Michigan's Public Safety Communications System	
Michigan Community Health	
Name	Description
CHREG1	MIDHHS Region 1
CHREG2N	MIDHHS Region 2 North
CHREG2S	MIDHHS Region 2 South
CHREG3	MIDHHS Region 3
CHREG5	MIDHHS Region 5
CHREG6	MIDHHS Region 6
CHREG7	MIDHHS Region 7
CHREG8	MIDHHS Region 8
CHOPHP1	Bureau of EMS, Trauma, and Preparedness Coord.

2.5 Marine Channels (these channels are wide band channels – 25 KHz)

Channel Number *	Ship Transmit MHz	Ship Receive MHz	Use
6	156.3000	156.3000	Inter-ship Safety
9	156.4500	156.4500	Boater Calling – Commercial and Non-Commercial
13	156.6500	156.6500	Inter-ship Navigation Safety (Bridge-to-Bridge). Ships > 20m length maintain a listening watch on this channel in US waters.
16	156.8000	156.8000	International Distress, Safety and Calling. Ships required to carry radio, USCG, and most coast stations maintain a listening watch on this channel.
17	156.8500	156.8500	State and Local Government Maritime Control
21A	157.0500	157.0500	USCG Only
22A	157.1000	157.1000	USCG liaison and Maritime Safety Information Broadcasts; first make contact with USCG on Channel 16
23A	157.1500	157.1500	USCG Only
69	156.4750	156.4750	Non-commercial. Working channel for voluntary boats

* "A" indicates simplex use of the ship station transmit frequency of an international duplex channel. Used in US waters only

2.5 Marine Channels

Channel Number *	Ship Transmit MHz	Ship Receive MHz	Use
72	156.6250	156.6250	Non-commercial. Working channel for voluntary boats
79A	156.9750	156.9750	Working channel for working ships – messages must be about business or the needs of the ship
80A	157.0250	157.0250	Working channel for working ships – messages must be about business or the needs of the ship
81A	157.0750	157.0750	US Government Only – environmental protection operations – not available to commercial and non-commercial vessels for normal use
83A	157.1750	157.1750	USCG Only

* "A" indicates simplex use of the ship station transmit frequency of an international duplex channel. Used in US waters only

2.6 Gateways

“Gateway” systems interconnect channels of disparate systems (whether on different frequency bands or radio operating modes), allowing first responders using their existing radios and channels to be interconnected with the channels of other users outside of their agency.

Often times in events where multiple agencies from multiple jurisdictions respond to an event, it is not uncommon to establish a “patch” or “bridge” between disparate systems to allow responders to communicate using their existing radios.

Gateways may be fixed or mobile. Fixed gateways such as console patching may be utilized on an incident/event or day-to-day basis. Due to limitations and potential communication challenges, it is highly recommended that gateways only be used under the guidance and planning of a qualified COML.

Since almost every dispatch center using consoles is capable of establishing patches, they are not listed individually. Mobile/deployable gateways are listed, by region, in the following tables.

Edits/Updates:

If your agency or region has new or updated information for the following tables, please contact and send the information to:

State of Michigan CASM Administrator:

Jerry Nummer nummerj@michigan.gov

Michigan Communications Unit Work Group:

DTMB-MICOMU@michigan.gov

2.6.1 Mobile Gateways Region 1

Gateway Owner	Detail	County	24/7 Phone Number
Eaton Co. Sheriff's Dept. EM		Eaton	517-372-8215
Lansing MMCSU - D1RMRC		Ingham	517-483-4570
Lenawee Co. 911		Lenawee	517-263-0524 ext 1
Lenawee Co. MMCSU - D1RMRC		Ingham	517-263-0524
Livingston Co. EMS	Codespear	Livingston	517-540-9111
Livingston Co. MMCSU - D1RMRC		Ingham	517-546-9111
Meridian Twp. MMCSU - D1RMRC		Ingham	517-853-4791
MI National Guard HQ	ACU 1000	Ingham	269-420-3866
MI National Guard HQ	ACU 1000	Ingham	269-420-3866
MI National Guard HQ	ACU 1000	Ingham	269-420-3866
MMR - MMCSU [Saginaw]		Ingham	989-758-2911

2.6.2 Mobile Gateways Region 2

Gateway Owner	Detail	County	24/7 Phone Number
Canton Dept. of Public Safety		Wayne	734-394-5400 ext 1
Oakland Co. MABAS Div. 3201 Comm. Team	Portable ICRI's	Oakland	248-858-5300
Oakland Co. MABAS Div. 3201 Comm. Team 2		Oakland	248-858-5300
Oakland Co. MABAS Div. 3201 Comm. Team 3		Oakland	248-858-5300
Oakland Co. Sheriff Dept.		Oakland	248-858-4911
Oakland Co. Sheriff Dept.	ACU-1000	Oakland	248-858-4911
Troy Fire Dept.- MABAS Div. 3201 Comm. Team 1		Oakland	248-524-3478
Warren Police Dept.		Macomb	586-574-4700
Wayne Co. DHS and EM		Wayne	734-727-7287

2.6.3 Mobile Gateways Region 3

Gateway Owner	Detail	County	24/7 Phone Number
Arenac Co. 911	Mod-U-Com	Arenac	989-846-4561
Huron Co. 911		Huron	419-663-2828
Oscoda Co. Sheriff Dept.		Oscoda	989-826-3214

2.6.4 Mobile Gateways Region 5

Gateway Owner	Detail	County	24/7 Phone Number
Albion Dept. of Public Safety PSAP		Calhoun	269-781-0912
Barry Co. EM		Barry	269-948-4800 EXT 1
Battle Creek Emergency Services	Mobile	Calhoun	269-781-0912
Berrien Co. EM/Office of Homeland Security	AC-COW	Berrien	269-926-2638 and 269-926-2538
Branch Co. 911	ACU M	Branch	517-278-3091
Calhoun Co. Sheriff's Office	Mobile	Calhoun	269-781-0912
Cass Co. Sheriff's Office	TCB-4	Cass	269-445-1560
Kalamazoo Co. Sheriff's Office		Kalamazoo	(269) 383-0911
Marshall Police Dept. PSAP		Calhoun	269-781-0912
Portage Public Safety- Fire		Kalamazoo	(269) 329-4567

2.6.5 Mobile Gateways Region 6

Gateway Owner	Detail	County	24/7 Phone Number
Grand Rapids Police Dept.		Kent	616-456-3408
Ionia Co. EM		Ionia	616-902-4652 or 616-527-0400
Isabella Co. 911		Isabella	989-773-1000
Kent Co. Sheriff Dept.		Kent	616-632-6100 ext 1
Lake Co. 911		Lake	231-745-2711
Lake Co. EM	Codespear	Lake	231-745-2711
Meceola 911 Center		Mecosta	231-796-4811
Montcalm Co. Sheriff Dept.	AC,DC	Montcalm	989-831-3500
Muskegon Co. 911		Muskegon	231-722-3524 ext 1
Newaygo Co. 911		Newaygo	231-689-5288
Oceana Co. EM		Oceana	231-869-5858
Ottawa Co. 911		Ottawa	616-994-7850 OR 1-800-249-0911
Walker Police Dept.		Kent	(616) 453-5441
Wyoming Police Dept.		Kent	616-530-7300 ext 1

2.6.6 Mobile Gateways Region 7

Gateway Owner	Detail	County	24/7 Phone Number
Kalkaska Co. Central Dispatch		Kalkaska	231-258-3350
Manistee Co. 911		Manistee	231-723-6241

2.6.7 Mobile Gateways Region 8

Gateway Owner	Detail	County	24/7 Phone Number
Chippewa Co. 911	ICRI Gateway	Chippewa	(906) 495-3312

2.7 Cache Radios

Cache radios refer to maintaining a supply of standby radios that can be deployed to support incidents. Spare radio(s) used as operational replacement for day-to-day use are NOT cache radios. Cache radios allow all responders to use common, compatible equipment during an incident and typically contain a minimum of 12 radios. Specific caches within the State, by region, are listed in the following tables.

To be available for deployment, the radios should be packaged, have at least one of the following power sources:

- Rechargeable batteries 9at least 2/radio
- Limited use batteries
- "AA" clamshell adapters which permit the use of disposable AA alkaline batteries

Each cache should also have a method of tracking the issue and return of the radios such as bar code, T card, sign out sheets, etc.

