	Strategy	WHERE - Affected Locations or Groups	WHO - Responsible Parties (Lead entities are in **Bold** font)	HOW - Resources	WHEN - Timeframe (Years)	PRIORITY TYPE (High, Med, or Low)	Hazardous Materials: Fixed Site Incident	Hazardous Materials: Transportation Incident	Oil and Gas Accidents (well and pipeline)	Structure Fires	Scrap Tire Fires	Major Transportation Incidents (air, highway, marine)	Energy Failures and Shortages (electric, natural gas, petroleum)	Built Infrastructure Failures (water, sewer, trails, roads, bridges, communications)	Built Infrastructure Failure (dams)	Public Health Emergencies (contagions, food and water contamination)	Cyberattacks and Major Network Disruptions	Terrorism and Similar Critical Incidents	Civil Disturbance	Nuclear
							Technological Hazards - Industrial					Technological Hazards - Infrastructure				Human-Related Hazards				
1	**Continue providing public education and school programs which encourage the development of a Site Emergency Plan for public buildings, a Family Disaster Plan for private households, and the preparation of a Disaster Supplies Kit.**	Countywide	**EM Coordinator**; First Responders; County Building Inspector																	
2	**Continue to pursue opportunities for brownfield and blight clean-up activities,** including demolition and clearance of vacant, condemned structures, **to remove actual and potential sources of land, water and air contamination, and reduce incidents of arson.**	Countywide	**Emmet County Brownfield Redevelopment Authority**; Local Governments				X			X	X							X	X	
3	**Pass and enforce local ordinances regarding chemical storage, spill protection** for areas where storage and use of hazardous materials is taking place, including but not limited to the storage of old motor vehicles.						X													
4	**Educate the public about the storage and disposal of hazardous chemicals.** Emmet County DPW provides public education on this through the promotion of their services, including their Household Chemical Drop-off Program.						X													
5	**Consider partnering with local disposal companies for hazardous waste drop off days.** Emmet County DPW offers two household hazardous waste collection days per year.						X													
6	**Encourage and educate residents who have buried underground storage tanks to have them removed and/or pumped out and filled.**						X													
7	Compliance with and enforcement of the Resource Conservation and Recovery Act (RCRA), SARA Title III, and other regulations.						X													
8	Compliance with all industrial, fire, and safety regulations.						X													
9	Proper separation and buffering between industrial areas and other land uses.						X													
10	Location of industrial areas away from schools, nursing homes, etc.						X													
11	Public warning systems and networks for hazardous material releases.						X													
12	Increased coverage and use of NOAA Weather Radio (which can provide notification to the community during any period of emergency, including large-scale hazardous material incidents).						X													
13	Enhanced facility security.						X													
14	Elimination of clandestine methamphetamine laboratories through law enforcement and public education.						X													
15	Insurance coverage.						X													
16	Additional traffic control or new designs/routing for roadway areas that demonstrate a need for improvement.							X												
17	Long-term planning that provides more connector roads for reduced congestion of arterial roads.							X												
18	Public warning systems and networks for notification of hazardous materials incidents.							X												
19	Increased coverage and use of NOAA Weather Radio, which can provide notification to the community during any period of emergency, including large-scale hazardous material incidents.							X												

	Strategy	WHERE - Affected Locations or Groups	WHO - Responsible Parties (Lead entities are in **Bold** font)	HOW - Resources	WHEN - Timeframe (Years)	PRIORITY TYPE (High, Med, or Low)	Technological Hazards - Industrial					Technological Hazards - Infrastructure				Human-Related Hazards				
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20	Locating schools, nursing homes, and similar facilities away from major hazardous materials routes.							X												
21	Proper planning, design, maintenance, and enhancements to designated truck routes.							X												
22	Railroad inspections and maintenance at railway/roadway grade crossings, along with the use of effective signs/signals in deficient areas (such as at rural railroad crossings).							X												
23	Locating pipelines away from dense development, critical facilities, special needs populations, and environmentally vulnerable areas whenever possible. Mitigation possibilities include the use of community zoning regulations to provide suitable open, unoccupied "buffer" areas around pipelines, storage fields, refineries, and compressor stations.								X											
24	Increasing public awareness and widespread use of the "MISS DIG" utility damage prevention service (800-482-7171).								X											
25	Proper pipeline design, construction, maintenance, and inspection.								X											
26	Using buffer strips to segregate wells, storage tanks, and other production facilities from transportation routes and adjacent land uses, in accordance with state regulations and consistent with the level of risk.								X											
27	Building designs that include the use of firewalls and automatic sprinkler systems (especially in tall buildings, dormitories, attached structures, and special facilities).									X										
28	Fire codes and enforcement.									X										
29	The installation and routine maintenance of smoke alarms. Smoke alarms are recommended on each level of a home, in addition to each bedroom (tested monthly, with batteries changed twice each year).									X										
30	Proper installation and maintenance of heating systems (especially those requiring regular cleaning, those using hand-loaded fuels, such as wood, or using concentrated fuels, such as liquid propane).									X										
31	Safe use and maintenance/cleaning of fireplaces and chimneys (with the use of spark arresters and proper storage of flammable items). Inspect chimneys at least twice a year and clean them at least once a year.									X										
32	Safe installation, maintenance, and use of electrical outlets and wiring.									X										
33	Measures to reduce urban blight and effective anti-arson programs.									X	X									
34	Defensible space around structures in fire-prone wildland areas that lead up to structures.									X										
35	Proper maintenance of power lines and efficient response to fallen power lines.									X										
36	Transportation planning that provides roadways and other infrastructure to maximize emergency access and response times to all developed areas of a community.									X										
37	Enforced fireworks regulations.									X										
38	Elimination of methamphetamine laboratories through law enforcement and public education.									X										
39	Obtaining fire insurance.									X										

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							Technological Hazards - Industrial					Technological Hazards - Infrastructure				Human-Related Hazards				
40	Improved design, routing, and traffic control at problem roadway areas.											X								
41	Railroad inspections and improved designs at problem railway/roadway intersections (at grade crossings, as well as signs/signals at rural railroad crossings.											X								
42	Long-term planning that provides more connector roads for reduced congestion of arterial roads.											X								
43	Use of designated truck routes.											X								
44	Use of ITS (intelligent transportation systems) technology.											X								
45	Airport maintenance, security, and safety programs.											X								
46	Burying electrical lines, where appropriate, to resist damage from severe winds, lightning, ice, and other hazards.												X							
47	Energy portfolios based on a diverse mix of generation sources (e.g., natural gas, solar, wind, nuclear).												X							
48	Generation or purchase of energy when prices are low and storage is available/feasible.												X							
49	Expanded consideration of distributed generation programs, such as net metering.												X							
50	Energy efficiency and architectural designs that reduce energy needs, such as Leadership in Energy and Environmental Design (LEED) certified buildings.												X							
51	Facility capacity to use more than one type of fuel to sustain necessary operations and functions.												X							
52	Provision of backup supply systems and redundancies.												X							
53	Maintaining proper levels of PPE for healthcare workers and first responders, with additional supplies for long-term care facilities.																			
54	Immunization programs to vaccinate against communicable diseases.																			
55	Improving ventilation techniques in areas, facilities, or vehicles that are prone to crowding or that may involve exposure to contagion or noxious atmospheres.																			
56	Maintaining community water and sewer infrastructure at acceptable operating standards.																			
57	Providing back-up generators for water and wastewater treatment facilities to maintain acceptable operating levels during power failures.																			
58	Demolition and clearance of vacant condemned structures.																			
59	Adequate community clinics and school health services.																			
60	Brownfield and urban blight clean-up activities.										X									
61	Proper location, installation, cleaning, monitoring, and maintenance of septic tanks.																			
62	Separation of storm and sanitary sewer systems.																			
63	Spraying programs to properly control mosquito populations.																			
64	Updated Continuity of Operations (COOP) plans and alternative “work from home” schedules.																			
65	Use of professional cybersecurity experts.																X			
66	Proper oversight of third party/vendor system access.																X			
67	Use of firewalls and anti-virus software.																X			
68	Use of Virtual Private Networks (VPNs).																X			
69	Frequent computer operating system updates/program versions/firmware updates/software patches.																X			

