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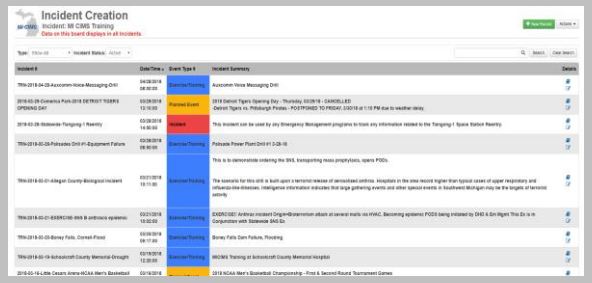
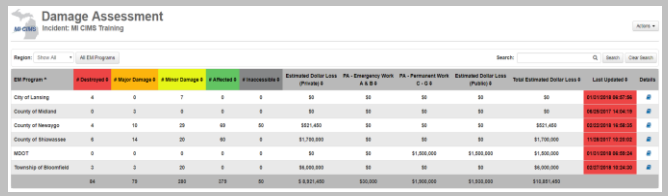
Emergency Management and Homeland Security Division
Michigan Department of State Police

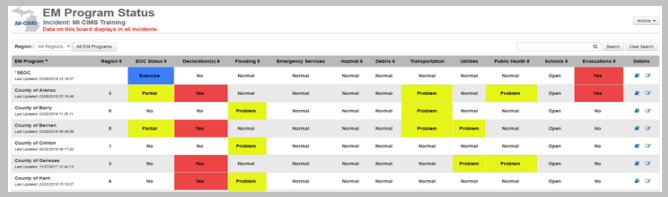
MICHIGAN DAMAGE ASSESSMENT HANDBOOK

A GUIDANCE HANDBOOK FOR THE COLLECTION, COMPILATION, ANALYSIS, SYNTHESIS, AND REPORTING OF DAMAGE AND IMPACT INFORMATION SUBSEQUENT TO A DISASTER OR EMERGENCY.

QUICK REFERENCE PAGE: INCIDENT CREATION AND DAMAGE ASSESSMENT REPORTING

MI CIMS Incident Creation Board	Created By
	An incident may be created by local emergency management program jurisdictions (EMC, Assistant EMC, and EM staff positions), by MSP/EMHSD District Coordinators, by MI CIMS administrator, by state department / agency EMCs, or by the SEOC Operations Section Chief or Logistics Section Chief, using the Incident Creation board. The Incident Creation board allows incidents to be created, and other users to be notified that the incident is available for them to log in to. Once created, an incident can be updated but it should **NOT** be duplicated in the MI CIMS. Only **ONE** entry should be made for a specific incident, with updates made as appropriate. Updated information pertaining to a created incident can also be entered in the Activity Log, and other appropriate boards within the MI CIMS. Note: MSP Posts do not have Incident Creation rights within the MI CIMS. MSP Posts (per Official Order No. 40) should work with the local emergency management program jurisdiction or MSP/EMHSD District Coordinator to create an incident, if not already done. If the MI CIMS is inoperable or not accessible / unavailable, MSP Posts should work with the local emergency management program jurisdiction or MSP/EMHSD District Coordinator to file an Incident Creation report using the prescribed back-up form and method in order to meet the Official Order No. 40 requirements.

MI CIMS Damage Assessment Board	Submitted By
	Local emergency management program jurisdictions and state departments / agencies report damage and impact assessment information via the Damage Assessment board. Local emergency management program jurisdictions report both public and private damage. State departments / agencies report damage to those public facilities, infrastructure, etc. that fall under their stewardship, as well as impacts to their ability to provide services. SEOC Section Chiefs have the capability to update damage assessment information submitted by any emergency management program jurisdiction or state department / agency. Note: Public damage is reported via the established federal Public Assistance (PA) damage categories – i.e., Categories A and B (Emergency Work) and Categories C-G (Permanent Work). The board automatically totals both public and private damage information.

MI CIMS EM Program Status Board	Submitted By
	The EM Program Status board contains 11 Essential Elements of Information (EEI) which must be reported by local emergency management program jurisdictions once an incident is created. These EEI are color-coded as follows: no color (no problem), yellow (problem exists), blue (exercise), and red (severe) to signify their current status. Once the EEIs are initially reported, they must be updated periodically as conditions change for better or worse. Once the response phase of a jurisdiction's operations is complete the EM Program Status board should be set back to Steady State status by using the Clear Record button on the form.

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Summary of Major Changes in this Guidance Document