Edits/Updates:

If your agency or region has new or updated information for the following tables, please contact and send the information to:

State of Michigan CASM Administrator:

Jerry Nummer nummerj@michigan.gov

Michigan Communications Unit Work Group:

DTMB-MICOMU@michigan.gov

2.7.1 Cache Radios Region 1

Radio Cache Owner	Analog / Digital	Detail	County	24/7 Phone Number
Gratiot Co. EM	Analog	VHF High-Band (150-174MHz)	Gratiot	989-875-7505
Lansing EMD	Analog	UHF (450-512 MHz)	Ingham	517-483-4570
MPSCS - Test Pool	Digital		Ingham	(517) 333-5050 or 1-888-554-4622
MSP - Loaner Pool	Digital	800 (806/851 - 824/869 MHz)	Ingham	517-332-2521

2.7.2 Cache Radios Region 2

Radio Cache Owner	Analog / Digital	Detail	County	24/7 Phone Number
Health Emergency Medical Services, Inc.	Digital	800 (806/851 - 824/869 MHz)	Wayne	734-727-7284
Macomb Co. EM	Macomb		Macomb	586-469-5502
Oakland Comm. Support Team MABAS 3201	Analog	UHF (450-512 MHz)	Oakland	248-858-5300
Oakland Comm. Support Team MABAS 3201	Digital	700 (764/794 - 776/806 MHz)	Oakland	248-858-5300
Oakland Comm. Support Team MABAS 3201	Analog	VHF High-Band (150-174MHz)	Oakland	248-858-5300
Washtenaw Co. Sheriff's Dept.	Digital	800 (806/851 - 824/869 MHz)	Washtenaw	734-994-2911
Wayne Co. DHS and EM	Digital	800 (806/851 - 824/869 MHz)	Wayne	734-727-7287

2.7.3 Cache Radios Region 3

Radio Cache Owner	Analog / Digital	Detail	County	24/7 Phone Number
Auburn Police Dept.	Digital	800 (806/851 - 824/869 MHz)	Bay	989-895-4050 or 989-892-9551
Auburn-Williams Fire Dept.	Analog	VHF High-Band (150-174MHz)	Bay	989-895-4050 or 989-892-9551
Bay City Fire Rescue [Station 1]	Analog	VHF High-Band (150-174MHz)	Bay	989-895-4050 or 989-892-9551
Bay Co. 911	Analog	VHF High-Band (150-174MHz)	Bay	989-895-4050 or 989-892-9551
Bay Co. EMD	Digital	800 (806/851 - 824/869 MHz)	Bay	989-895-4050 or 989-892-9551
Bay Co. Health Dept.	Analog	VHF High-Band (150-174MHz)	Bay	989-895-4050 or 989-892-9551
Bay Co. Sheriff Dept.	Analog	VHF High-Band (150-174MHz)	Bay	989-895-4050 or 989-892-9551
Clayton Twp. Police Dept.	Analog	VHF High-Band (150-174MHz)	Genesee	810-732-4720
Delta College Police	Analog	VHF High-Band (150-174MHz)	Bay	989-895-4050 or 989-892-9551
East Tawas Fire Dept.	Analog	VHF High-Band (150-174MHz)	Iosco	989-362-1430
East Tawas Fire Dept.	Analog	VHF High-Band (150-174MHz)	Iosco	989-362-1430
East Tawas Fire Dept.	Digital	800 (806/851 - 824/869 MHz)	Iosco	989-362-1430
Essexville – Fire	Analog	VHF High-Band (150-174MHz)	Bay	989-895-4050 or 989-892-9551
Gaines Village Police Dept.	Analog	VHF High-Band (150-174MHz)	Genesee	810-732-4720
Gladwin Co. EOC	Analog	700 (764/794 - 776/806 MHz)	Gladwin	989-426-9284 OR 989-426-6871
Huron Co. 911	Digital	800 (806/851 - 824/869 MHz)	Huron	419-663-2828
Iosco Co. 911 911	Digital	800 (806/851 - 824/869 MHz)	Iosco	989-362-1430
Iosco Co. EMS	Digital	800 (806/851 - 824/869 MHz)	Iosco	989-362-1430

Radio Cache Owner	Analog / Digital	Detail	County	24/7 Phone Number
Lapeer Co. 911	Digital	800 (806/851 - 824/869 MHz)	Lapeer	810-667-0292
Linden Police Dept.	Analog	VHF High-Band (150-174MHz)	Genesee	810-732-4720
Midland Co. 911	Digital	800 (806/851 - 824/869 MHz)	Midland	989-839-6466
Midland Co. EM	Digital	800 (806/851 - 824/869 MHz)	Midland	989-839-6466
MMR-Saginaw	Digital	800 (806/851 - 824/869 MHz)	Bay	(989)758-2911
Monitor Twp. Fire Dept.	Analog	VHF High-Band (150-174MHz)	Bay	(989)684-6320
Ogemaw Goodar Twp. Fire Dept.	Analog	VHF High-Band (150-174MHz)	Ogemaw	989-345-9911
Ogemaw Goodar Twp. Fire Dept.	Analog	VHF High-Band (150-174MHz)	Ogemaw	989-345-9911
Plainfield Fire Dept.	Digital	800 (806/851 - 824/869 MHz)	Iosco	989-362-1430
Plainfield Fire Dept.	Analog	VHF High-Band (150-174MHz)	Iosco	989-362-1430
Plainfield Fire Dept.	Analog	VHF High-Band (150-174MHz)	Iosco	989-362-1430
Saginaw Co. 911 Communications	Digital	700 (764/794 - 776/806 MHz)	Saginaw	989-797-4580
Sanilac Co. Sheriff's Dept.	Analog	VHF High-Band (150-174MHz)	Sanilac	810-648-2000 ext 2
Tawas City Fire Dept.	Analog	VHF High-Band (150-174MHz)	Iosco	989-362-1430
Tawas City Fire Dept.	Digital	800 (806/851 - 824/869 MHz)	Iosco	989-362-1430
Tuscola Co. EOC	Digital	800 (806/851 - 824/869 MHz)	Tuscola	989-673-8161 OR 989-673-8165

2.7.4 Cache Radios Region 5

Radio Cache Owner	Analog / Digital	Detail	County	24/7 Phone Number
Allegan Co. 911	Digital	800 (806/851 - 824/869 MHz)	Allegan	269-673-3899
Allegan Co. EM	Analog	VHF High-Band (150-174MHz)	Allegan	269-673-3899
Barry Co. EM	Digital	800 (806/851 - 824/869 MHz)	Barry	269-948-4800 EXT 1
Battle Creek Emergency Services	Analog	VHF High-Band (150-174MHz)	Calhoun	269-781-0912
Berrien Co. EM/ Office HS	Analog	VHF High-Band (150-174MHz)	Berrien	269-926-2638 and 269-926-2538
Berrien Co. Health Dept.	Analog	UHF (450-512 MHz)	Berrien	269-926-2638 and 269-926-2538
Berrien Co. Sheriff Dept.	Digital	800 (806/851 - 824/869 MHz)	Berrien	269-926-2638 and 269-926-2538
Branch Co. Office of EM	Analog	VHF High-Band (150-174MHz)	Branch	517-278-3091
St Joseph Co. 911	Digital	800 (806/851 - 824/869 MHz)	St. Joseph	269-467-4195
Van Buren Co. Sheriff	Digital	800 (806/851 - 824/869 MHz)	Van Buren	269-657-3101 OR 269-657-2171

2.7.5 Cache Radios Region 6

Radio Cache Owner	Analog / Digital	Detail	County	24/7 Phone Number
Cascade Fire Dept.	Analog	VHF High-Band (150-174MHz)	Kent	616-949-1320
Grand Rapids Fire Dept.	Analog	UHF (450-512 MHz)	Kent	616-262-0820 or 616-456-3515
Ionia Co. 911	Digital	800 (806/851 - 824/869 MHz)	Ionia	616-902-4652 or 616-527-0400
Kent Co. Sheriff Dept.	Digital P25	700/800	Kent	616-632-6100 ext 1
Kent Co. Sheriff Dept.	Analog/Digital Trbo	UHF (450-512 MHz)	Kent	616-632-6100 ext 1