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							Technological Hazards - Industrial					Technological Hazards - Infrastructure				Human-Related Hazards				
70	Effective password management (removal of default passwords, strong passwords, rotating passwords).																X			
71	Use of two-factor authentication or biometrics for computer or program access.																X			
72	Employee training on proper computer hygiene, particularly the treatment of outside emails.																X			
73	Consistent use of computer data back-up systems with secure offsite storage as appropriate.																X			
74	Use of uninterruptible battery supplies (UPS) and/or generators.																X			
75	Manual process plans in the case of complete network failure.																X			
76	Designated fallout shelters and public warning systems.																			X
77	Construction of concrete safe rooms (or shelters) in houses, trailer parks, community facilities, and business districts.																			X
78	Using laminated glass, metal shutters, structural bracing, and other hazard-resistant, durable construction techniques in public buildings and critical facilities.																	X	X	X
79	Increased coverage and use of NOAA Weather Radio (which can provide notification to the community during any period of emergency, including enemy attack).																			X
80	Layout design options for consideration for schools, factories, office buildings, shopping malls, hospitals, correctional facilities, stadiums, etc. that take into consideration emergency and security needs.																	X	X	
81	Utilizing established avenues of reporting, such as the state Suspicious Activity Reporting system, MichTip, via phone, website, or mobile application for information preventing terrorist incidents and sabotage.																	X		
82	Strong community relations with law enforcement.																		X	
83	Volunteers and participant cooperation to monitor events and encourage peaceful conditions.																		X	
84	Social media presences designed to counter inaccurate or intentionally misleading information, along with public education geared towards developing skills for recognizing poor sources of information.																		X	
85	Blight reduction and neighborhood upkeep strategies in combination with anti-arson practices.										X								X	
86	Structure and property insurance in high risk areas.																		X	

HAZARDOUS MATERIALS FIXED SITE INCIDENTS - Select Laws, Agencies, or Programs

Superfund Amendments and Reauthorization Act (SARA), Title III

The emergency planning provisions of SARA Title III require each state to establish a State Emergency Response Commission (SERC, see below), emergency planning districts, and a Local Emergency Planning Committee (LEPC, see below) for each district to ensure that the public can access information on the hazardous materials stored in their communities (as well as the quantities of any such material releases). Affected facilities must send "Tier II" hazardous substance reports to the SERC, LEPCs, EGLE and local fire departments. The SERC and LEPCs are responsible for preparing and implementing emergency plans, as well as disseminating copies of material safety data sheets, chemical inventories, and other reports and forms necessary for compliance under the Act. In Michigan, the SARA Title III program is jointly administered and implemented by MSP and EGLE.

Michigan Citizen-Community Emergency Response Coordinating Council

The Michigan Citizen-Community Emergency Response Coordinating Council (MCCERCC) is the name for the state's official SERC under SARA Title III. The MCCERCC consists of 19 members appointed by the Governor, with membership including several state agencies, local government, various groups, and the general public. It works in conjunction with LEPCs and is divided into the Citizen's Corps Committee, the Hazard Mitigation Committee, and the Emergency Planning and Community Right to Know Committee.

Local Emergency Planning Committees

Local Emergency Planning Committees (LEPCs) are designated planning districts responsible for developing emergency response plans for communities that have facilities in their jurisdiction subject to SARA Title III emergency planning requirements. The LEPC is the primary mechanism through which local SARA Title III planning, training. and exercising activities are implemented. A facility is subject to SARA Title III provisions if extremely hazardous substances (as determined by the U.S. Environmental Protection Agency) are present at the facility in quantities at or above the minimum threshold quantities established in Section 302 of the Act. The map at the end of this section provides a breakdown of Title III (Section 302) sites by county.

Hazardous Material Response Planning

Each Section 302 site must be covered by a community response plan that addresses the emergency planning requirements of SARA Title III. Inclusion of Michigan Firefighter Right-to-Know provisions of the Michigan Occupational Health and Safety Act (1986 PA 80) is also encouraged in the planning guidance provided by MSP/EMHSD. Assistance typically includes provision of written planning guidance, interaction with the planning team, plan reviews, and limited financial assistance (via federal grant funds) to offset the costs of preparing the plans. Each plan must address the following critical areas: 1) hazard identification (to include chemical inventories, locations, release detection, and chemical-specific response information); 2) vulnerability map and analysis (to include a vulnerability zone, special populations affected, and other facilities and areas that may contribute to risk); 3) population protective actions (to include warning, access control, evacuation and in-place sheltering); 4) response procedures (to include both on-site and off-site expertise and equipment); and 5) a training and plan exercising program. Plans are reviewed and commented on by MCCERCC, with EGLE and MDARD providing technical assistance in the areas of community-right-to-know, material safety data sheets, chemical inventories, incident reporting, and (on a limited basis) incident cleanup.

Hazardous Material Response Training

MSP/EMHSD provides hazardous material response training programs through the Emergency Management and Homeland Security Training Center (EMHSTC). The EMHSTC provides training courses for individuals and companies responsible for planning, inspection, response, mitigation, and cleanup activities involving hazardous materials. Specific subjects include: 1) Hazmat Technician Program (Pro Board certified); 2) hazardous materials chemistry; 3) hazardous materials emergency response; 4) hazardous waste worker compliance; 5) incident management; and 6) other specialized hazardous materials-related courses such as highway and rail cargo tanker and storage tank handling. Many courses are conducted with simulation aids available in the EMHSTC Training Yard. Some mobile courses are available.

Federal/State Hazardous Material Response Resources

Groups include the National Response Team (NRT), Regional Response Teams (RRTs), and state and local hazardous material response teams. The Chemical Manufacturers Association established the Chemical Transportation Emergency Center (CHEMTREC) to provide 24-hour technical advice to emergency responders. The National Response Center (NRC), which operates much like CHEMTREC, was established to provide technical advice and to coordinate federal response to a hazardous material incident. In Michigan, a 24-hour statewide notification system called the Pollution Emergency Alerting System (PEAS) was established for reporting chemical spills directly to EGLE.

State Fertilizer and Pesticide Regulation

Regulations for these products are governed in part by the Michigan's Natural Resources and Environmental Protection Act (NREPA), Act 451 of 1994. Michigan's Fertilizer Program and Pesticide Program give broad consideration to not just farming but also sites such as golf courses and lawns. Excessive fertilizer run-off into waters can lead to harmful algal blooms. MDARD oversees several mitigation initiatives and has established a 24-hour Agriculture Pollution Emergency Hotline for reporting fertilizer and pesticide spills.

U.S. EPA Chemical Emergency Preparedness and Prevention Office (CEPPO)

CEPPO provides assistance to states, local governments, and private industry to: 1) prevent and prepare for chemical emergencies; 2) respond to environmental crises; and 3) inform the public about chemical hazards that may be present in their community. The CEPPO works closely with several Michigan state agencies to implement and coordinate a number of regulatory and non-regulatory programs designed to protect human health and the environment in Michigan from chemical accidents, including the SARA Title III program.

Chemical Awareness Week

This annual public information campaign focuses on: 1) the hazards associated with the manufacture, transport, storage, use, and disposal of chemicals; 2) the programs and systems in place to protect the public from accidental chemical releases; and 3) community emergency response procedures for chemical incidents.

HAZARDOUS MATERIAL TRANSPORTATION INCIDENTS - Select Laws, Agencies, or Programs

Federal Hazardous Material Transportation Regulations

The Pipeline and Hazardous Materials Safety Administration (PHMSA), Office of Hazardous Materials Safety (OHMS), carries out a national safety and security program to protect against life and property risks inherent in the transportation of hazardous materials by all transportation modes. In addition to enforcing regulations, other OHMS programmatic areas include: research and development for improved containment/packaging, interagency coordination efforts in setting hazardous material transportation standards, management of data information systems pertaining to hazardous material transportation, and the development of safety training policies and programs. Regulations specify the type and size of containers utilized for shipping hazardous material, labels that must be on containers, placards for carrying vessels, and material quantities and loading requirements. Many materials are assigned a unique four-digit identification number that is located on the placard or container. The regulations also require a company involved with hazardous transport to maintain a manifest for material quantity, origin, and destination. Emergency contact numbers must be maintained in case of accidental release.