Subject	Change	Location
Incident Creation and Damage Assessment Reporting Quick Reference Page	The Incident Creation and Damage Assessment Reporting Quick Reference Page was updated with current screenshots of MI CIMS boards, and instructions for the submission of information.	Quick Reference Page: Incident Creation and Damage Assessment Reporting
The Assessment Function within the EOC Structure	The last version of the document stated that the damage assessment function typically falls under the Planning Section of the EOC. This section of the handbook was changed to reflect that not all EOCs operate under the same organizational structure, and that there is a variety of options for how to integrate the damage assessment function into EOC operations.	Pages 1 to 2
Role of the Planning Section/Handling of Damage Assessment information at the EOC	Since this version of the document focuses less on the Planning Section's handling of damage assessment information at the EOC, content was changed to cover the handling of damage assessment at the EOC as a whole.	Pages 2 to 3
Damage Assessment Application	EMHSD has developed a Damage Assessment Application for mobile devices. Background information on functions and how to access the tool were added to the document.	Pages 7 to 8
FEMA Expectations for State and Local Representatives/Roles of State and Local Representatives during the PDA	Instead of focusing on federal expectations, the document now features a wider variety of tasks that need to be accomplished by state and local stakeholders before, during and after a Preliminary Damage Assessment.	Pages 14 to 15
State ("Section 19") Disaster Relief Funding.	Information was updated to reflect the changes to Section 19 of 1976 Public Act 390, as amended, effective June 28, 2018. These changes increased the maximum amount of assistance from the Disaster and Emergency Contingency Fund available to jurisdictions from $100,000 to $1,000,000, dependent on the population size of the jurisdiction.	Page 19
Attachment A: MI CIMS Basic Instructional Resources	The MI CIMS Basic Instructional Resources Attachment was updated with current screenshots of MI CIMS and the MI CIMS Local Agency End User Manual.	Page 21
Attachment B: Back-Up Incident Creation Board	The Incident Creation Board Back-Up Submittal Form was updated to reflect changes to the MI CIMS Incident Creation Board.	Page 22
Attachment C: Format for Declaring a Local "State of Emergency"	The Local State of Emergency declaration template was updated to include a submission date and updated submittal instructions.	Page 23
Attachment D: Format for Requesting a Governor's Emergency or Disaster Declaration and State Assistance	The Governor's Declaration Request template was updated to include a submission date and updated submittal instructions.	Page 24
Attachment E: Back-Up EM Program Status Board	The EM Program Status Board Back-Up Submittal Form was updated to reflect changes to the MI CIMS EM Program Status Board.	Pages 25 to 26
Attachment F: Back-Up Damage Assessment Board	The Damage Assessment Board Back-Up Submittal Form was updated to reflect changes to the MI CIMS Damage Assessment Board.	Pages 27 to 28
Attachment G: Damage Survey Worksheet and Mapping Instructions, and Degree of Damage Categories	The attachment was updated to include the Inaccessible damage category, update other damage categories based on current FEMA guidance, and remove pictures with examples of damage that no longer corresponded with the associated damage categories. The Rapid Evaluation Matrix for Damage Classification and Damage Survey Worksheets included in the attachment were also updated to include current descriptions of damage categories.	Pages 29 to 41
Attachment J: Guidelines for Disaster Photography	The attachment was updated to reflect increased capabilities for the use of aerial imagery for damage assessment purposes through helicopters and unmanned aerial systems.	Pages 49 to 51
Attachment L: Federal Disaster Assistance Programs	The attachment was updated to reflect changes to the Individual and Households Program, SBA Low Interest Disaster Loans, FSA Emergency Conservation Grants, Public Assistance Grant Program, and Hazard Mitigation Assistance.	Pages 53 to 61

Note: Other minor changes (such as smaller additions or removal of content, grammatical or name changes) have been made but are not listed.

ACRONYM GUIDE

The following acronyms are used in this document. For consistency and brevity purposes, acronyms are used extensively for frequently appearing terms once they have been initially identified in the document text. Certain terms may not have an acronym if an acronym is not commonly used in place of the term or using an acronym would prove unnecessarily confusing for readers.

ARC ..... American Red Cross
CDBG ..... Community Development Block Grant
CEO ..... Chief Elected Official
CERT ..... Community Emergency Response Team
CIMS ..... Critical Incident Management System
DC ..... District Coordinator (of the MSP/EMHSD)
DHS ..... U.S. Department of Homeland Security
DOD ..... U.S. Department of Defense
DRC ..... Disaster Recovery Center
EM ..... Emergency Management
EMAC ..... Emergency Management Assistance Compact
EMC ..... Emergency Management Coordinator
EMT ..... Emergency Medical Technician
EOC ..... Emergency Operations Center
EOP ..... Emergency Operations Plan
FAS ..... Federal Aid System
FCO ..... Federal Coordinating Officer
FEMA ..... Federal Emergency Management Agency
FHA ..... Federal Housing Administration
FHWA ..... Federal Highway Administration
FMAGP ..... Fire Management Assistance Grant Program
FMAP ..... Flood Mitigation Assistance Program
FSA ..... Farm Service Agency
GIS ..... Geographic Information System
GNMA ..... Government National Mortgage Association (a.k.a., “Ginnie Mae”)
GPS ..... Global Positioning System
HMA ..... Hazard Mitigation Assistance
HMGP ..... Hazard Mitigation Grant Program
HS ..... Homeland Security
HUD ..... U.S. Department of Housing and Urban Development
HVAC ..... Heating, Ventilating, and Air Conditioning (Systems)
IA ..... Individual Assistance
IC ..... Incident Commander
ICP ..... Incident Command Post
IHP ..... Individuals and Households Program
IRS ..... Internal Revenue Service
JFO ..... Joint Field Office
JIC ..... Joint Information Center
JIT ..... Joint Information Team
LEIN ..... Law Enforcement Information Network

ACRONYM GUIDE (cont.)

MDARD	Michigan Department of Agriculture and Rural Development
MDHHS	Michigan Department of Health and Human Services
MDNR	Michigan Department of Natural Resources
MDOT	Michigan Department of Transportation
MEMAC	Michigan Emergency Management Assistance Compact
MEMP	Michigan Emergency Management Plan
MHMP	Michigan Hazard Mitigation Plan
MI CIMS	Michigan Critical Incident Management System
MRIAT	Michigan Rapid Impact Assessment Team
MSP	Michigan (Department of) State Police
MSP/EMHSD	Michigan (Department of) State Police, Emergency Management and Homeland Security Division
MUIA	Michigan Unemployment Insurance Agency
NAD	North American Datum
NFIP	National Flood Insurance Program
NIMS	National Incident Management System
NRCS	Natural Resources Conservation Service
NRF	National Response Framework
ONA	Other Needs Assistance
OSHA	U.S. Occupational Health and Safety Administration
PA / PAGP	Public Assistance / Public Assistance Grant Program
PA	Public Act (State)
PDA	Preliminary Damage Assessment
PDF	Portable Document Format
PDMP	Pre-Disaster Mitigation Program
PIO	Public Information Officer
PL	Public Law (Federal)
PNP	Private Nonprofit (Organization)
PPE	Personal Protective Equipment
PW	Project Worksheet
R	Rule (i.e., State Administrative Rule)
RFCP	Repetitive Flood Claims Program
SBA	U.S. Small Business Administration
SCO	State Coordinating Officer
SEOC	State Emergency Operations Center
SRLP	Severe Repetitive Loss Program
TTY / TDD	Text Telephone (a.k.a., Telecommunication Device for the Deaf – TDD)
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
WGS	World Geodetic System
WMD	Weapon of Mass Destruction