Radio Cache Owner	Analog / Digital	Detail	County	24/7 Phone Number
Kent Co. Sheriff Dept.	Analog	VHF High-Band (150-174MHz)	Kent	616-632-6100 ext 1
Lake Co. EM	Analog	VHF High-Band (150-174MHz)	Lake	231-745-2711
Montcalm Co. EMS	Digital	800 (806/851 - 824/869 MHz)	Montcalm	989-831-3500
Newaygo Co. 911	Analog	UHF (450-512 MHz)	Newaygo	231-689-5288

2.7.6 Cache Radios Region 7

Radio Cache Owner	Analog / Digital	Detail	County	24/7 Phone Number
Crawford Co. EMD – Grayling	Digital	800 (806/851 - 824/869 MHz)	Crawford	989-348-4911
Crawford Emergency 911	Analog	VHF High-Band (150-174MHz)	Crawford	989-348-4911

2.7.7 Cache Radios Region 8

Radio Cache Owner	Analog / Digital	Detail	County	24/7 Phone Number
Baraga Co. Sheriff Dept.	Digital	800 (806/851 - 824/869 MHz)	Baraga	906-524-6177
Baraga Co. Sheriff Dept.	Analog	VHF High-Band (150-174MHz)	Baraga	906-524-6177
Chippewa Co. 911	Digital	800 (806/851 - 824/869 MHz)	Chippewa	906-495-3312
Chippewa Co. 911	Dual D/A	800 & VHF	Chippewa	906-495-3312
Keweenaw Bay Fire Dept.	Digital	800 (806/851 - 824/869 MHz)	Baraga	866-411-0018

2.8 Mobile Command Units

A Mobile Command Unit refers to any vehicular asset that can be deployed to provide or supplement Incident Command Operations with associated communications capabilities in an incident area. The following tables show the Mobile Command Units by Region in the State of Michigan.

2.8.1 Mobile Command Units Region 1

MCU Owner	Detail	County	24/7 Phone Number
MPSCS - Site on Wheels		Eaton	(517) 333-5050 or 1-888-554-4622

2.8.2 Mobile Command Units Region 2

MCU Owner	Detail	County	24/7 Phone Number
NONE			

2.8.3 Mobile Command Units Region 3

MCU Owner	Detail	County	24/7 Phone Number
NONE			

2.8.4 Mobile Command Units Region 5

MCU Owner	Detail	County	24/7 Phone Number
Berrien Co. EM/Office of Homeland Security	COW	Berrien	269-926-2638 and 269-926-2538
Berrien Co. EM – (3) MTR 2000 Repeaters	Conventional (VHF/UHF), 800 MHz	Berrien	269-926-2638 and 269-926-2538
Kalamazoo Co. Sheriff's Office (RACES)		Kalamazoo	(269) 383-0911

2.8.5 Mobile Command Units Region 6

MCU Owner	Detail	County	24/7 Phone Number
NONE			

2.8.6 Mobile Command Units Region 7

MCU Owner	Detail	County	24/7 Phone Number
NONE			

2.8.7 Mobile Command Units Region 8

MCU Owner	Detail	County	24/7 Phone Number
NONE			

3 Michigan Public Safety Communications System (MPSCS)

The Michigan Public Safety Communications System (MPSCS) provides a stable, secure framework for interoperable communications among local, state, federal, tribal and private first responders and supplies a public safety communication resource for citizens. Through its employees, MPSCS handles the second-largest trunked communication system in the world, including administration of a statewide 800/700 MHz digital trunked radio communication network spanning 59,415 square miles and including more than 1400 federal, state, local and private public safety agencies across the state of Michigan, and integrates with bordering states and Canada. Information about MPSCS including approved radios, system policies, forms, etc., can be found at their website:

<https://www.michigan.gov/mpscs>

MPSCS provides service and support through the division's headquarters in Lansing and a network of seven regional service centers.

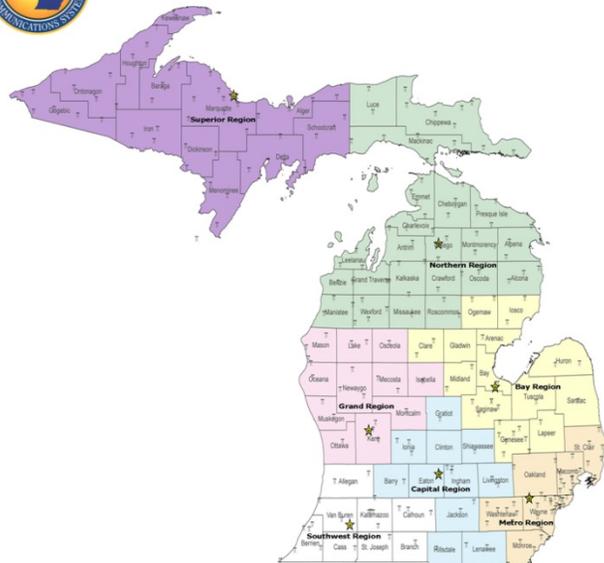
Michigan's Public Safety Communications System
Michigan Department of Technology, Management & Budget
7150 Harris Drive
P.O. Box 30631
Lansing, Michigan 48909

General Inquiries
517-336-6262

3.1 MPSCS Regional Service Centers



MPSCS Regional Service Centers



Capital Region Office
 6951 Crowner Drive
 Lansing, MI 48913
 Phone: 517-322-5160
 Fax: 616-636-4311

Bay Region Office
 3202 S. Euclid Avenue
 Bay City, MI 48706
 Phone: 989-667-9343
 Fax: 989-671-0930

Grand Region Office
 8650 Algoma
 Rockford, MI 49341
 Phone: 616-866-2548
 Fax: 616-866-2641

Metro Region Office
 42145 W. Seven Mile Road
 Northville, MI 48167
 Phone: 248-380-1080
 Fax: 248-380-1045

Northern Region
 123 N, Fairview
 Gaylord, MI 49735
 Phone: 989-732-0781
 Fax: 989-731-5425

Southwest Region
 Phone: 269-207-8009
 Fax: 269-731-2979

MPCS REGIONAL SERVICE CENTERS (CONT.)

Superior Region

1924 Industrial Parkway
Marquette, MI 49855
Phone: 906-227-7552
Fax: 906-225-0144

3.2 MPCS RADIO SHOP LOCATIONS

Capital Region

6951 Crouner Drive
Lansing, MI 48913
Phone: 517-322-5160
Fax: 616-636-4311

Northern Region

St. Ignace Radio Shop
1120 W. US 2
St. Ignace, MI
Phone: 906-643-7532
Fax: 906-643-7645

Northern Region

Newberry Radio Shop
5666 Hwy M-123
Newberry, MI 49868
Phone: 906-293-9650
Fax: 906-346-5329

Superior Region

Iron River Radio Shop
3 West Genesee Street
P.O. Box 368
Iron River, MI 49935
Phone: 906-293-9650
Fax: 906-346-5329

Superior Region

Laurium Radio Shop
310 Hecla Street
P.O. Box 627
Laurium, MI 49913-0627
Phone: 906-337-1095
Fax: 906-337-1533

4 Michigan State Police (MSP)

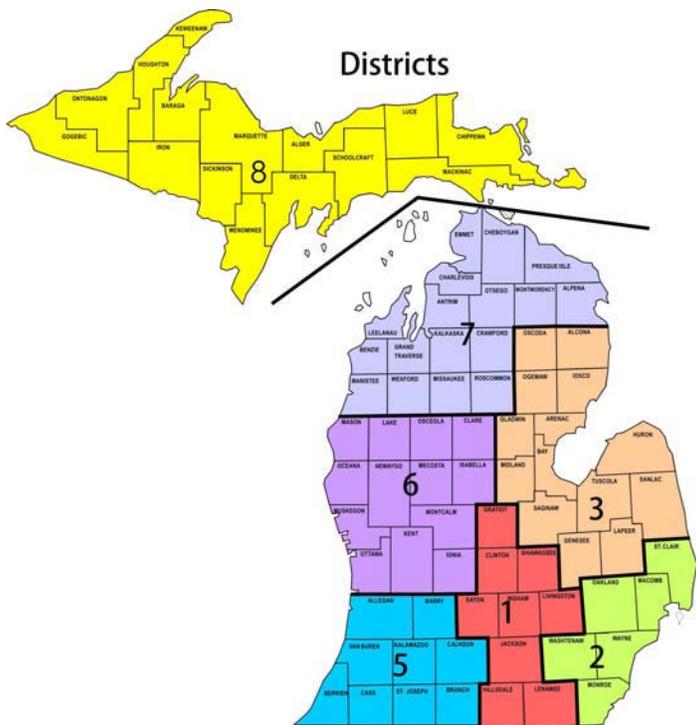
As described in the Michigan Emergency Management Plan (MEMP), the plan is developed and maintained by the Michigan State Police Emergency Management and Homeland Security Division (MSP/EMHSD) in accordance with 1976 Public Act 390, in partnership with partner departments, agencies and organizations. The ultimate purposes of the plan are to: 1) protect the safety, health and general well-being of Michigan's residents and visitors from natural, technological, weapon of mass destruction attack, and human-related hazards occurring or otherwise impact the State of Michigan; 2) protect property and the environment; and 3) ensure that critical services can be provided in a timely and unencumbered manner. The MEMP is available for review at

http://www.michigan.gov/documents/msp/MEMP_portfolio_for_web_383520_7.pdf

Upon activation of the MEMP, MSP/EMHSD and other state departments/agencies and NGOs will provide direct assistance to affected local jurisdictions as specified in the plan and deemed necessary to protect public safety and/or health, property, and the environment, and/or to maintain critical public services. If deemed appropriate, the State Emergency Operations Center will be activated to coordinate incident-related activities and functions.