Hazardous Materials Transportation Uniform Safety Act

The federal Hazardous Materials Transportation Uniform Safety Act (HMTUSA) provides funding for the training of emergency responders and the development of emergency response plans for both fixed site facilities and transportation-related incidents. This funding mechanism under the HMTUSA is referred to as Hazardous Material Emergency Preparedness (HMEP) grants. In Michigan, the HMTUSA/HMEP program is coordinated and implemented by the Michigan State Police, Emergency Management and Homeland Security Division.

Hazardous Material Response Training

The Michigan State Police, Emergency Management and Homeland Security Division provides a wide array of hazardous material response training programs through the Emergency Management and Homeland Security Training Center (EMHSTC). The EMHSTC provides training courses for individuals and companies responsible for planning, inspection, response, mitigation, and cleanup activities involving hazardous materials. Specific subjects include: 1)Hazmat Technician Program (Pro Board certified); 2) hazardous materials chemistry; 3) hazardous materials emergency response; 4) hazardous waste worker compliance; 5) incident management; and 6) other specialized hazardous materials-related courses, such as highway and rail cargo tanker and storage tank handling. Many courses are conducted onsite in Lansing due to the unique simulation aids available in the EMHSTC Training Yard, but there are some mobile courses available as well.

Federal/State Hazardous Material Response Resources

There are numerous groups at the federal, state, and local levels, and in private industry that are trained to deal with hazardous material fixed-site and transportation incidents. These groups include the National Response Team (NRT), the Region 5 Regional Response Teams (RRT), and state and local hazardous material response teams. The American Chemistry Council established the Chemical Transportation Emergency Center (CHEMTREC) to provide 24-hour technical advice to emergency responders. The National Response Center (NRC), which operates much like CHEMTREC, was established to provide technical advice and coordinate the federal response to a hazardous material incident. In Michigan, a 24-hour, statewide notification system called the Pollution Emergency Alerting System (PEAS) was established for reporting chemical spills to the Michigan Department of Environmental, Great Lakes, and Energy. As a companion to the PEAS, the Michigan Department of Agriculture and Rural Development (MDARD) has established a 24-hour Agriculture Pollution Emergency Hotline for use by agri-chemical users to report fertilizer and pesticide spills. Callers to the MDARD hotline gain immediate access to appropriate technical assistance and regulatory guidance.

U.S. EPA Chemical Emergency Preparedness and Prevention Office (CEPPO)

The U.S. Environmental Protection Agency's CEPPO provides leadership, advocacy and assistance to states, local governments, and private industry to: 1) prevent and prepare for chemical emergencies; 2) respond to environmental crises; and 3) inform the public about chemical hazards that may be present in their community. The CEPPO works closely with several Michigan state agencies to implement and coordinate a number of regulatory and non-regulatory programs designed to protect human health and the environment in Michigan from chemical incidents, including the SARA Title III program.

National Transportation Safety Board (NTSB)

The NTSB investigates all significant transportation incidents that occur nationwide and issues safety recommendations (to the transporter and to government regulators) aimed at preventing future incidents. Examples of such Michigan incidents include the November 15, 2001 freight train incident in Springfield Township, the June 4, 1999 cargo transfer incident in Whitehall, the September 16, 1990 Jupiter tanker fire in Bay City, the July 22, 1989 train derailment in Freeland, and an August 2, 1975 propane pipeline incident in Romulus. The NTSB also publishes a list of suggested safety improvements on its "most wanted" page.

Transportation Community Awareness and Emergency Response (TRANSCAER)

TRANSCAER is an industry outreach program coordinated by the American Chemistry Council and Michigan Chemistry Council to address hazardous material transportation concerns. The program offers free resources for hazmat and emergency response training, as communities develop their own emergency response plans.

OIL AND GAS PIPELINE HAZARDS - Select Laws, Agencies, or Programs

Pipeline and Hazardous Materials Safety Administration (PHMSA), Office of Pipeline Safety (OPS)
The Pipeline and Hazardous Materials Safety Administration (PHMSA), part of the U.S. Department of Transportation, is the nation's chief administrator for pipeline safety and hazardous materials transportation safety operations. The Pipeline Safety Improvement Act of 2002 requires each pipeline operator to prepare and implement an integrity management program that requires operators to identify High Consequence Areas (HCAs) on their systems and to conduct associated risk analysis. Companies are required to identify all HCAs and submit specific integrity management programs to the PHMSA's Office of Pipeline Safety (OPS), among others. Because of the complexity of HCAs for hazardous liquid pipelines, the OPS identifies and maps HCAs for hazardous liquids on its National Pipeline Mapping System (NPMS). These maps are revised periodically by OPS based on new and updated information.

Additional pipeline safety requirements are contained in the Federal Safety Standards (Parts 191, 192, 193 and 195), as administered by the PHMSA/OPS. Interstate gas and liquid petroleum pipeline operators must develop and maintain written emergency procedures similar to those required under the Michigan Gas Safety Standards (see below). In addition, they are required to coordinate both planned and actual response actions with local officials and response agencies. Part 195 contains a continuing education requirement to keep the public informed about risks associated with the transportation of hazardous liquids via pipeline

Michigan Jurisdiction and Oversight
Pipeline jurisdiction and oversight in Michigan is complex, determined primarily by the type and function of a pipeline and its location. Agencies involved include the (1) Michigan Public Service Commission (MPSC), (2) Michigan Department of Environment, Great Lakes, and Energy (EGLE) and their Oil, Gas, and Minerals Division (OGMD), and (3) the federal PHMAS/OPS.

Pipeline Safety Regulation in Michigan P

Pipeline Type	Jurisdiction	Applicable Code	Inspected By
Inter-state Natural Gas	PHMSA	49 CFR Part 192	MPSC
Intrastate Natural Gas	MPSC	Michigan Gas Safety Standards	MPSC
Liquid Petroleum	PHMSA	49 CFR Parts 193/195	PHMSA
Gathering Lines*	MPSC/EGLE/OGMD	Oil/Gas Administrative Rules under PA 451 (1994) & PA 165 (1969)	MPSC/EGLE/OGMD

Michigan Gas Safety Standards
Pipeline operators are regulated under the Michigan Gas Safety Standards, Act 165 (1969) and its implementing Administrative Rules (the Michigan Gas Safety Standards) to help ensure public safety. Gas pipeline companies (operators) must develop and maintain written procedures to minimize the hazards resulting from a gas pipeline emergency. The procedures in general require the identification and classification of any events, notification/coordination with local response agencies and public officials, response plans (including emergency shutdown and pressure reduction procedures), and processes associated with the restoration of services. Operators must ensure that personnel are properly trained regarding emergency procedures. If an incident occurs, the operator must review

response actions to determine whether procedures were followed and, if necessary, take samples of failed equipment for laboratory examination. Mitigation actions are taken as necessary to help minimize recurrence.

MPSC Pipeline Safety Inspections

MPSC safety engineers are certified to conduct inspections on natural gas pipelines to ensure their structural and operational integrity. If violations are found, the pipeline company can be ordered to take corrective actions and face fines. MPSC safety engineers also respond to incidents involving natural gas or other gas pipelines.

National Transportation Safety Board

The National Transportation Safety Board (NTSB) investigates all significant pipeline accidents in the U.S. and provides pipeline company and government regulators with safety recommendations aimed at preventing future accidents. The NTSB also publishes a list of "most wanted" safety improvements for pipelines and other modes of transportation for nationwide implementation by appropriate entities. Although these safety improvement recommendations are not mandatory and the NTSB has no regulatory or enforcement powers, it nonetheless has been successful in getting more than 80 percent of its recommendations adopted. Many safety features currently incorporated into pipelines and other transportation modes had their genesis in NTSB recommendations.