DAMAGE ASSESSMENT ORGANIZATIONAL BASICS

Basic Purposes of Damage Assessment. Damage assessment is defined as the systematic process of determining and appraising the nature and extent of the loss, suffering, or harm resulting from a disaster or emergency. Damage assessment is concerned with determining ***what*** happened, ***when***, ***where*** and ***how***, and ***who*** is affected. Damage assessment is crucial because of its direct relationship to organized action by response personnel. Effective organized action requires knowledgeable decision making based on accurate information. Unless an organized system for gathering, evaluating, and disseminating information has been set up, managing the response and recovery effort will be much more difficult.

There are numerous reasons why it is important to develop a strong damage assessment capability:

- To obtain timely, accurate, and comprehensive information on the incident
- To facilitate timely and effective decision making
- To enable the public to be quickly and accurately informed
- To aid in the prioritization of limited resources
- To provide a basis for justifying the need for assistance, and to develop assistance requests
- To facilitate rapid and effective response and recovery efforts

For these and other reasons, development and maintenance of a strong damage assessment capability should be a top priority for local emergency management program jurisdictions and their support jurisdictions, state departments / agencies, and tribal governments.

Creating an Effective Damage Assessment Organization. Incidents may affect many different facets of a community; therefore, the collection of assessment information necessarily involves many sources in order to obtain a complete picture of the situation. Creating an effective damage assessment organization is the most important step in developing a damage assessment capability. This can best be accomplished by assigning personnel from the various organizations involved to support this activity, and developing adequate damage assessment procedures for the assigned personnel.

The Assessment Function within the EOC Structure. Damage assessment is a unique function in any level of government; therefore, a unique organization must be formed to perform the damage assessment function. Where the Damage Assessment functions falls in an EOC depends on the organizational structure of the EOC. For example, in an EOC that organizes staff according to ICS, a Damage Assessment Branch under the Operations Section might be responsible for carrying out the collection of damage assessment information in the field, while the Planning Section is responsible for compiling and analyzing the gathered data. In an EOC that is strictly organized by functional groups, a Damage Assessment group that reports to an Executive Group might carry out the collection and analysis of damage assessment data. In the State Emergency Operations Center, Recovery Section personnel are responsible for the verification and analysis of damage assessment information received from local jurisdictions, state agencies, and the private sector. The State Individual Assistance Officer and State Public Assistance Officer will coordinate with the SEOC Operations Sections Chief to carry out a Preliminary Damage Assessment with FEMA and local jurisdictions, if needed.

An important point to consider when developing a damage assessment capability is the assignment of personnel to support this activity who are normally not operational during a disaster or emergency. Because damage assessment takes place concurrently with and in support of other response and recovery activities, operational heads and other disaster workers probably will not have the time to actively support damage assessment activities. Suitable personnel for assignment to the damage assessment function might be individuals that do not already have an established emergency management role, such as (at the local government level) the county or municipal assessor, planning director, building inspector, equalization director, or support staff from these agencies.

On-Site Inspection Teams. On-site damage inspection teams are an essential element of the damage assessment organization. These teams assist in: 1) documenting the nature, scope, magnitude, and location of damage and impacts; and 2) verifying information and reports received from other sources. Two different types of teams should be formed – one to survey private damage to homes, and one to survey public damage (i.e., bridges, roads, schools, etc.). Team assignments can be made in a variety of ways. Possibilities include making assignments by zones or districts, or having teams in each political subdivision or department. At the local government level, assessors, equalization directors, planners, engineers, building inspectors, and local realtors are usually good choices for on-site inspection teams because of their knowledge of community facilities, property values, building construction and engineering. American Red Cross (ARC) and/or Community Emergency Response Team (CERT) personnel, as well as personnel from other volunteer and/or community-based organizations may also be able to assist in on-site inspections. Each jurisdiction must examine its own organizational structure, personnel, resources, and capabilities and make assignments accordingly.

Planning and Training. Training for all damage assessment personnel should be provided as soon as possible after assignments are made, and then on a regular basis thereafter. Assessment personnel should also be actively involved in the development and maintenance of damage assessment standard operating procedures, including provisions for notification, staff augmentation, message flow, data collection, compilation, analysis, synthesis and reporting, mapping, information plotting / display, and communications with field personnel. These specific standard operating procedures should support and implement the general operational guidelines for damage assessment found in the jurisdiction or entity's Emergency Operations Plan. The Michigan State Police/Emergency Management and Homeland Security Division can provide damage assessment training at the request of a local emergency management program. This can be arranged through the Emergency Management and Homeland Security Training Center.

Handling of Damage Assessment information at the EOC. The handling of Damage Assessment data at the EOC is an important part of the management of information related to the incident. The EOC collects, compiles, analyzes, synthesizes, and displays incident-related information on maps and status boards to provide a comprehensive, up-to-date and accurate portrayal of events, actions, and damage at all times. In many cases, first responders (i.e., law enforcement officers, fire fighters, EMTs, public works employees) may provide much of the initial assessment information. Street, floodplain, topographic, and population density maps, as appropriate, can be used to plot the affected areas, evacuation routes, shelter locations, number of persons affected, potential disaster conditions, and other information deemed pertinent to the situation. Damaged areas can be plotted on maps and prioritized so that those areas with the most damage can be targeted first for assistance. Status boards can be used to indicate current conditions, including casualty estimates, number of buildings damaged or destroyed, road and bridge damage or closures, number of persons in shelters, etc. A message board can be used to display important messages that everyone needs to see.