The Michigan State Police is organized into seven districts and 29 posts. EMHSD District Coordinators are assigned to each district and are the designated points of contact for access to EMHSD assistance. Post and district commanders are also available for assistance.

A list of District Commanders and District EMHSD Coordinators, including contact information, is included on the next page.



First District

District Commander Captain Kevin McGaffigan
 Address 7119 North Canal Road
 Lansing, MI 48913
 Phone 517-322-1912
 Fax 517-322-0675

District Coordinator Lieutenant Richard Martin
 Phone (o) 517-322-1918
 (f) 517-322-0675
 (c) 989-245-3154
 E-mail MartinR13@michigan.gov

Second District

District Commander Captain Monica Yesh
Address 1301 Third Street
Detroit, MI 48226
Phone 313-962-7850
Fax 313-962-3036

For Emergency Management and Homeland Security Division services, the Second District is divided into two Regions, North and South. The Second District North Region includes Oakland, Macomb and St. Clair Counties. The Second District South Region includes Washtenaw, Wayne and Monroe Counties.

District Coordinator (N) Lieutenant Timothy Ketvirtis
Address 42800 Merrill Road
Sterling Heights, MI 48314
Phone (O) 586-726-6709
(F) 586-726-6661
(C) 517-202-5597
E-mail KetvirtisT@michigan.gov

District Coordinator (S) Lieutenant Nathaniel McQueen
Address 12111 S. Telegraph Road
Taylor, MI 48180
Phone (O) 734-287-5044
(F) 734-287-5027
(C) 248-210-0672
E-mail McQueenN@michigan.gov

Third District

District Commander Captain Gene Kapp
Address G-4495 Corunna Road
Flint, MI 48532
Phone 810-733-9380
Fax 810-733-9399

District Coordinator Lieutenant BJ Roach
Address 6296 Dixie Highway, PO Box 608
Bridgeport, MI 48722
Phone (O) 989-777-0650
(F) 989-777-3571
(C) 517-819-0841
E-Mail RoachB@michigan.gov

Fifth District

District Commander Captain Michael A. Brown
Address 108 W. Michigan Avenue
 Paw Paw, MI 49079

Phone 269-657-6081
Fax 269-657-7571

District Coordinator Lieutenant Ken High
Address 108 W. Michigan Avenue
 Paw Paw, MI 49079

Phone (O) 269-657-6081
 (F) 269-657-7571
 (C) 269-332-2475

E-Mail HighK@michigan.gov

Sixth District

District Commander Captain David Roesler
Address 345 Northland Drive NE
 Rockford, MI 49341

Phone 616-866-6666
Fax 616-866-3997

District Coordinator Lieutenant Mark Russo
Address 345 Northland Drive NE
 Rockford, MI 49341

Phone (O) 616-866-6665
 (F) 616-866-3997
 (C) 616-299-9312

E-Mail Russom3@michigan.gov

Seventh District

District Commander Captain Michael Caldwell
Address 931 S. Otsego Avenue, Suite 6
 Gaylord, MI 49735
Phone 989-705-3800
Fax 989-731-0123

District Coordinator Lieutenant Michael de Castro
Address 931 S. Otsego Avenue, Suite 6
 Gaylord, MI 49735
Phone (O) 989-705-3805
 (F) 989-731-0123
 (C) 231-499-8266
E-Mail Decastrom@michigan.gov

Eighth District

District Commander Captain John Halpin
Address 1924 Industrial Parkway, Suite A
 Marquette, MI 49855
Phone 906-225-7030
Fax 906-225-0904

District Coordinator Lieutenant Don Brown
Address 1924 Industrial Parkway, Suite A
 Marquette, MI 49855
Phone (O) 906-227-7504
 (F) 906-225-0904
 (C) 906-250-2365
E-Mail BrownD43@michigan.gov

5 Michigan Amateur Radio Public Service Corps (ARPSC)

The Michigan Amateur Radio Public Service Corps (ARPSC) includes the Amateur Radio Emergency Services (ARES), Radio Amateur Civil Emergency Service (RACES) and Skywarn, a service provided in cooperation with the National Radio Service. In Michigan, many amateur radio operators have been cross-trained in both ARES and RACES protocols. This aids the process of assistance in that cross-trained individuals who start out as an ARES Operator can transition and provide assistance as a RACES Operator if needed.

The Mission of the ARPSC is to, *"Develop the Michigan ARPSC Program in to a fully integrated communications team ready, willing and able to provide radio communications support to Public Service Agencies and the citizens of Michigan."*

5.1 Amateur Radio Emergency Services (ARES)

The Amateur Radio Emergency Service® (ARES) consists of licensed amateurs who have voluntarily registered their qualifications and equipment, with their local ARES leadership, for communications duty in the public service when disaster strikes. ARES Events can be any event where a communications need exists of a non-commercial nature ([FCC Part 97 Rules](#)). ARES is administered by the American Radio League (ARRL), the national association for amateur radio. ARRL represents the interest of amateur radio operators, provides technical advice and assistance to amateur radio operators, supports educational programs and sponsors emergency communications service throughout the country.

ARES VHF simplex frequencies are assigned by county, with some counties having multiple frequencies in use. The following chart provides the primary frequency assigned by county:

5.1.1 ARES Assigned County Frequencies

County	Frequency	Updated
Alcona	146.535	2012-04-21 05:43:16
Alger	147.46	2010-04-20 04:06:06
Allegan	147.47	2010-04-13 14:40:12
Alpena	146.58	2010-04-16 15:59:11
Antrim	146.58	2010-04-16 15:56:07
Arenac	146.460	2012-04-21 05:43:55
Baraga	146.45	2010-04-20 04:06:28
Barry	146.56	2010-04-16 10:03:09
Bay	146.550	2012-04-21 05:44:25
Benzie	146.58	2010-04-16 16:03:56
Berrien	146.460	2012-05-09 07:27:12
Branch	146.550	2012-05-09 07:28:31
Calhoun	146.440	2012-05-09 07:28:10
Cass	-- N o D a t a --	
Charlevoix	146.58	2010-04-16 15:57:20
Cheboygan	146.58	2010-04-16 15:57:36
Chippewa	146.54	2010-04-20 04:09:04
Clare	146.42	2012-03-06 11:28:40
Clinton	-- N o D a t a --	
Crawford	146.58	2010-04-16 15:58:01
Delta	146.45	2010-04-20 04:09:23
Dickinson	146.58	2010-04-20 04:09:46
Eaton	146.550	2012-05-09 07:25:43
Emmet	146.58	2010-04-16 15:58:19
Genesee	147.580	2012-04-21 05:45:06
Gladwin	146.520	2012-04-21 05:45:32
Gogebic	146.47	2010-04-20 04:10:08
Grand Traverse	146.58	2010-04-16 15:58:41