The Protection of Underground Facilities Act / MISS DIG Program

Michigan's first line of defense against pipeline (and other utility line) breaks from construction excavation is the "MISS DIG" 811 Program. The free 24-hour phone and utility communications system helps contractors comply with state law (Act 53) that requires the notification of utilities at least three working (but not more than 21 calendar) days before starting the excavation, tunneling, demolishing, drilling/boring, or use of explosive charges for a project.

American Petroleum Institute (API) Recommended Practice (RP) 1162

The API Recommended Practice (RP) 1162, "Public Awareness Programs for Pipeline Operators" has regulations for pipeline operators to provide public information about how to recognize, respond to, and report pipeline emergencies. The importance of using the one-call notification system prior to excavation is to be emphasized for all stakeholders. Emergency officials and local public officials must be provided with information about the location of transmission pipelines to enhance emergency response and community growth planning.

Michigan Propane Gas Association (MPGA) and Michigan Oil and Gas Association (MOGA)

The MPGA is a trade and membership service organization that represents propane marketers throughout the state. The MPGA's primary purpose is to maintain high standards of practice within the industry and, in so doing, protect and expand the ability of its members to compete in the marketplace.

The MOGA is a trade association representing oil and natural gas interests within the state. Members include major oil companies, independent oil companies, and the exploration arms of various utility companies. The organization works with the public on any ongoing issues in the field. It has a useful education page with industry fact sheets.

Nonprofit Pipeline Safety Organizations

There are several nonprofit organizations and agencies that provide information encouraging pipeline safety in Michigan. These organizations can work to educate the public by organizing meetings, seminars, and workshops to improve pipeline reliability, operational efficiency, and the regulatory environment. These organizations can support the safe delivery of pipeline products; research pipeline operational problems; act as a common ground forum where members can discuss and seek solutions to industry problems; promote underground facilities, damage prevention, and implementation of damage prevention best practices to all stakeholders; and represent industry interests before Congress, federal agencies, and other energy-related stakeholders by developing regulatory and legislative policies. These particular organizations include the National Association of Pipeline Safety Representatives (NAPSR), Association of Oil Pipe Lines (AOPL), American Public Gas Association (APGA), Pipeline Research Council International, Inc. (PRCI), and the Common Ground Alliance (CGA).

Interstate Oil and Gas Compact Commission (IOGCC)

Michigan is a member of Interstate Oil and Gas Compact Commission (IOGCC) that represents the governors of oil and natural gas producing states. In 1935, six states endorsed, and Congress ratified, the Interstate Compact to Conserve Oil and Gas, resulting in the formation of the unique governmental entity now known as the Interstate Oil and Gas Compact Commission. The IOGCC has helped states to establish effective regulation of the oil and natural gas industry through the sharing of information, technologies, and regulatory methods. The IOGCC advocates for environmentally sound ways to increase the supply of American energy. This can be accomplished by providing governors of member states with a clear and unified voice to Congress, while also serving as the authority on issues surrounding these vital resources.

Michigan Oil and Gas Producers Education Foundation (MOGPEF)

MOGPEF assists in supporting educational projects and programs about the industry. It is a tax-exempt organization under Section 501(c) (6) of the United States Internal Revenue Service code. Its mission is to provide financial support for programs that will inform the people of Michigan about the importance of the local oil and natural gas industry and about the environmental safeguards that are employed. Materials and programs developed by MOGPEF are available for use by members of petroleum, energy, and allied industries and by the general public.

STRUCTURE FIRE HAZARDS - Select Laws, Agencies, or Programs

Michigan Fire Prevention Act

The Michigan Fire Prevention Act (1941 PA 207), the state's primary fire enabling legislation, provides for the prevention of fires and the protection of persons and property from exposure to the dangers of fire and explosion. The Act gives the State Fire Marshal (Michigan Department of Licensing and Regulatory Affairs) and local fire chiefs broad authority to take actions necessary to prevent fires and stop the spread of fires once they have started. This includes: 1) requiring the razing, repair, alteration or improvement of buildings and premises that constitute a fire hazard; 2) controlling the use and occupancy of such buildings and premises; and 3) engaging in public education activities aimed at preventing or mitigating the effects of fire and explosion.

Michigan Department of Licensing and Regulatory Affairs

The Michigan Department of Licensing and Regulatory Affairs (LARA) conducts a number of important fire-related initiatives, including: 1) statewide public education programs aimed at preventing fires; 2) investigating fires, explosions and hazardous material incidents; 3) collecting, compiling, and analyzing fire-related data (through the National Fire Incident Reporting System) to determine fire frequency, causes, and impacts; and 4) membership organizations for fire fighters and fire chiefs. LARA's Michigan Fire Fighters Training Council also develops standards for firefighter selection and training, instructor requirements, courses of study, and evaluation. LARA's public education outreach program, MI Prevention, provides fire safety tips, escape plan templates, and other prevention/mitigation resources.

Michigan's Bureau of Fire Services

The Bureau of Fire Services is responsible for conducting fire safety and prevention inspections in state-regulated and other certain facilities. Services include: 1) fire safety inspections of adult foster care; correctional and health care facilities, and hotels/motels; 2) plan review and construction inspections of the regulated facilities in item (1), as well as schools, colleges, universities, and school dormitories; 3) coordination of fire inspector training programs; and 4) coordination of fire alarm and fire suppression system installation in regulated facilities. These important mitigation activities are designed to save lives and protect property from structure fire hazards. The Bureau of Fire Services also works in conjunction with State Fire Safety Board and Bureau of Construction Codes to promulgates rules covering the construction, operation, and maintenance of schools, dormitories, health care facilities, and correctional facilities.

National Fire Protection Association

The National Fire Protection Association (NFPA) conducts research on fires, develops codes and standards for fire prevention and protection, and disseminates fire safety information to fire departments and the public. A consensus standards development system resulted in the creation and maintenance of the National Fire Codes, over 300 codes and standards covering all areas of fire safety. Used throughout the world, virtually every building and construction process in place today is affected, in one way or another, by the codes and standards developed through the NFPA system.

U.S. Fire Administration

Established by P.L. 93-498, the Federal Fire Prevention and Control Act of 1974, the U.S. Fire Administration (USFA) provides leadership, coordination and support for the nation's fire prevention and control, fire training and education, and emergency medical services activities. The USFA, a branch

of the federal Department of Homeland Security, conducts training for firefighters through the National Fire Academy (NFA), located in Emmitsburg, Maryland. Many Michigan firefighters have attended those training courses. In addition, the USFA administers a number of national fire programs aimed at fire prevention, with a particular emphasis on structural fire prevention. The USFA also supports the National Fire Incident Reporting System (NFIRS), administered and implemented in Michigan by the State Fire Marshal (Department of Licensing and Regulatory Affairs). The NFIRS data is used by the State Fire Marshal and other state and local fire agencies to assess and combat the fire problem in Michigan.

SCRAP TIRE FIRE HAZARDS - Select Laws, Agencies, or Programs

Scrap Tire Advisory Committee (STAC)

The STAC was created by the Waste and Hazardous Materials Division of EGLE to foster interaction between the department and other stakeholders to continually improve the state's scrap tire program (administered under Part 169 of the Natural Resources and Environmental Protection Act). STAC Annual Reports and a Michigan map for scrap tire sites can be found on the STAC's webpage.

BUILT INFRASTRUCTURE FAILURE HAZARDS - Select Laws, Agencies, or Programs

Water Distribution Systems

Michigan's public water supplies are regulated under the Federal Safe Drinking Water Act. The Michigan Department of Environment, Great Lakes, and Energy (EGLE) provides supervision and control of Michigan's public water supplies (including their operation and improvements) under the Michigan Safe Drinking Water Act (1976 PA 399). The Drinking Water and Radiological Protection Division of EGLE regulates, through a permit process, the design, construction, and alteration of public water supply systems. Water supply construction must be conducted within the framework of the Michigan Safe Drinking Water Act, as well as the Architecture, Professional Engineering and Land Surveying Act (1937 PA 240). Most communities in Michigan have developed water system master plans that conform to the requirements of the Michigan Safe Drinking Water Act.