Damage assessment information is vital in assisting key EOC personnel in making important decisions regarding response and recovery operations. In certain situations, the Damage Assessment personnel may also be activated to perform pre-incident assessments (e.g., to plot rising flood levels. Having damage assessment personnel work out of the EOC ensures they can interface with key decision makers and, through established communications links, response personnel at the incident scene. If an EOC is not utilized for an incident, provisions should be made for a work station at or near the alternate coordination facility, such as a Command Post, where communications links are available and issues can be coordinated with on-scene personnel.

During the initial stages of the incident, Damage Assessment personnel at the EOC may assist the Incident Commander in creating the incident in the MI CIMS and in preparing a local "state of emergency" declaration for submittal to the MSP/EMHSD. Damage Assessment personnel is also responsible for organizing the on-site inspection teams to conduct more detailed damage surveys, and for determining the various sources from which information must be collected. They may be requested to provide regular updated reports with verified damage information to the jurisdiction's Public Information Officer (for release to the media), an EOC Planning Section (if the Damage Assessment function is not located there), and to the Chief Executive and affected department heads. In some cases, these activities may necessitate round-the-clock operation for the first few days of the incident.

INCIDENT REPORTING

Damage Assessment under the MI CIMS. The web-based software "WebEOC" is used for statewide critical incident management in the State of Michigan. For identification purposes, this system is referred to as the Michigan Critical Incident Management System (MI CIMS). The MSP/EMHSD has obtained an enterprise license for the MI CIMS that allows it to provide a user license to local emergency management program jurisdictions, state departments / agencies, tribal governments, and certain nongovernmental (NGO) and private sector emergency management partner organizations. This statewide integration effort allows these stakeholders to easily and quickly communicate with the SEOC and with each other during disasters, emergencies, and other incidents.

The MI CIMS is the primary mechanism for incident reporting and assessment within the State of Michigan. However, because it is necessary to have a back-up reporting system in place in the event the MI CIMS is inoperable or otherwise not accessible / available, this handbook will provide guidance for using both the MI CIMS and back-up reporting systems.

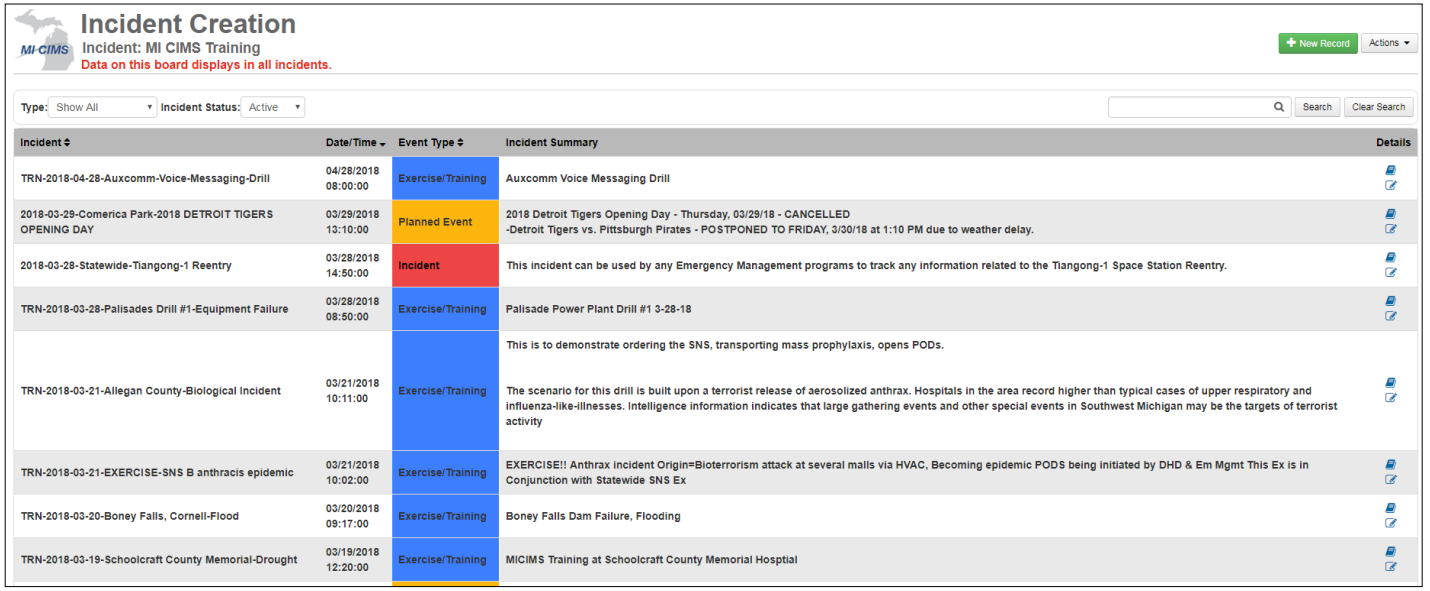
Creating an Incident in the MI CIMS. The MI CIMS Incident Creation board is used to initially report incidents and provide a means of notifying other system users of the incident. This information should be entered as soon as possible after incident occurrence, or prior to the incident if occurrence is imminent. An incident may be created by local emergency management program jurisdictions (EMC, Assistant EMC, and EM staff positions), by MSP/EMHSD District Coordinators, by state department / agency EMCs, or by the SEOC Operations Section Chief or Logistics Section Chief.

Important Note: Incidents which affect more than one jurisdiction (e.g., multi-jurisdiction flooding; multi-jurisdiction storm; etc.) must be treated as one incident in the MI CIMS. Once one jurisdiction has created an incident for such an occurrence, other affected jurisdictions must log into that original incident (not create their own) so that unnecessary duplication is eliminated and information about the incident can be shared across all jurisdictions. If this is not done, the MSP/EMHSD MI CIMS Administrator will take steps to move all of the data under one incident heading.