5.1.1 ARES Assigned County Frequencies

County	Frequency	Updated
Gratiot	146.52	2012-05-09 07:25:14
Hillsdale	146.420	2012-05-09 07:24:53
Houghton	146.42	2010-04-20 04:10:44
Huron	-- N o D a t a --	
Ingham/ Lansing	146.580	2012-05-09 07:26:09
Ionia	-- N o D a t a --	
Iosco	146.550	2012-04-21 05:46:00
Iron	146.49	2010-04-20 04:11:01
Isabella	-- N o D a t a --	
Jackson	146.430	2012-05-09 07:24:24
Kalkaska	146.58	2010-04-16 15:59:37
Kent	-- N o D a t a --	
Keweenaw	146.56	2010-04-20 04:11:34
Kalamazoo	147.47	2010-04-13 14:41:08
Lake	-- N o D a t a --	
Lapeer	147.580	2012-04-21 05:46:25
Leelanau	146.58	2010-04-16 15:59:55
Lenawee	-- N o D a t a --	
Livingston	146.580	2012-05-09 07:26:35
Luce	146.40	2010-04-20 04:11:59
Mackinac	146.58	2010-04-20 04:12:36
Macomb	146.58	2010-04-21 06:08:41
Manistee	146.58	2010-04-16 16:00:30
Marquette	147.44	2010-04-20 04:13:59
Mason	-- N o D a t a --	
Mecosta	146.470	2012-05-09 07:23:02
Menominee	146.56	2010-04-20 04:13:42
Midland	146.49	2010-04-13 14:46:23

5.1.1 ARES Assigned County Frequencies

County	Frequency	Updated
Missaukee	146.58	2010-04-16 16:00:50
Monroe	146.58	2010-04-21 06:09:01
Montcalm	-- No Data --	
Montmorency	146.58	2010-04-16 16:01:21
Muskegon	147.435	2013-10-22 13:14:14
Newaygo	146.540	2012-05-09 07:22:35
Oakland	146.58	2010-04-21 06:08:05
Oceana	146.535	2012-05-09 07:22:01
Ogemaw	147.440	2012-04-21 05:46:55
Ontonagon	146.40	2010-04-20 04:14:24
Osceola	146.580	2012-05-09 07:21:19
Oscoda	146.480	2012-04-21 05:47:26
Otsego	146.58	2010-04-16 16:01:39
Ottawa	146.52	2012-05-09 07:23:56
Presque Isle	146.58	2010-04-16 16:02:09
Roscommon	146.58	2010-04-16 16:02:30
Saginaw	146.550	2012-04-21 05:47:54
Sanilac	146.430	2012-04-21 05:48:27
Schoolcraft	146.42	2010-04-20 04:14:57
Shiawassee	-- No Data --	
Saint Clair	146.58	2010-04-21 06:09:53
Saint Joseph	146.580	2012-05-09 07:27:41
Tuscola	145.525	2012-04-21 05:48:56
Van Buren	146.460	2012-05-19 06:46:23
Washtenaw	146.58	2010-04-21 06:09:42
Wayne	146.58	2010-04-21 06:09:21
Wexford	146.58	2010-04-16 16:02:54

5.2 Radio Amateur Civil Emergency Services (RACES)

RACES, administered by local, county and state emergency management agencies, and supported by the Federal Emergency Management Agency (FEMA) of the United States government. It is a part of the Amateur Radio Service that provides radio communications for civil-preparedness purposes *only*, during periods of local, regional or national civil emergencies. These emergencies are not limited to war-related activities, but can include natural disasters such as fires, floods and earthquakes.

As defined in the rules, RACES is a radiocommunication service, conducted by volunteer licensed amateurs, designed to provide emergency communications to local or state civil-preparedness agencies. It is important to note that RACES operation is authorized by emergency management officials only, and this operation is strictly limited to official civil-preparedness activity in the event of an emergency-communications situation.

The Michigan RACES Section Emergency Coordinator is:

John J. McDonough, WB8RCR
2211 Laurel Lane
Midland, MI 48642-3820
989-430-4855
989-631-0178
wb8rcr@arrl.net

6 National Weather Service

The National Weather Service is a component of the National Oceanic and Atmospheric Administration (NOAA), whose mission is to provide weather, water, and climate data, forecasts and warnings for the protection of life and property and enhancement of the national economy. The National Weather Service supports several programs that enhance public safety include NOAA Weather Radio All Hazards (NWR), and SKYWARN.

The National Weather Service has four NWS Offices in Michigan. The offices are located in Detroit, Grand Rapids, Marquette and Gaylord.

6.1 NOAA Weather Radio All Hazards (NWR)

The NOAA Weather Radio All Hazards (NWR) is a nationwide network of radio stations that continuously broadcast weather information directly from the nearest National Weather Service office. In addition to official Weather Service warnings, watches, forecasts and other hazard information NWR is also an “all hazards” radio network that broadcasts warnings and post-event information. NWR provides information about natural (such as earthquakes), environmental (such as chemical releases or oil spills) and public safety (such as AMBER alerts).

NWR broadcasts are on the VHF public service band at seven frequencies (MHz):

WX2	WX4	WX5	WX3	WX6	WX7	WX1
162.400	162.425	162.450	162.475	162.500	162.525	162.550

6.1.1 NWR County Coverage Listings for Michigan

Refer to the below charts for frequency, call sign and other information for NWR for Michigan by county. The "Remarks" column refers to the portion of the county covered by the listed frequency. "SAME #" is the Specific Area Message Encoding, the protocol used to encode the Emergency Alert System (EAS) and NWR in the U.S., as well as portions of Canada and Mexico.

6.1.1 NWR County Coverage Listing for Michigan

County	SAME #	NWR Transmitter	Call Sign	Frequency	Remarks
Alcona	026001	Alpena	KIG83	162.550	ALL
Alger	026003	Grand Marais	WZ2515	162.425	ALL
Alger	026003	Manistique	WNG684	162.525	ALL
Alger	026003	Marquette	KIG66	162.550	W 1/2
Alger	026003	Munising	WZ2514	162.475	ALL
Alger	026003	Newberry	WNG576	162.450	ALL
Allegan	026005	Grand Rapids	KIG63	162.550	ALL
Allegan	026005	Plainwell	WWF34	162.475	ALL
Allegan	026005	West Olive	WXN99	162.425	ALL
Alpena	026007	Alpena	KIG83	162.550	ALL
Antrim	026009	Traverse City	KIH22	162.400	ALL

6.1.1 NWR County Coverage Listing for Michigan

County	SAME #	NWR Transmitter	Call Sign	Frequency	Remarks
Arenac	026011	West Branch	KXI33	162.450	ALL
Baraga	026013	Houghton	WXK73	162.400	ALL
Baraga	026013	Marquette	KIG66	162.550	E 1/2
Barry	026015	Grand Rapids	KIG63	162.550	ALL
Barry	026015	Plainwell	WWF34	162.475	ALL
Bay	026017	Flint	KIH29	162.475	ALL
Benzie	026019	Traverse City	KIH22	162.400	ALL
Berrien	026021	Michigan City	KJY62	162.500	ALL
Berrien	026021	North Webster	KZZ36	162.500	ALL
Berrien	026021	Plainwell	WWF34	162.475	ALL
Berrien	026021	South Bend	WXJ57	162.400	ALL

6.1.1 NWR County Coverage Listing for Michigan

County	SAME #	NWR Transmitter	Call Sign	Frequency	Remarks
Branch	026023	Angola	KXI94	162.425	ALL
Branch	026023	Onondaga	WXK81	162.400	ALL
Branch	026023	Plainwell	WWF34	162.475	ALL
Calhoun	026025	Onondaga	WXK81	162.400	ALL
Calhoun	026025	Plainwell	WWF34	162.475	ALL
Cass	026027	North Webster	KZZ36	162.500	ALL
Cass	026027	Plainwell	WWF34	162.475	ALL
Cass	026027	South Bend	WXJ57	162.400	ALL
Charlevoix	026029	Traverse City	KIH22	162.400	ALL
Cheboygan	026031	Petoskey	WNG572	162.475	ALL
Chippewa	026033	Newberry	WNG576	162.450	ALL

6.1.1 NWR County Coverage Listing for Michigan

County	SAME #	NWR Transmitter	Call Sign	Frequency	Remarks
Chippewa	026033	Sault Ste Marie	KIG74	162.550	ALL
Clare	026035	Mount Pleasant	KZZ33	162.525	ALL
Clinton	026037	Onondaga	WXK81	162.400	ALL
Crawford	026039	Gaylord	WWF70	162.500	ALL
Delta	026041	Escanaba	KZZ35	162.500	ALL
Delta	026041	Marquette	KIG66	162.550	ALL
Delta	026041	Sister Bay	WXN69	162.425	S
Dickinson	026043	Escanaba	KZZ35	162.500	ALL
Dickinson	026043	Marquette	KIG66	162.550	N 1/2
Eaton	026045	Onondaga	WXK81	162.400	ALL
Emmet	026047	Petoskey	WNG572	162.475	ALL