Wastewater Collection and Treatment Systems

The Federal Clean Water Act regulates discharge from community wastewater collection and treatment systems. The regulatory aspects of the Act that pertain to municipalities have been delegated to the EGLE Surface Water Quality Division (for surface water discharge facilities) and the EGLE Waste Management Division (for groundwater discharge facilities). Authority for the oversight of planning, design review, and construction permitting of sewage systems and treatment facilities, is derived primarily from Part 41 of the Michigan Natural Resources and Environmental Protection Act (1994 PA 451). EGLE monitors and assists local communities with the development and maintenance of their wastewater collection and treatment systems.

Surface Water Drainage Systems

The Michigan Drain Code provides for the maintenance and improvement of a vast system of county and inter-county drainways to help prevent flooding. Each drain is part of a tax assessment district, and new drains can be established by a petition of the affected landowners and/or municipalities. County drains, with a special assessment district entirely within a county, are administered by the locally elected county drain commissioner. Inter-county drains are administered by a larger drainage board. Drains may be constructed of large pipes ranging in size from 12–16 inches in diameter, while others are simple open ditches that may be dry during part of the year. Floodwater-retarding dams, flood pumps, erosion control structures, and storage basins may also be used. Natural retention ponds are sometimes incorporated into parks or use to create natural areas for wildlife.

U.S. Army Engineer Research and Development Center (ERDC)

As part of the Army Corps of Engineers, the ERDC's mission is to provide scientific knowledge, technology, and expertise in engineering and environmental sciences to support the Armed Forces in their missions. ERDC laboratories collaborate to address research in five major areas, including water resources, and is leading a collaborative effort to address the legacy issues of PFAS contamination at military installations. ERDC has a featured service section specifically dealing with infrastructure-related issues, including programs to benefit sewer and water pipelines such as the Concrete Technology Information Analysis Center (CTIAC), High-Performance Materials and Systems Selection, Materials Testing Center (MTC), and the Soil Mechanics Information Analysis Center (SMIAC).

MAJOR TRANSPORTATION INCIDENTS- Select Laws, Agencies, or Programs

National Transportation Safety Board (NTSB)
The NTSB is an independent federal agency responsible for promoting aviation, highway, railroad, marine, and hazardous materials transportation safety. It is mandated to investigate significant transportation events, determine their probable cause, issue safety recommendations, and evaluate the effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through incident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

Although the NTSB has no regulatory or enforcement powers, it has nonetheless been successful in seeing the adoption and implementation of the majority of its recommendations. A past example of an implemented recommendation was the agreement between the Federal Aviation Administration (FAA) and the Boeing Aircraft Company to redesign and replace the rudder system for their entire fleet of 737 jetliners. The retrofit program cost Boeing nearly one-quarter of a billion dollars. The rudder system had come under the scrutiny of the NTSB after crashes of 737s in 1991 and 1994 resulted in over 150 fatalities.

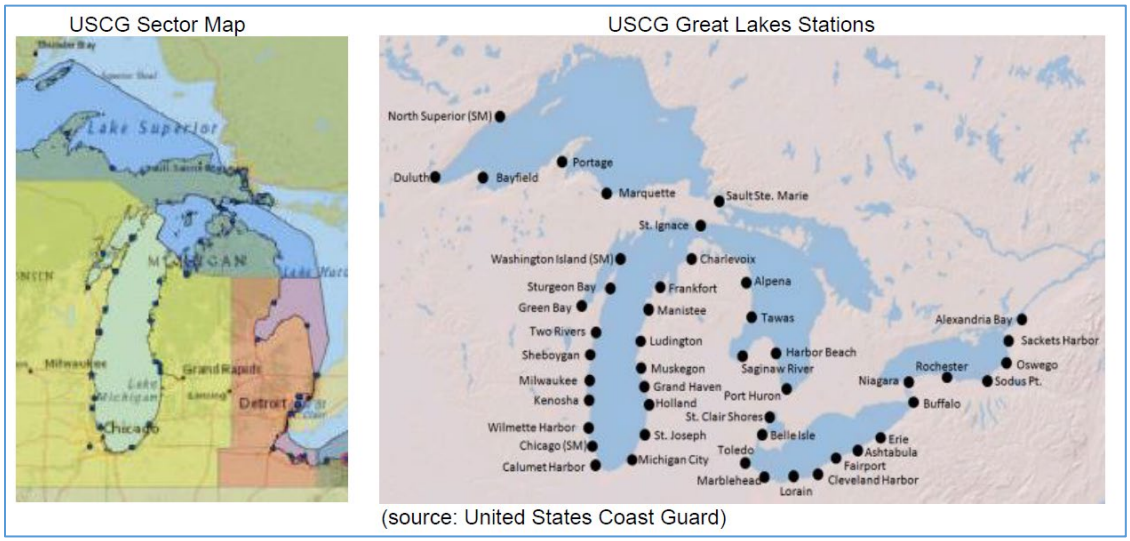
State Commercial Vehicle Enforcement Division (CVED)
MSP's CVED is responsible for conducting road patrol activities focused on commercial vehicle enforcement and the operation of 14 scale facilities. Officers at these locations monitor vehicles for compliance with size and weight requirements, perform driver/vehicle safety inspections, verify driver's credentials, enforce regulatory violations, hours-of-service requirements, and promote homeland security. Every year it also publishes the Michigan School Bus Inspection Report. The buses are inspected on a cycle beginning each September and ending each August.

Farmer's Transportation Guidebook
Michigan Farm Bureau, in partnership with the MSP, publishes the Michigan Farmer's Transportation Guidebook to keep farmers apprised of laws and regulations pertaining to transportation and road safety. Topics include driver standards, vehicle standards, motor carrier standards, traffic regulations, and federal hazardous materials regulations.

State Air Transportation Regulation
MDOT's Michigan Aeronautics Commission administers several programs aimed at improving aviation safety and promoting airport development. The Commission's safety programs include: (1) registering aircraft dealers, aircraft, and engine manufacturers, (2) licensing airports and flight schools, (3) inspecting surfaces and markings on airport runways, and (4) assisting in the removal of airspace hazards at airports. The Commission's airport development program includes the provision of state funds for airport development and airport capital improvements, contributing to upkeep and safety.
The FAA contracts with MDOT for the inspection of the state's public-use airports on an annual basis. The FAA has regulatory jurisdiction over operational safety and aircraft worthiness.

U.S. Coast Guard (USCG) District 9
The USCG enforces many commercial and recreational maritime laws and is a source for useful information related to boating safety. The USCG presence in Michigan waters, as part of District 9 and the Atlantic Command Center, is divided between three sectors: Sector Lake Michigan (yellow), Sector

Detroit (red), and Sector Sault Sainte Marie (blue).



(source: United States Coast Guard)

District 9 predominantly serves duties such as search and rescue, ship inspection, maritime law enforcement, safety and security, navigational aid, environmental protection, and icebreaking. Additional maps and information regarding its air stations, Marine Safety Units (MSU), Aids to Navigation Teams (ANT), and cutter ships is also available on its website at https://www.atlanticarea.uscg.mil/Atlantic-Area/Units/District-9/Ninth-District-Units/.

ENERGY FAILURES AND SHORTAGES - Select Laws, Agencies, or Programs

The federal government has put into place significant legislative and programmatic infrastructure to address energy emergencies, frequently operated in conjunction with the states and other entities. The Michigan Public Service Commission (MPSC) is the state's lead agency.

Department of Energy (DOE)
The Department of Energy Organization Act of 1977 brought the federal government's various energy entities into a single agency, including the Federal Energy Administration, the Energy Research and Development Administration, and the Federal Power Commission. Its directives and guidance are DOE's primary means of establishing energy policies and requirements, as well as non-mandatory strategies for fulfilling those requirements and goals. Its missions include energy security, nuclear security, cybersecurity, environmental cleanup, and emergency response. DOE's State and Local Government webpage provides resources for energy efficiency and weatherization programs.