Figure 1: MI CIMS Incident Creation Board
(Incident Creation Window)

Figure 2: MI CIMS Incident Creation Board (cont.)
(Input View)

Figure 3: MI CIMS Incident Creation Board (cont.)
(Viewing Incidents)



Creating an incident in a timely manner and with adequate early information enables government officials and other emergency responders to determine the nature, scope, magnitude, severity, and anticipated duration of the incident. It also provides a basis for alerting applicable agencies and organizations that might be required or requested to provide assistance.

Back-Up Method for Creating an Incident. Attachment B provides a duplicate version of the MI CIMS Incident Creation board which can be used as the back-up reporting method. This format can be completed electronically (i.e., Microsoft Word or Excel document) and transmitted as an email attachment, it can be completed in hardcopy and transmitted via facsimile, or it can be entered and transmitted via the Law Enforcement Information Network (LEIN). Whichever method is used, it should be transmitted to: 1) the appropriate MSP/EMHSD District Coordinator; and 2) the MSP/EMHSD office in Dimondale. If using email, facsimile, or the LEIN will delay the information, the telephone should be used. If telephone service is not available, radio may be used.

Declaring a Local "State of Emergency." If the incident in a local jurisdiction is such that significant threats exist to public health, safety, and general welfare, and/or extensive coordination and resource involvement is required to respond to and recover from the situation, then a local "state of emergency" should be declared using the template format found in Attachment C (“Format for Declaring Local State of Emergency"). The declaration must be immediately forwarded as an attachment to the MI CIMS EM Program Status board to ensure it will be received by the MSP/EMHSD. If the MI CIMS is unavailable, the declaration must be submitted via a back-up method prescribed below.

The declaration of a local "state of emergency" is important for several reasons. First, it documents that the response and recovery aspects of the local EOP have been activated in a timely manner, at the beginning of the emergency / disaster. Second, and perhaps most important, declaring a "state of emergency" emphasizes the severity of the situation by indicating that local response efforts are underway, and local resources are being utilized to their maximum potential. Finally, to be eligible for 1976 PA 390, Section 19 state funding, a jurisdiction must have declared a local "state of emergency" or be covered by such a declaration in a timely manner.

Back-Up Method for Declaring a Local "State of Emergency." If the MI CIMS is inoperable or not accessible / available, the declaration should be sent via email, facsimile, or LEIN in accordance with the instructions found on the form. It should be transmitted to: 1) the appropriate MSP/EMHSD District Coordinator; and 2) the MSP/EMHSD office in Dimondale. If using email, facsimile, or the LEIN will delay the information, the telephone should be used. If telephone service is not available, radio may be used.

INFORMATION COLLECTION, COMPILATION, ANALYSIS, SYNTHESIS, AND REPORTING

Information Collection, Compilation, Analysis, and Synthesis. The State is dependent upon local government to provide complete, accurate and timely assessment information. The MSP/EMHSD must ascertain as early as possible whether or not state resources should be committed to assist local authorities, so that adequate alerting and activation of state forces can be accomplished. Accurate damage assessment information must be collected, compiled, analyzed, synthesized, and reported in a timely manner by local government if the nature, scope, magnitude, severity, and expected duration of the incident are to be known. In addition, this information serves as the basis for requesting federal disaster relief assistance, including a request from the Governor to the President (through FEMA) for a major disaster or emergency declaration under Public Law 93-288, as amended (Robert T. Stafford Disaster Relief and Emergency Assistance Act).

A number of agencies and organizations may have to provide assessment information in order to obtain a complete picture of the total individual, private, public, and agricultural damage sustained. Typical sources of assessment information are shown in the following table. Counties collect, compile, and submit assessment information from county agencies, as well as those cities, villages, and townships that are part of the county emergency management program. Separate municipal emergency management programs collect, compile, and submit information only from their own departments and agencies.

Figure 4: Potential Sources of Assessment Information

Type of Information	Potential Sources
IMPACTS TO INDIVIDUALS	Hospitals; Coroner; Sheriff's / Police Department; Health Department; Unemployment Office; American Red Cross; County Department of Human Services; Area Agency on Aging; other community or faith-based organizations; direct telephone or web-based reporting by affected individuals
PUBLIC DAMAGE (public facilities or PA-eligible private nonprofit only)	Road Commission; Public Works Department; Drain Commission; Parks Commission / Department; Intermediate / Local School District; Publicly-Owned Utilities; Medical Care Facilities; Educational Facilities; Custodial Care Facilities; Emergency Facilities; Utilities; Senior Citizen Centers; Community Centers; Libraries; Streets Department; Public Transportation Authority
PRIVATE DAMAGE	Equalization Department; Planning Department; Building Department; Assessor; Chamber of Commerce; Business Council; Tourism Development Office; direct telephone or web-based reporting by large private entities such as businesses, institutions, insurance companies, and associations
AGRICULTURAL DAMAGE	Obtained by State directly from County Agricultural Emergency Boards
BUDGET INFORMATION	Treasurer; Personnel Department; County Controller; Road Commission; Drain Commission; Parks Commission / Department; Public Works Department; Streets Department; City Manager; Budget Director; Public Transportation Authority
LOCAL JURISDICTION INFORMATION (for counties only)	Local political units that are part of the county emergency management program – i.e., cities, villages, and townships

Field Surveys. On-site inspection teams should be dispatched to survey damaged areas as soon as it is safe to do so after the occurrence of the incident. These teams have two major functions: 1) to survey private damage (i.e., homes and businesses); and 2) to survey public damage (i.e., bridges, roads, schools, etc.). Generally, this necessitates that two separate but concurrent surveys be taken (one for private damage and one for public damage). Consequently, on-site inspection teams should be formed accordingly.