6.1.1 NWR County Coverage Listing for Michigan

County	SAME #	NWR Transmitter	Call Sign	Frequency	Remarks
Genesee	026049	Flint	KIH29	162.475	ALL
Gladwin	026051	West Branch	KXI33	162.450	ALL
Gogebic	026053	Ashland	KZZ78	162.525	ALL
Gogebic	026053	Houghton	WXK73	162.400	ALL
Gogebic	026053	Marenisco	WNG683	162.550	ALL
Grand Traverse	026055	Traverse City	KIH22	162.400	ALL
Gratiot	026057	Mount Pleasant	KZZ33	162.525	ALL
Hillsdale	026059	Adrian / Petersburg	WNG647	162.450	ALL
Hillsdale	026059	Angola	KXI94	162.425	ALL
Hillsdale	026059	Onondaga	WXK81	162.400	ALL
Houghton	026061	Houghton	WXK73	162.400	ALL

6.1.1 NWR County Coverage Listing for Michigan

County	SAME #	NWR Transmitter	Call Sign	Frequency	Remarks
Huron	026063	Bad Axe	WNG701	162.525	ALL
Huron	026063	Flint	KIH29	162.475	ALL
Huron	026063	Sandusky	WNG582	162.450	ALL
Ingham	026065	Onondaga	WXK81	162.400	ALL
Ionia	026067	Grand Rapids	KIG63	162.550	ALL
Iosco	026069	West Branch	KXI33	162.450	ALL
Iron	026071	Crystal Falls	KJY76	162.475	ALL
Iron	026071	Marquette	KIG66	162.550	ALL
Isabella	026073	Mount Pleasant	KZZ33	162.525	ALL
Jackson	026075	Adrian / Petersburg	WNG647	162.450	ALL
Jackson	026075	Onondaga	WXK81	162.400	ALL

6.1.1 NWR County Coverage Listing for Michigan

County	SAME #	NWR Transmitter	Call Sign	Frequency	Remarks
Kalamazoo	026077	Plainwell	WWF34	162.475	ALL
Kalkaska	026079	Traverse City	KIH22	162.400	ALL
Kent	026081	Grand Rapids	KIG63	162.550	ALL
Keweenaw	026083	Copper Harbor	WZ2513	162.500	ALL
Keweenaw	026083	Houghton	WXK73	162.400	ALL
Lake	026085	Wolf Lake	WNG672	162.425	ALL
Lapeer	026087	Flint	KIH29	162.475	ALL
Lapeer	026087	Sandusky	WNG582	162.450	ALL
Leelanau	026089	Traverse City	KIH22	162.400	ALL
Lenawee	026091	Adrian / Petersburg	WNG647	162.450	ALL
Lenawee	026091	Detroit	KEC63	162.550	ALL

6.1.1 NWR County Coverage Listing for Michigan

County	SAME #	NWR Transmitter	Call Sign	Frequency	Remarks
Lenawee	026091	Toledo	WXL51	162.500	ALL
Livingston	026093	Detroit	KEC63	162.550	ALL
Livingston	026093	Onondaga	WXK81	162.400	ALL
Luce	026095	Newberry	WNG576	162.450	ALL
Mackinac	026097	Newberry	WNG576	162.450	ALL
Mackinac	026097	Sault Ste Marie	KIG74	162.550	E 1/2
Macomb	026099	Detroit	KEC63	162.550	ALL
Manistee	026101	Traverse City	KIH22	162.400	ALL
Manistee	026101	Wolf Lake	WNG672	162.425	ALL
Marquette	026103	Marquette	KIG66	162.550	ALL
Mason	026105	Wolf Lake	WNG672	162.425	ALL

6.1.1 NWR County Coverage Listing for Michigan

County	SAME #	NWR Transmitter	Call Sign	Frequency	Remarks
Mecosta	026107	Mount Pleasant	KZZ33	162.525	ALL
Mecosta	026107	Wolf Lake	WNG672	162.425	ALL
Menominee	026109	Escanaba	KZZ35	162.500	ALL
Menominee	026109	Marquette	KIG66	162.550	ALL
Menominee	026109	Sister Bay	WXN69	162.425	ALL
Menominee	026109	Wausaukee	WNG553	162.400	ALL
Midland	026111	Flint	KIH29	162.475	ALL
Midland	026111	Mount Pleasant	KZZ33	162.525	ALL
Missaukee	026113	Traverse City	KIH22	162.400	ALL
Monroe	026115	Adrian / Petersburg	WNG647	162.450	ALL
Monroe	026115	Detroit	KEC63	162.550	ALL

6.1.1 NWR County Coverage Listing for Michigan

County	SAME #	NWR Transmitter	Call Sign	Frequency	Remarks
Monroe	026115	Toledo	WXL51	162.500	ALL
Montcalm	026117	Grand Rapids	KIG63	162.550	ALL
Montcalm	026117	Mount Pleasant	KZZ33	162.525	ALL
Montmorency	026119	Alpena	KIG83	162.550	ALL
Muskegon	026121	Hesperia	WWF36	162.475	ALL
Muskegon	026121	West Olive	WXN99	162.425	ALL
Newaygo	026123	Hesperia	WWF36	162.475	ALL
Newaygo	026123	Wolf Lake	WNG672	162.425	ALL
Oakland	026125	Detroit	KEC63	162.550	ALL
Oceana	026127	Hesperia	WWF36	162.475	ALL
Oceana	026127	Wolf Lake	WNG672	162.425	ALL

6.1.1 NWR County Coverage Listing for Michigan

County	SAME #	NWR Transmitter	Call Sign	Frequency	Remarks
Ogemaw	026129	West Branch	KXI33	162.450	ALL
Ontonagon	026131	Houghton	WXK73	162.400	ALL
Ontonagon	026131	Marenisco	WNG683	162.550	S C AND W
Osceola	026133	Mount Pleasant	KZZ33	162.525	ALL
Osceola	026133	Wolf Lake	WNG672	162.425	ALL
Oscoda	026135	Alpena	KIG83	162.550	ALL
Otsego	026137	Gaylord	WWF70	162.500	ALL
Ottawa	026139	Grand Rapids	KIG63	162.550	ALL
Ottawa	026139	West Olive	WXN99	162.425	ALL
Presque Isle	026141	Alpena	KIG83	162.550	ALL
Roscommon	026143	West Branch	KXI33	162.450	ALL

6.1.1 NWR County Coverage Listing for Michigan

County	SAME #	NWR Transmitter	Call Sign	Frequency	Remarks
Saginaw	026145	Flint	KIH29	162.475	ALL
Sanilac	026151	Flint	KIH29	162.475	ALL
Sanilac	026151	Sandusky	WNG582	162.450	ALL
Schoolcraft	026153	Manistique	WNG684	162.525	ALL
Schoolcraft	026153	Marquette	KIG66	162.550	ALL
Shiawassee	026155	Flint	KIH29	162.475	ALL
Shiawassee	026155	Onondaga	W XK81	162.400	ALL
St. Clair	026147	Detroit	KEC63	162.550	ALL
St. Clair	026147	Sandusky	WNG582	162.450	ALL
St. Joseph	026149	Angola	KXI94	162.425	ALL
St. Joseph	026149	North Webster	KZZ36	162.500	ALL

6.1.1 NWR County Coverage Listing for Michigan

County	SAME #	NWR Transmitter	Call Sign	Frequency	Remarks
St. Joseph	026149	Plainwell	WWF34	162.475	ALL
St. Joseph	026149	South Bend	WXJ57	162.400	ALL
Tuscola	026157	Flint	KIH29	162.475	ALL
Van Buren	026159	Plainwell	WWF34	162.475	ALL
Washtenaw	026161	Adrian / Petersburg	WNG647	162.450	ALL
Washtenaw	026161	Detroit	KEC63	162.550	ALL
Wayne	026163	Detroit	KEC63	162.550	ALL
Wexford	026165	Traverse City	KIH22	162.400	ALL
Wexford	026165	Wolf Lake	WNG672	162.425	ALL