State Energy Conservation Program Improvement Act
States are required to create and submit an energy supply emergency planning program to the DOE under the State Energy Conservation Program Improvement Act of 1990 (P.L. 101-440). The contingency plan provided by this program must include implementation strategies (including regional coordination) for dealing with energy emergencies. In Michigan, this energy emergency planning requirement falls under the purview of the MPSC.

Michigan Public Service Commission (MPSC)
The MPSC is the primary liaison to the electric and natural gas industry operating within the state. It is responsible for the state's energy emergency planning and response and deals with issues related to service disruptions and restoration, system damage, and emergency services. As part of these duties, the MPSC:

- Develops, administers, and coordinates energy emergency contingency plans.
- Acts as the communications focal point for federal, state, and local activities related to energy emergency planning and management.
- Monitors Michigan's energy supply system for the purpose of detecting unusual imbalances that may indicate the potential for an energy emergency and advises appropriate state officials of such events.
- Maintains ongoing contact with the petroleum, natural gas, and electric industries concerning the state's energy status.

Michigan Energy Emergency Plans
The MPSC develops and maintains two energy emergency preparedness and response plans pertaining to electricity, natural gas, and petroleum: (1) the Michigan Energy Assurance Plan is a comprehensive, all-hazards plan that outlines state regulatory authority, roles and responsibilities, energy monitoring, emergency curtailment measures for electric and natural gas, and communication procedures, and (2) the Michigan Petroleum Shortage Response Plan concentrates solely on the petroleum sector and provides a comprehensive set of demand and supply management measures along with regulatory waivers which can be used in the event of a fuel disruption/shortage or a declared energy emergency. The plans outline the roles and responsibilities of local, federal, and state governments during an emergency. State involvement typically occurs when a local government's capacity to address an emergency is exceeded, with federal government involvement occurring when the state's capacity is

exceeded. In these latter two instances, an Energy Emergency or a Disaster is declared, and the agency leading the response and recovery efforts change.

LEVEL 1 – Monitoring / Stand-By
Conditions: Routine monitoring uncovers current or potential impacts to Michigan's energy supply and/or systems. Although an impact to Michigan's communities has been observed, it is relatively low and likely in the initial stages.
Lead Agency: MPSC
LEVEL 2 – EERT Activation
Conditions: The impact on Michigan is moderate/limited compared to a more catastrophic event, however conditions are unstable or likely to worsen and additional information is required.
Lead Agency: MPSC
LEVEL 3 – State Energy Emergency Declaration
Conditions: The anticipated impact within the State of Michigan is moderate to high. Conditions have sufficiently deteriorated to the degree that the state has declared, or is considering declaring, an Energy Emergency under PA 191. The emergency is limited in scope to energy issues.
Lead Agency: MPSC / LARA
LEVEL 4 – State Disaster Declaration
Conditions: It is determined that the event involves more than an energy supply disruption, and that the impacts within Michigan are so severe that the governor has declared a State Disaster under PA 390. Governor directs necessary response actions led by Michigan State Police.
Lead Agency: MSP / EMHSD
LEVEL 5 – Federal Disaster Declaration
Conditions: The consequences of the event are extreme, the governor has requested, and/or the president has declared a National Disaster under the Robert T. Stafford Disaster Relief and Emergency Assistance Act.
Lead Agency: FEMA /DOE

(source: Michigan Public Service Commission)

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Energy Supply Monitoring

The MPSC monitors energy supply and demand as a part of its emergency preparedness program, tracking energy developments affecting Michigan, the region, and the nation via the DOE Energy Information Administration, industry partners, and various trade publications. Historical and forecast data are published by the MPSC semi-annually in its Michigan Energy Appraisal reports. In the event of

an actual or anticipated energy emergency, special updates to this basic publication can be issued as required to aid in decision-making during the response.

Public Information and Crisis Communications
The MPSC maintains a public information program designed to inform and enlist support from the public during an actual or anticipated energy emergency. The program provides the public with two basic sets of information: 1) an educational campaign to inform citizens about ways to minimize their use of energy and address issues resulting from a disruption, and 2) an informational campaign to provide clear information on the problems and the steps being taken in response. Public information activities will be coordinated through a Joint Information Center (JIC).

The Declaration of a State of Energy Emergency Act (1982 PA 191)
This law provides the Governor with the authority to declare a State of Energy Emergency in response to an actual or anticipated event. It remains in effect for the duration of the emergency or for 90 days, whichever is shorter. The State of Energy Emergency may be extended with the approval of the Legislature and may be terminated by a majority vote of both chambers. While the declaration is in effect, the Governor is authorized to:

(1) Order specific restrictions on the use and sale of energy resources, which may include:

- Restrictions on the interior temperature of buildings.
- Restrictions on the hours and days during which buildings may be open.
- Restrictions on the conditions under which energy resources may be sold.
- Restrictions on lighting levels and the use of display and decorative lighting.
- Restrictions on the use of privately owned vehicles, or a reduction in speed limits.
- Restrictions on the use of public transportation, including directions to close a public transportation facility.
- Restrictions on the use of pupil transportation programs operated by public schools

(2) Direct an energy resource supplier to provide an energy resource to a health facility; school; public utility; public transit authority; fire or police station or vehicle; newspaper or television or radio station (for the purpose of relaying emergency instructions or other emergency message); food producer, processor, retailer or wholesaler; and to any other person or facility which provides essential services for the health, safety, and welfare of Michigan residents.

(3) By Executive Order, suspend a statute or an order or rule of a state agency, or a specific provision of a statute, rule, or order, if strict compliance with the statute, rule, or order, or a specific provision of the statute, rule, or order will prevent, hinder, or delay necessary action in coping with the energy emergency.

North American Electric Reliability Council (NERC) and Reliability First
A non-profit organization overseen by the Federal Energy Regulatory Commission, NERC works to ensure that electric utilities and other suppliers maintain an adequate electric supply that meets the nation's needs. Its primary responsibilities include working with stakeholders to develop/enforce power system

operation standards, assess resource adequacy, and provide for accredited training programs. Composed of eight separate regional reliability councils, Reliability First covers almost all Michigan areas. They and NERC's other regional partners should not be confused with Independent System Operator Regions, such as the previously mentioned Midcontinent Independent System Operator (MISO).

Strategic Petroleum Reserve (SPR)

The SPR represents the largest supply of emergency crude oil in the world, stored in large underground salt caverns at four sites in Louisiana and Texas along the Gulf of Mexico. As of August 31, 2020, U.S. government holdings were:

- Bryan Mound site – 231.7 MMB in 20 caverns (68.1 MMB sweet and 163.6 MMB sour) b
- Big Hill site – 148.1 MMB in 14 caverns (67.1 MMB sweet and 81.1 MMB sour)
- West Hackberry site – 193.7 MMB in 22 caverns (102.2 MMB sweet and 91.1 MMB sour)
- Bayou Choctaw site – 73.7 MMB in 6 caverns (21.6 MMB sweet and 52.0 MMB sour)

This is equivalent to the supply of roughly 1,000 days of total U.S. petroleum net imports. Decisions for emergency withdrawal are made by the President under the authorization of the Energy Policy and Conservation Act. Oil would be distributed by competitive sale in the case of an emergency. Additional information is available at SPR Quick Facts.

TERRORISM INCIDENTS- Select Laws, Agencies, or Programs

In addition to the information below, please refer also to the Weapons of Mass Destruction Attack Procedures section of the Michigan Emergency Management Plan for a comprehensive list of federal and state response assets.

Presidential Decision Directive 39 (PDD-39)
In 1995, and in response to the World Trade Center, Oklahoma City, and Tokyo Subway incidents, PDD-39 directed federal agencies to prepare for nuclear, biological, and chemical attacks from inside the country, as well as abroad. Although many presidential administrations have issued similar directives, PDD-39 was the first to make terrorism a top priority and to recognize that significant terrorism threats exist from within. PDD-39 designated the Federal Bureau of Investigation (FBI) as the lead federal agency for the crisis management of terrorism incidents and Federal Emergency Management Agency (FEMA) for post-incident consequence management.