A Damage Survey Worksheet can be found at Attachment G. This worksheet can be used for surveying both private damage and public damage. A common damage classification system – based on the current FEMA Damage Assessment Operations Manual – and set of instructions are included to assist on-site inspection teams in documenting damage. Damage information should be recorded on the Damage Survey Worksheet and a map by the on-site inspection teams. In addition, in many cases a photographic or video image of the damage should also be taken by the on-site inspection teams. (See Attachment J for instructions and guidelines for disaster photography.) The completed worksheets, maps, and photography must be submitted in a timely manner to the EOC for compilation, analysis, synthesis, and reporting. Depending on site conditions, inspection teams may also be required to estimate the amount of disaster debris generated or to report on the occurrence of fallen or damaged trees that may be a safety concern. Attachments J and L, respectively, provide the inspection team with tools to complete these tasks.

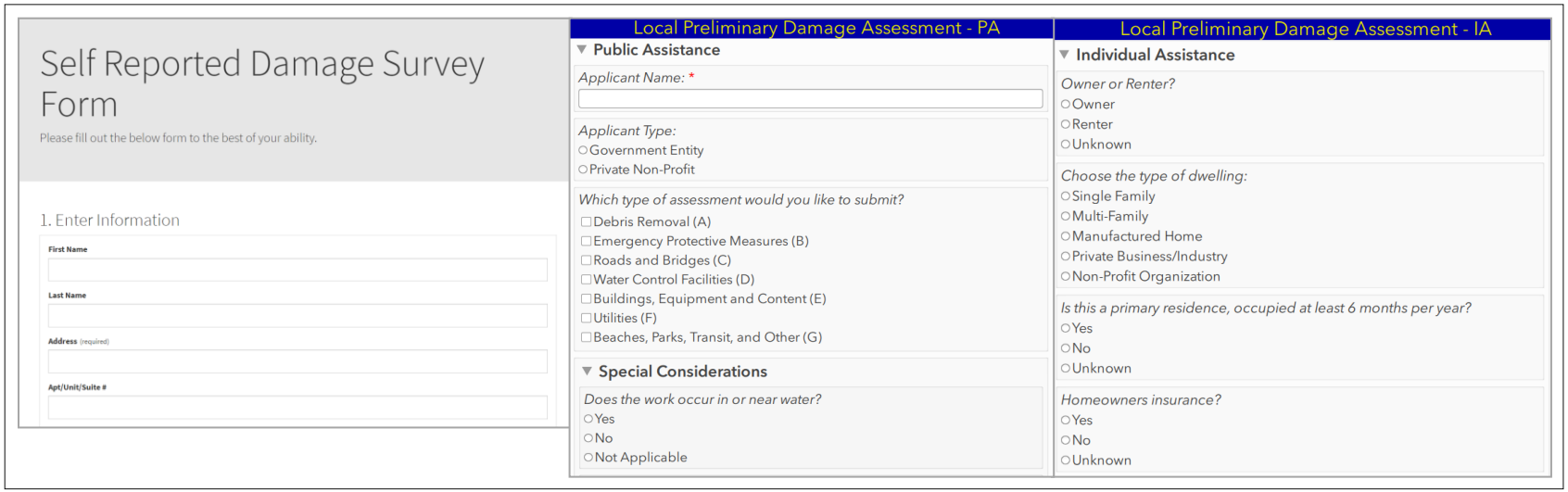
Background Note: The original hardcopy Damage Survey Worksheets, damage maps, photographs, and videos taken should be retained by the EOC for: 1) permanent recordkeeping; and 2) use by FEMA / State damage assessment teams in the event they are dispatched to the area to conduct a Preliminary Damage Assessment (PDA) for a Presidential emergency or major disaster declaration. See the "Preliminary Damage Assessment" section for more information on the PDA process.

Another tool that local jurisdictions can use to collect assessment information from businesses and non-profit organizations (e.g., churches, nursing homes, etc.) is the "Damage Survey Form for Businesses and Non-Profit Organizations" found at Attachment H. This form can be provided to affected entities so that they can assess their own damages and impacts, and then return the completed form to the EOC for information compilation, analysis, synthesis, and reporting.

Damage Assessment Application. To support local damage assessment operations, MSP/EMHSD has developed a Damage Assessment Application (DAA). Each Emergency Management Coordinator can access the application's different tools for use during damage assessments, regardless if the SEOC has been activated or a Governor's Declaration of Disaster or Emergency is in place. The DAA consists of four tools: A self-reporting form available that can be made available to the public, an Individual Assistance Survey, a Public Assistance Survey, and a Map Viewer.

Background Note: Emergency Management Coordinators interested in using the DAA should contact their District Coordinator to coordinate access to the system.

Figure 5: Damage Assessment Application Tools



Self-Reporting Form: The first DAA tool is a public self-reporting form that the EM program can share with residents via a link. Residents can use this form to report any damage experienced due to the incident. The data is then filtered by emergency management program and made available to the EMC through their assigned Map Viewer (see Map Viewer).

Individual Assistance Survey: The Individual Assistance Survey can be accessed through a free application called Survey123 for ArcGIS that can be downloaded onto any smart device such as a tablet or mobile phone. Damage Assessment teams can use the survey to collect data for individual homes and businesses on their smart device. The data is georeferenced within the application, so each location is tagged with latitudinal and longitudinal information. The survey also allows for up to ten pictures of damages to be stored per record. Within the survey, the user can identify information such as the type of dwelling, whether the residence has insurance, level of damage, and more. The data is then filtered by EM program and made available to the EMC through their Map Viewer.

Public Assistance Survey: The Public Assistance Survey applies the same concepts as the Individual Assistance Survey tool to the PA environment. The tool allows damage assessment teams to collect data for emergency and permanent restoration work from public entities and eligible private non-profit organizations. Within the survey, the user can track applicable PA categories, estimated costs, types of repairs, save pictures, etc. Data for the EM program will then be made available to the EMC through their Map Viewer.

Map Viewer: The Map Viewer is a web application that the EMC can access through MSP/EMHSD ArcGIS Online. It displays the data collected from the Self-Reporting Form, Individual Assistance Survey and Public Assistance Survey. The data can be filtered and exported using a custom export tool. The EMC can also toggle the data within the map, change the base map, zoom in/out of certain points of the map, and click on locations for additional information.