6.1.2 Emergency Alert System (NWS – SAME) Alert Codes

EMERGENCY ALERT SYSTEM EVENT	NWR - SAME Codes
Weather-Related Events	
Blizzard Warning	BZW
Coastal Flood Watch	CFA
Coastal Flood Warning	CFW
Dust Storm Warning	DSW
Flash Flood Watch	FFA
Flash Flood Warning	FFW
Flash Flood Statement	FFS
Flood Watch	FLA
Flood Warning	FLW
Flood Statement	FLS
High Wind Watch	HWA
High Wind Warning	HWW
Hurricane Watch	HUA
Hurricane Warning	HUW
Hurricane Statement	HLS
Severe Thunderstorm Watch	SVA
Severe Thunderstorm Warning	SVR
Severe Weather Statement	SVS
Special Marine Warning	SMW
Special Weather Statement	SPS
Tornado Watch	TOA
Tornado Warning	TOR
Tropical Storm Watch	TRA
Tropical Storm Warning	TRW
Tsunami Watch	TSA
Tsunami Warning	TSW
Winter Storm Watch	WSA
Winter Storm Warning	WSW

6.1.2 Emergency Alert System (NWS – SAME) Alert Codes

EMERGENCY ALERT SYSTEM EVENT	NWR - SAME Codes
Non-Weather-Related Events – National Codes Required	
Emergency Action Notification	EAN
Emergency Action Termination	EAT
National Information Center	NIC
State and Local Codes-Optional	
Avalanche Watch	AVA
Avalanche Warning	AVW
Child Abduction Emergency	CAE
Civil Danger Warning	CDW
Civil Emergency Message	CEM
Earthquake Warning	EQW
Evacuation Immediate	EVI
Fire Warning	FRW
Hazardous Materials Warning	HMW
Law Enforcement Warning	LEW
Local Area Emergency	LAE
911 Telephone Outage Emergency	TOE
Nuclear Power Plant Warning	NUW
Radiological Hazard Warning	RHW
Shelter in Place Warning	SPW
Volcano Warning	VOW

6.2 SKYWARN

To obtain critical weather information, the National Oceanic & Atmospheric Administration (NOAA)'s National Weather Service (NWS) established SKYWARN. SKYWARN, a volunteer program, has nearly 290,000 trained severe weather spotters. NWS encourages anyone with an interest in public service and access to communications, such as HAM radio, to join the SKYWARN program.

Additional information about SKYWARN can be located at www.skywarn.org

6.2.1 SKYWARN Michigan Groups

Information about Michigan SKYWARN groups can be located by selecting the group name from the list:

- [Baraga](#)
- [Genesee County Amateur Radio Public Service Corps](#) – GC-ARPSC
- [Houghton](#)
- [IMO SKYWARN](#) - Northern Indiana, Southern Michigan, Northwestern Ohio
- [Kalamazoo](#)
- [Kent County](#)
- [Keweenaw](#)
- [Lansing Area](#)
- [Macomb County Amateur Radio Public Svc. Corps](#)
- [Marquette](#)
- [Midwest Severe Storm Tracking Response Center](#)
- [Newaygo County West Michigan](#)
- [NSW White Lake](#)
- [NWS-Gaylord](#)
- [Oakland](#)
- [Oakland County ARPSC](#)
- [Ontonagon](#)
- [SKYWARN of Ionia County](#)

- [Spotter Network](#) – Nationwide
- [Trucker Weather Watch](#) - Nationwide
- [Washtenaw County](#)
- [West Michigan](#)

Appendix A: Michigan's Public Safety Communications Interoperability Board

The Michigan Public Safety Communications System Advisory Board, created by Executive Order 2005-8 was transferred to the Department of Technology, Management, and Budget by Executive Order 2009-55 and renamed the Public Safety Interoperability Board. The Board adopts procedures governing the organization and operations of the Michigan Public Safety Communications System. In addition to other duties, the Board may recommend best practices and oversight mechanisms for the implementation of public safety communications systems interoperability and standards in Michigan.

The Board is comprised of 16 members, including nine members appointed by the governor and seven voting ex officio members including:

- a. The employee within the Department of Technology, Management and Budget with principal administrative responsibilities for the Michigan Public Safety Communications System
- b. The office or employee within the Department of State Police with principal administrative responsibility for the state's emergency management operations
- c. The State Fire Marshal
- d. The Director of the Department of Community Health, or designee
- e. The Adjutant General, or designee
- f. The Director of the Department of Natural Resources and Environment, or designee
- g. The Director of the Department of Transportation, or designee

Appendix B: Standard Phonetic Alphabet

Character	International Phonetic	Law Enforcement Phonetic	Morse Code	Nautical	Sign
A	Alpha	Adam	•—		
B	Bravo	Boy	—•••		
C	Charlie	Charles	—•—		
D	Delta	David	—••		
E	Echo	Edward	•		
F	Foxtrot	Frank	••—•		
G	Golf	George	—•—•		
H	Hotel	Henry	••••		
I	India	Ida	••		
J	Juliet	John	•—•—		
K	Kilo	King	—•—		
L	Lima	Lincoln	•—••		
M	Mike	Mary	—•—		
N	November	Nora	—•		
O	Oscar	Ocean	—•—		
P	Papa	Paul	•—•—		
Q	Quebec	Queen	—•—		

R	Romeo	Robert	•-•		
S	Sierra	Sam	•••		
T	Tango	Tom	-		
U	Uniform	Union	••-		
V	Victor	Victor	•••-		
W	Whiskey	William	•--		
X	X-ray	X-ray	-••		
Y	Yankee	Young	-•-		
Z	Zulu	Zebra	-••		

Appendix C: Reference Source / Materials

- **SAFECOM.** <http://www.safecomprogram.gov>
The *National Emergency Communications Plan* (NECP) is a strategic plan that sets goals and identifies key national priorities to enhance governance, planning, technology, training and exercises, and disaster communications capabilities. The NECP provides recommendations, including milestones, to help emergency response providers and relevant government officials make measurable improvements in emergency communications over the next three years.

- **National Public Safety Telecommunications Council (NPSTC).** <http://www.npstc.org>
<http://www.safecomprogram.gov/SAFECOM/nifog>
The *National Interoperability Field Operations Guide* (NIFOG) is a technical reference for emergency communications planning and for radio technicians responsible for radios that will be used in disaster response. The NIFOG includes rules and regulations for use of nationwide and other interoperability channels, tables of frequencies and standard channel names, and other reference material; formatted as a pocket-sized guide for radio technicians to carry with them.

- **Federal Emergency Management Agency (FEMA).**
<http://www.fema.gov>
The Department of Homeland Security *Target Capability List* (TCL) describes the capabilities related to the four homeland security mission areas: Prevent, Protect, Respond, and Recover. It defines and provides the basis for assessing preparedness. It also establishes national guidance for preparing the Nation for major all-hazards events, such as those defined by the National Planning Scenarios.

- **NIMS Integration Center.**

<http://www.fema.gov/emergency/nims/>

The *National Incident Management System* (NIMS) provides a systematic, proactive approach to guide departments and agencies at all levels of government, nongovernmental organizations, and the private sector to work seamlessly to prevent, protect against, respond to, recover from, and mitigate the effects of incidents, regardless of cause, size, location, or complexity, in order to reduce the loss of life and property and harm to the environment.

- **National Incident Management System (NIMS) Incident Command System (ICS) Forms Booklet – FEMA 502-2**

http://www.fema.gov/media-library-data/1425992150044-22337affe725b5f9d5fd8c7e9167ad8/ICS_Forms_508_12-7-10.pdf

This booklet is designed to assist emergency response personnel in the use of ICS and corresponding documentation during incident operations. It is a companion document to the NIMS ICS Field Operations Guide (FOG), FEMA 502-1,

- **Michigan Public Safety Communications Interoperability Board**

https://www.michigan.gov/snyder/0,1607,7-277-57738_57679_57726-250147--,00.html

The Public Safety Communications Interoperability Board, Michigan's 800 MHz radio system and telecommunications network, provides statewide interoperability in digital clarity to its members throughout the state and adopts procedures governing the organization and operations of the Michigan Public Safety Communications System.

Appendix D: Incident Command System (ICS) Communication Forms

This appendix contains forms for incident command system (ICS) planning. These forms are from the National Incident Management (NIMS) Incident Command System (ICS) Forms Booklet.