Homeland Security Act of 2002
The Homeland Security Act of 2002, Public Law 107-296, established the Department of Homeland Security (DHS) with the mandate and legal authority to protect the American people from the continuing threat of terrorism. In the act, Congress assigned the DHS the primary mission to (1) prevent terrorist attacks within the United States, (2) reduce the vulnerability of the United States to terrorism at home, (3) minimize the damage and assist in the recovery from terrorist attacks that occur, and (4) act as the focal point regarding natural and manmade crises and emergency planning.

Michigan Penal Code Act 328 (1931)
Although the federal definition of terrorism is used as a definition for the beginning of this chapter, the state penal code was significantly updated in 2002 with the signing of the Michigan anti-terrorism act into law. While similar, a link to the state law is provided here as a point of comparison and study for those looking to learn more on the topic.

Homeland Security Presidential Directives (HSPDs)
Many important HPSDs have been issued, including HSPD-5 (2003) to enhance the ability of the country to manage domestic incidents, such as terrorist attacks, major disasters, and other emergencies. This was done in part by establishing a single, comprehensive National Incident Management System (NIMS). This is now a part of Michigan's response framework. HSPD-7 was issued to identify, prioritize, and protect critical infrastructure. HSPD-8 required a national all-hazards preparedness goal, establishing mechanisms to improve federal preparedness assistance to states and local governments. More information can be found at the Homeland Security Digital Library.

National Operations Center (NOC) and National Counterterrorism Center (NCTC)
The NOC is the primary national-level multi-agency hub for domestic incident management. Part of the Department of Homeland Security, the NOC is a standing 24/7 interagency fusion center for law enforcement, national intelligence, emergency response, and private sector reporting. The NOC facilitates homeland security information sharing and operational coordination with other federal, state, local, tribal, and nongovernmental Emergency Operations Centers. The NCTC is the primary federal organization for analyzing and integrating all U.S. governmental intelligence pertaining to terrorism and counterterrorism. It serves as a central shared knowledge bank on known and suspected terrorists.

Michigan Intelligence Operations Center (MIOC)
The MIOC is Michigan's fusion center, operated by the Michigan State Police and providing 24-hours a day statewide information sharing among local, state, and federal public safety agencies and private sector organizations in order to facilitate the collection, analysis, and dissemination of intelligence relevant to terrorism and public safety, including the state's OK2SAY school safety program and suspicious activity reporting system, MichTip.

Michigan School Safety Initiatives
In addition to its involvement with OK2SAY, the Michigan State Police's Office of School Safety provides educational resources and expertise for the hardening of schools buildings against attackers. Information on the School Safety Commission and Competitive School Safety Grant program is also available.

Metropolitan Medical Response System (MMRS)
The MMRS supports the integration of emergency management, health, and medical systems into a coordinated response to mass casualty incidents. Successful MMRS grantees reduce the consequences of an incident by augmenting their existing local operational response systems. MMRS sub-grantees collaborate with local, regional, and health partners for strategic planning, including the continuity of government/operations, supply procurement, and emergency triage services. Additional programs are available on FEMA's Homeland Security Grant Program webpage.

Michigan Regional Response Team Network (RRTN)
The RRTN includes geographically positioned teams spread throughout the state that can respond to a weapons of mass destruction incident anywhere in Michigan within two hours of activation. These regional teams include local police, fire, and medical agencies, with support from the Michigan Urban Search and Rescue Team (MUSAR) and local and state bomb squads. The RRTN in Berrien County is one example.

51st Weapons of Mass Destruction Civil Support Team (WMD CST)
Stationed at the Michigan National Guard's Fort Custer Training Center, the 51st WMD CST augments local terrorism response capabilities for attacks known or suspected to involve Chemical, Biological, Radiological, Nuclear, and high yield Explosives (CBRNE). The 51st CST is deployed to (1) assess a suspected CBRNE event in support of a local Incident Commander, (2) advise civilian responders regarding appropriate response actions, and (3) facilitate requests for assistance to expedite the arrival of additional state and federal assets to help save lives, prevent human suffering, and mitigate property damage. Working in support of the Incident Commander, the CST can verify the perimeter of the exclusion zone and send teams into a "hot zone" to conduct reconnaissance, survey, detection, and sampling missions. The Team is on-call 24 hours-a-day, seven days-a-week and is designed for rapid deployment. The 51st WMD CST is activated through the State Emergency Operations Center (SEOC), or through a lead emergency response organization's Request for Assistance (RFA) submitted to the Michigan National Guard's Joint Operations Center (JOC).

Michigan Emergency Drug Delivery and Resource Utilization Network (MEDDRUN) and CHEMPACK
During the early stages of a mass casualty incident, the health care system may be overwhelmed—especially with cases involving chemical weapons where the early use of antidotes may be lifesaving.

The MEDDRUN establishes standardized caches of medications and supplies strategically located throughout Michigan. It is intended to rapidly deliver these resources to hospitals and other sites via Michigan's rotary air and other emergency medical service (EMS) agencies. CHEMPACK provides a sustainable, supplemental source of pre-positioned nerve-agent/organophosphate antidotes and associated pharmaceuticals that will be readily available for use when local supplies become depleted.

Strategic National Stockpile (SNS)
The U.S. Centers for Disease Control (CDC) Strategic National Stockpile—a national repository of pharmaceuticals and life-saving medical materials—can be delivered to states at times of national need. It was used in 2020 in response to the COVID-19 pandemic to deliver gloves, face masks, hospital gowns, and other supplies.

Michigan Department of Health and Human Services (MDHHS) Bioterrorism Efforts
MDHHS's Bioterrorism Laboratory Preparedness webpage offers resources to help the state's laboratories prepare for and respond to bioterrorist attacks. Past related departmental initiatives have included a statewide bioterrorism response plan (2001) under an agreement with the U.S. Centers for Disease Control.

Terrorism Risk Insurance Program (TRIA)
TRIA provides for a transparent system of shared public and private compensation for insured losses resulting from acts of terrorism. This protects consumers by addressing market disruptions and ensuring the widespread availability and affordability of property and casualty insurance for terrorism risks. Although technically established as a temporary program, it has been extended through 2027.

Public Health Security and Bioterrorism Preparedness Act of 2002
The Act, Public Law 107-188, provides the Food and Drug Administration (FDA) with information on the origin and distribution of food and feed products and aids in the quick response to potential threats to the U.S. food supply. Its primary components include National Preparedness for Bioterrorism and Other Public Health Emergencies, Enhancing Controls on Dangerous Biological Agents and Toxins, Protecting Safety and Security of Food and Drug Supply, and Drinking Water Security and Safety.

The Maritime Transportation Security Act (MTSA) of 2002
The MTSA, Public Law 107-295, is designed to protect the nation's ports and waterways from terrorist attacks. The law is the U.S. equivalent of the International Ship and Port Facility Security Code. It requires vessels and port facilities to conduct vulnerability assessments and develop security plans that may include passenger, vehicle, and baggage screening procedures, security patrols, and installation of surveillance equipment. The MTSA also requires Area Maritime Security Committees tasked with collaborating to deter, prevent, and respond to port-related terror threats.

CYBERATTACKS AND MAJOR NETWORK DISRUPTIONS - Select Laws, Agencies, or Programs

Michigan Cyber Initiatives
The State of Michigan has made numerous advances in its preparedness and security initiatives, an overview of which can be found at http://www.michigan.gov/cybersecurity. It includes a copy of the state's Cyber Disruption Response Plan and links to the Michigan Cyber Civilian Corps (MiC3) and other sources of information on the topic.

The Michigan Cyber Disruption Response Team (CDRT) comprises members from several state departments and agencies and is the primary coordinating structure for the state's cyber disruption incidents. The MiC3 is a group of trained, civilian technical experts who individually volunteer to provide rapid response assistance to the state in the event of a critical cyber incident. Its mission is to provide mutual aid to state government, business organizations, and other partners in the event of a critical cyber incident. The Michigan Intelligence Operations Center (MIOC) within the Michigan State Police monitors online activities that may impact the state's security interests. The state also participates in National Cybersecurity Awareness Month (typically in October).