Michigan Rapid Impact Assessment Team Assistance. The Michigan Rapid Impact Assessment Team (MRIAT), composed of functional-area experts from 10 Michigan state departments / agencies, was formed to improve the State's capabilities to determine the nature, scope, magnitude, anticipated duration, and severity of emergencies and disasters. The MRIAT can be activated to work in partnership with affected local governments to rapidly assess damage and impact to, and the resource needs of, citizens and communities. The MRIAT can serve many roles – partner, advisor, technical information source, liaison, organizer, and advocate. The nature and extent of the MRIAT role will depend on the incident, as well as the needs, desires, and capabilities of the community. The MRIAT is intended to be a supplemental assessment resource to local jurisdictions. It will not serve as a substitute for a good assessment organization for, or assessment effort by, the community.

As a rule of thumb, the MRIAT will only be activated for those situations that, in the opinion of the MSP/EMHSD and/or the Governor's Office, warrant state assistance in assessing damage, impacts, and resource needs. Generally, MRIAT involvement will be limited to those situations that are 1) "highly problematic" from a technical standpoint; 2) large-scale or widespread in nature; or 3) "high profile" due to intense citizen and/or media interest. Most emergencies and smaller disasters do not fall into one of those categories.

Activation of the MRIAT may be initiated at the request of a local jurisdiction (through the Emergency Manager) and/or the recommendation of the MSP/EMHSD District Coordinator, or upon request of the Governor's Office. The MSP/EMHSD will evaluate all requests for activation and make the final determination as to whether to activate the MRIAT. If the MRIAT is activated, local jurisdictions will be notified by their MSP/EMHSD District Coordinator of the anticipated arrival time and the necessary preparations that must be made.

The MRIAT will work side-by-side, in partnership with local officials, in assessing damage and impacts. The MRIAT will link up with the community's existing damage assessment teams and they will jointly conduct assessment operations in the field. The MRIAT will not come into a community to "take over" assessment operations and responsibilities. It can, however, under the appropriate circumstances, assist and coordinate with local officials in conducting a rapid assessment of the situation.

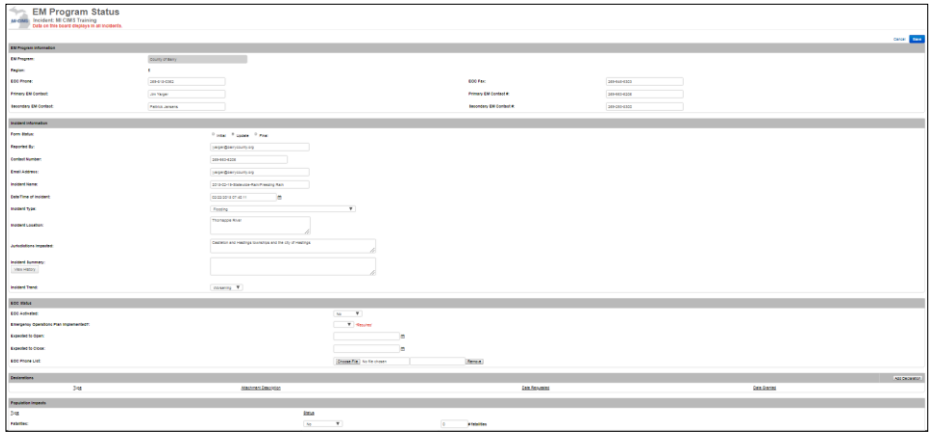
Agricultural Damage Assessment. Although farms are businesses, local emergency management program jurisdictions do not need to collect agricultural damage assessment information. Rather, agricultural damage assessment information is normally collected and compiled by the County Agricultural Emergency Board, which is composed of county representatives from federal and state agricultural programs. This process is managed by the United States Department of Agriculture (USDA) and Michigan Department of Agriculture and Rural Development (MDARD). A "Flash Situation Report" is automatically prepared by the County Emergency Board within 24 hours of the occurrence of a disaster impacting agricultural resources. In addition, a more detailed agricultural "Damage Assessment Report" is prepared upon request of the Governor or the MDARD Director, specifying the level of damage to crops, animals, lands, and agricultural facilities, including barns and service buildings. This information is forwarded to the USDA Michigan headquarters in East Lansing for verification, summarization, concurrence, and distribution.

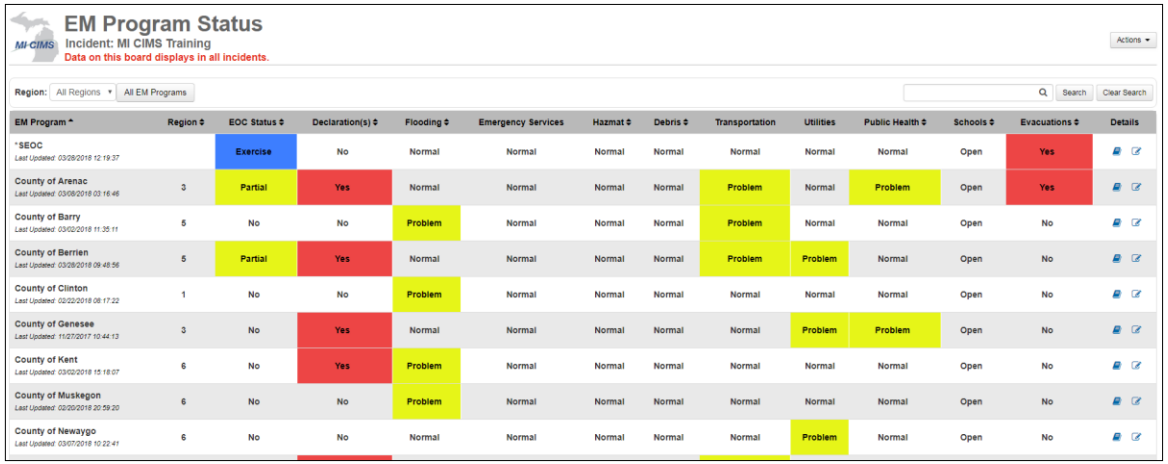
The SEOC Recovery Section obtains this data through the MDARD State Agency Emergency Management Coordinator, who serves as liaison to the USDA. Although local emergency management program jurisdictions do not need to submit agricultural damage assessment information to the State, as a matter of good business practice it is still recommended that Local Emergency Managers establish a working relationship with the County Agricultural Emergency Board for the purposes of information sharing and coordination of assessment activities.