Due to the size of this document, these forms are not functional as presented. If you don't have these forms available for your use, they can be found at the following websites:

COMU Documents: www.michigan.gov/comuwg

http://www.fema.gov/media-library-data/1425992150044-22337affef725b5f9d5fd8c7e9167ad8/ICS_Forms_508_12-7-10.pdf

Appendix E: Glossary and Terms

Cache radios	Also known as “swapped radios,” refer 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 radios allow all responders to use common, compatible equipment during an incident.
CAM	Communication Assets Mapping
CAS	Communication Assets Survey
CASM	Communication Assets Survey and Mapping
COMC	Communications Coordinator
COML	Communications Unit Leader
COMT	Incident Communications Technician
CTCSS	Continuous Tone-Coded Squelch System
DHS	Department of Homeland Security
EOC	Emergency Operations Center
Gateway Systems	Interconnect channels of disparate systems (whether on different frequency bands or radio operating modes), allowing first responders using their existing radios and channels to be interconnected with the channels of other users outside of their agency. Dispatch consoles that are able to create patches will also be captured as gateways.
FEMA	Federal Emergency Management Agency
FOG	Field Operations Guide
IC	Incident Commander
ICC	Incident Communications Center
ICP	Incident Command Post
ICS	Incident Command System
INCM	Incident Communications Center Manager

Interoperability	The ability to communicate between agencies that utilize disparate radio systems and other interoperability methods such as mutual aid channels, gateways, dispatch centers and radio caches. Interoperable resources are defined as shared systems, shared channels, gateways, and radio caches
Inter-System Shared Channels	Refers to common frequencies/talk groups established and programmed into radios to provide interoperable communications among agencies using <i>different</i> radio systems. "Channel," in this context, refers to the name of a common frequency/talk group visually displayed on a user's radio.
Intra-System Shared Channels	Refer to common frequencies/talk groups established and programmed into radios to provide interoperable communications among agencies using the <i>same</i> shared radio system. "Channel," in this context, refers to the name of a common frequency/talk group visually displayed on a user's radio.
MACS	Multiagency Coordination System
MEMAC	Michigan Emergency Management Assistance Compact
MOUs	Memoranda of Understanding
NAC	Network Access Code
NECP	National Emergency Communications Plan
NIFC	National Interagency Fire Center
NIMS	National Incident Management System
NRF	National Response Framework
RADO	Radio Operator
SEOC	State Emergency Operations Center EOC
Shared Systems	Refer to a single radio system used to provide service to several public safety agencies.
SOP	Standard Operating Procedure
THSP	Technical Specialist
TICP	Tactical Interoperable Communications Plan
UACSC	Urban Area Communications Steering Committee

Appendix F: Web Site Links

American Radio Relay League (ARRL): www.arrl.org

APCO International: www.apcointl.org

CASM: <http://publicsafetytools.info/>

DHS OEC: www.dhs.gov/xabout/structure/gc_1189774174005.shtm

FCC Enforcement Bureau : www.fcc.gov/eb

FCC Public Safety & Homeland Security Bureau: www.fcc.gov/pshs

FCC Special Temporary Authority (STA): www.fcc.gov/pshs/services/sta.html

FCC ULS: wireless.fcc.gov/uls

FEMA: www.fema.gov

Government Emergency Telecommunications Service (GETS):

gets.ncs.gov

Michigan Communications Working Group: www.michigan.gov/comuwg

Michigan Emergency Management Assistance Compact:

http://michigan.gov/documents/MEMACFINAL7-3-03_69499_7.pdf

Michigan MEDCOM Plan:

http://www.michigan.gov/documents/mdch/MEDCOM_REQUIREMENTS.Sept_2006_174553_7.pdf

National Emergency Communications Plan:

http://www.dhs.gov/xlibrary/assets/national_emergency_communications_plan.pdf

National Incident Management (NIMS) Incident Command System (ICS)

Forms Booklet: [http://www.fema.gov/media-library-](http://www.fema.gov/media-library-data/1425992150044-22337affef725b5f9d5fd8c7e9167ad8/ICS_Forms_508_12-7-10.pdf)

[data/1425992150044-](http://www.fema.gov/media-library-data/1425992150044-22337affef725b5f9d5fd8c7e9167ad8/ICS_Forms_508_12-7-10.pdf)

[22337affef725b5f9d5fd8c7e9167ad8/ICS_Forms_508_12-7-10.pdf](http://www.fema.gov/media-library-data/1425992150044-22337affef725b5f9d5fd8c7e9167ad8/ICS_Forms_508_12-7-10.pdf)

National Interagency Fire Center (NIFC): www.nifc.gov

National Interagency Incident Communications: www.fs.fed.us/fire/niicd

National Interoperability Information Exchange (NIIX): www.niix.org

National Regional Planning Council (NRPC) www.nrpc.us

National Response Framework Resource Center

<http://www.fema.gov/emergency/nrf/>

National Telecommunications & Information Admin (NTIA):

<http://www.ntia.doc.gov>

National Wildfire Coordinating Group (NWCG): www.nwcg.gov

NIFOG: www.safecomprogram.gov/SAFECOM/nifog

NIMS Information: www.fema.gov/emergency/nims

National Public Safety Communications Council (NPSTC): www.npstc.org

Radio Reference: www.radioreference.com

SAFECOM: www.safecomprogram.gov

Wildland Fire Communications: www.fireradios.net

Wireless Priority Service (WPS): wps.ncs.gov

Interoperable Communications “Watch Out” Situations

- Inadequate or no communication with crew members or supervisor.
- Users unfamiliar with radio system(s) or assigned radio functionality.
- Organizations in the system do not use the same vocabulary or terminology.
- Multiple conversations on the same talk-group or channel.
- Unable to communicate critical information due to radio congestion.
- High level of background noise (i.e. wind, generators, and power tools).
- Working in the deep interior of a building, parking garage, or underground.
- A single Communications Unit Leader has not been designated.
- Instructions and assignments for Comm Unit are not clear.
- Inadequate number of tactical channels available or assigned.
- Incident is using radio frequencies in more than one radio band.
- Multiple agencies performing radio programming at the incident.
- Different radio bands being used via console or gateway patch.
- Gateways must be monitored for problems such as “stuck keys”, intermodulation, etc.
- Multiple mobile gateways available at the incident.
- Mobile gateway devices being used in a strategic (wide-area) rather than tactical (local) environment.
- Dispatch to dispatch channel patching.

Appendix H: Cross-Border Operation of Portable Radios

STATEMENT OF INTENT OF THE FEDERAL COMMUNICATIONS COMMISSION OF THE UNITED STATES OF AMERICA AND THE DEPARTMENT OF INDUSTRY OF CANADA RELATED TO THE CROSS-BORDER OPERATION OF PORTABLE RADIOS BY PUBLIC SAFETY AGENCIES ALONG THE UNITED STATES-CANADA BORDER

Considering that discussions have taken place between the Federal Communications Commission and the Department of Industry of Canada (Industry Canada) (hereafter the "Agencies") on improving cross-border public safety communications in areas along the United States-Canada border;

Considering that Article II of the 1952 *Convention between Canada and the United States of America relating to the Operation by Citizens of either country of certain Radio Equipment or Stations in the Other Country* (the Convention) permits certain cross-border communications by mobile radio stations installed in public safety vehicles;

Considering that public safety mobile communications have evolved since the Convention was drafted and now include the operation of portable radio units¹ (not limited to operation within public safety vehicles) that were not envisioned at the time the Convention was ratified;

Considering that public safety licensees are those that protect safety of life, health or property (e.g. police, fire and emergency medical services) as described by the Agencies in their relevant

rules;

Taking the above into account, the Agencies intend to allow the use of portable radio units by public safety licensees of either country. Furthermore, the Agencies recognize that in the April 15, 1991 Exchange of Letters between the Department of Communications (now Industry Canada) and the Federal Communications Commission, the Agencies concurred to suspend the requirement under the 1952 Convention for the registration and the issuance of a permit to terrestrial mobile radio units operating in the other country, provided such mobiles are under the control of a properly licensed terrestrial station in the country in which they are operating. Similarly, the agencies do not intend to require registration or the issuance of a permit for the operation of mobile or portable radio units by public safety licensees of either country, regardless of whether or not these radio units are under the control of a terrestrial station in the country in which they are operating, provided such radio units are properly licensed in their country of origin.

This document may be found at:

<https://transition.fcc.gov/ib/sand/agree/files/CBPSC.pdf>

The 1952 Convention and Letters amending it may be found at:

https://transition.fcc.gov/ib/sand/agree/can_nonbroad_agree.html