Cybersecurity and Infrastructure Security Agency (CISA)
Established in 2018, CISA is a standalone U.S. federal agency and operational component under the Department of Homeland Security. Its website includes the CISA Services Catalog, available to all levels of government, along with a secure web-enabled Incident Reporting System for forwarding computer security incidents to CISA in order help the agency monitor and analyze potential attacks (available for viewing on its recent alerts page). The alerts can also be subscribed to. Michigan is a part of CISA Region V, headquartered in Chicago.

National Cybersecurity and Communications Integration Center (NCCIC)
Housed within CISA, the NCCIC helps to coordinate the federal government's cybersecurity and cyberattack mitigation efforts through cooperation with various stakeholders, including state and local governments. The NCCIC includes the country's United States Computer Emergency Readiness Team (US-CERT) and Industrial Control Systems Cyber Emergency Response Team (ICS-CERT).

National Risk Management Center (NRMC)
Housed within CISA, the NRMC leverages sector and stakeholder expertise to identify the most significant risks to the nation and to coordinate risk reduction activities to ensure critical infrastructure is secure and resilient. Some of the top NRMC initiatives in 2020 included 5G, election security, electromagnetic pulses, national critical functions, and positioning navigation timing.

Computer Emergency Response Team Coordination Center / Software Engineering Institute
The Computer Emergency Response Team Coordination Center (CERT/CC) is located at the Software Engineering Institute, a federally funded research center. CERT/CC was established at the behest of the Defense Advanced Research Projects Agency (DARPA) to coordinate communication among experts during security emergencies and to help prevent future incidents. The CERT/CC publishes security alerts and develops training in network security. Its incident handling practices have been adapted by cyber response teams around the world

Nuclear Attack - Select Laws, Agencies, or Programs

Ready.gov
The website for Ready.gov contains actions and advice to help U.S. citizens prepare for a wide contingency of disasters, including nuclear explosions. Information is provided on important steps that can be taken before, during, and after a nuclear attack, including sheltering, decontamination, and long-run survival considerations.

FEMA Media Library
Publication V-1015 provides a useful two-page fact sheet to help individuals be better prepared for a potential nuclear explosion. The document is designed to provide concise information that can easily be shared with family.

Radiation Emergency Medical Management (REMM)
The U.S. Department of Health and Human Service's REMM initiative provides technical information related to surviving nuclear detonations and improvised nuclear devices. Detailed sections regarding fallout, expected medical effects, and radiation detection systems is included.

PUBLIC HEALTH EMERGENCIES - Select Laws, Agencies, or Programs

Michigan Department of Health and Human Services (MDHHS)
The MDHHS and local district health departments across the state have a number of programs and initiatives to protect the health and safety of Michigan's residents. The MDHHS director and local public health officers have authority (under the Michigan Public Health Code–1978 PA 368, as amended) to take necessary steps to prevent epidemics and the spread of hazardous communicable diseases. They may issue written orders to implement these preventive steps and/or responses. State and local health departments also have detailed emergency operation plans in place to address other public health emergencies.

World Health Organization (WHO) and MDHHS Influenza Pandemic Planning
The WHO has established a pandemic preparedness webpage, and has established six levels of pandemic "phases" based upon observable phenomena and allowing for incorporation of recommendations and approaches into existing preparedness and response plans. Phases 1–3 concern preparedness activities, including capacity development and response planning, while Phases 4–6 indicate a need for response and mitigation efforts. After a first pandemic wave has occurred, particular "periods" are defined to facilitate post pandemic recovery activities.

COVID-19 has been classified as a Phase 6 pandemic at the time of this writing. During the early days of the disease, there was some debate over whether the disease was an epidemic or a pandemic, and how such definitions should impact policy decisions. Information on MDHHS's Pandemic Influenza Planning is also available. The state's official flu related website is https://www.michigan.gov/flu.

U.S. Centers for Disease Control and Prevention (CDC)
The CDC has federal responsibility and authority to investigate public health emergencies to determine their cause, probable extent of impact, and appropriate mitigation measures. It also has a webpage dedicated to pandemic influenza. The CDC can also assist state and local public health officials in establishing health surveillance and monitoring systems/programs, and in disseminating information on prevention and treatment to the public. The CDC has made dedicated funding available for bioterrorism response, and Michigan has strengthened its surveillance and intervention infrastructures with these funds.

Emerging Disease Information Website
Michigan's website for Emerging Diseases provides information on infectious diseases that may be transmitted among humans or between animals and humans. The site includes a GIS-based mapping tool to aid in analyzing zoonotic and vector-borne diseases. Additional information regarding avian influenza, rabies, ticks, mosquitoes, bed bugs, head lice, and scabies is also available.

Michigan Health Alert Network (MIHAN)
MIHAN is a secure, statewide, web-based disease alert system serving over 4,000 health care providers and other critical responders at local health departments, hospitals, clinics, and several state governmental agencies. MDHHS has implemented the MIHAN to enhance the State's emergency public health communications system and serve as a platform for health alerts, prevention guidelines, national disease surveillance, and electronic laboratory reporting. The MIHAN provides role-based alerting and permissions, secure web-based communication, and bi-directional alerting with message confirmation by telephone, email, and text pager, plus broadcast facsimile capabilities. The MIHAN serves as a

foundation for the integration of public health and emergency response partners throughout Michigan, plus tribal health centers, border states, Canada, and federal agencies.

U.S. Food and Drug Administration (FDA) Food Code

The FDA Food Code is the national regulatory standard for retail food establishments. The FDA Food Code is neither federal law nor federal regulation but represents the FDA's best advice for a uniform system of regulation to ensure that food at retail establishments is safe and properly protected and presented. It may be adopted and used by agencies at all levels of government that have responsibility for managing food safety risks at the retail level.

Food Law (2000 PA 92)

The Food Law of 2000 was enacted to modernize, standardize, and consolidate Michigan's food laws, while adopting the FDA 1999 Food Code as a uniform regulatory standard for retail food establishments, such as restaurants, other food service facilities, groceries, and convenience stores. The law helps to protect consumers from serious foodborne illnesses, such as E. coli, salmonella, listeriosis, botulism, and hepatitis.

CIVIL DISTURBANCES - Select Laws, Agencies, or Programs

Civil disturbances can be difficult to address, with officials needing to balance between the constitutional rights of individuals to assemble and air grievances, as compared to the overall needs of the community to provide essential services, public safety, secured property, and uninterrupted commerce. Most large public gatherings and demonstrations are held in a peaceful manner, but governmental resources are needed to respond to any escalations.

Michigan State Police and Michigan National Guard
In most civil disturbances, local law enforcement resources, augmented where necessary by the Michigan State Police, are sufficient to manage an incident. When such resources are not adequate, the Michigan National Guard may be activated to provide for the immediate preservation of public peace and safety. A Governor's Declaration of Emergency is necessary to activate the Michigan National Guard.

Prison Uprisings
Prison uprisings are first contained by Michigan Department of Corrections facility squads, composed of trained Correctional Custody personnel. Department Emergency Response Teams (ERTs) then resolve the situation. ERT members are specially trained personnel who respond to security needs or emergency situations which arise during daily institutional operations. ERTs also responds to situations which threaten the safety or security of any correctional institution, or which pose a threat to the community. Additional units may be brought in from other nearby facilities. If those resources are not sufficient, specially trained Michigan State Police officers can be activated to assist within the prison, provide perimeter security, or augment resource needs. In extreme cases, the National Guard may also be used.

College Campus Anti-Rioting Law
In the wake of the 1999 Michigan State University riot, a new state law (2000 PA 51) was passed aimed at curbing rioting on or near (within 2,500 feet of) Michigan's public colleges and universities. The law allows judges to ban campus rioters and others convicted of riot-related offenses, unlawful assembly, and civil disorder from all public college and university campuses in Michigan for up to two years for a felony conviction (one year for a misdemeanor).