Damage Assessment Report. The local EOC, working in conjunction with the on-site inspection teams, compiles assessment information on the MI CIMS Damage Assessment board and EM Program Status board. If incident conditions allow, the Damage Assessment board information must be entered into the MI CIMS, in final format, within 3 days (72 hours) of incident occurrence. If incident conditions (e.g., lingering flood waters) do not allow for submittal of final assessment information within 3 days, then an initial report must be submitted within 3 days and the final assessment report submitted within 7 days of incident occurrence. In rare cases, earlier submittal may be essential to ensure that the jurisdiction is eligible for the full range of assistance for which it may be entitled. The Damage Assessment and EM Program Status boards should be updated if additional damage is discovered or revisions are required.

Note: The Damage Assessment board should be used to report public and private damage totals (numbers of affected sites / structures and the corresponding damage cost figures). The EM Program Status board should be used to report on the 11 Essential Elements of Information (EEI) found on the board. The EEI assesses incident-specific impacts to various critical services or functions as well as impacts caused by specific types of hazards such as flooding.

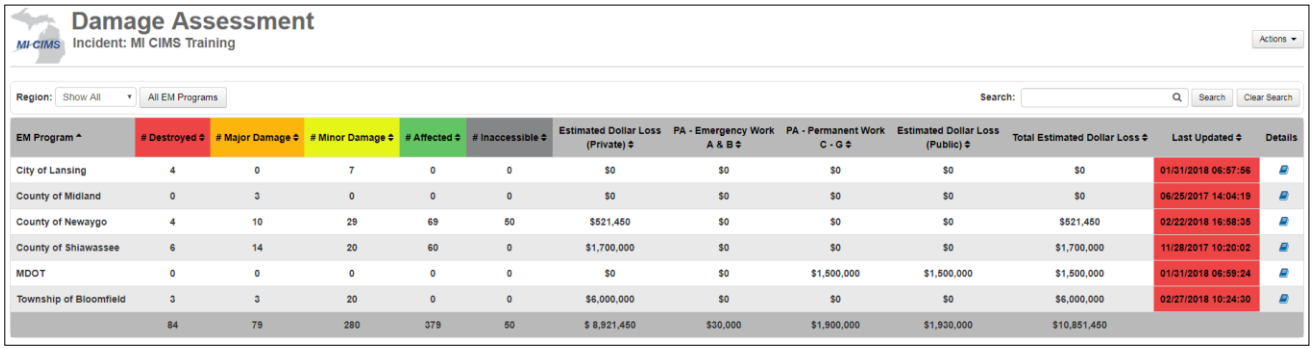
Figure 6: MI CIMS EM Program Status Board (Input View and Summary View)





EM Program	Region	EOC Status	Declaration(s)	Flooding	Emergency Services	Hazmat	Debris	Transportation	Utilities	Public Health	Schools	Evacuations	Details
*SEOC Last Updated: 03/28/2018 12:19:37		Exercise	No	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Open	Yes	
County of Arenac Last Updated: 03/08/2018 03:16:46	3	Partial	Yes	Normal	Normal	Normal	Normal	Problem	Normal	Problem	Open	Yes	
County of Barry Last Updated: 03/02/2018 11:35:11	5	No	No	Problem	Normal	Normal	Normal	Problem	Normal	Normal	Open	No	
County of Berrien Last Updated: 03/28/2018 09:48:56	5	Partial	Yes	Normal	Normal	Normal	Normal	Problem	Problem	Normal	Open	No	
County of Clinton Last Updated: 02/22/2018 08:17:22	1	No	No	Problem	Normal	Normal	Normal	Normal	Normal	Normal	Open	No	
County of Genesee Last Updated: 11/27/2017 10:44:13	3	No	Yes	Normal	Normal	Normal	Normal	Normal	Problem	Problem	Open	No	
County of Kent Last Updated: 03/02/2018 15:18:07	6	No	Yes	Problem	Normal	Normal	Normal	Normal	Normal	Normal	Open	No	
County of Muskegon Last Updated: 03/20/2018 20:59:20	6	No	No	Problem	Normal	Normal	Normal	Normal	Normal	Normal	Open	No	
County of Newaygo Last Updated: 03/07/2018 10:22:41	6	No	No	Normal	Normal	Normal	Normal	Normal	Problem	Normal	Open	No	

Figure 7: MI CIMS Damage Assessment Board (Input View and Summary View)



Damage Assessment
Incident: MI CIMS Training

Actions

Region: Show All | All EM Programs

Search: Search | Clear Search

EM Program	# Destroyed	# Major Damage	# Minor Damage	# Affected	# Inaccessible	Estimated Dollar Loss (Private)	PA - Emergency Work A & B	PA - Permanent Work C - G	Estimated Dollar Loss (Public)	Total Estimated Dollar Loss	Last Updated	Details
City of Lansing	4	0	7	0	0	$0	$0	$0	$0	$0	01/31/2018 06:57:56	
County of Midland	0	3	0	0	0	$0	$0	$0	$0	$0	06/25/2017 14:04:19	
County of Newaygo	4	10	29	69	50	$521,450	$0	$0	$0	$521,450	02/22/2018 16:58:35	
County of Shiawassee	6	14	20	60	0	$1,700,000	$0	$0	$0	$1,700,000	11/28/2017 10:20:02	
MDOT	0	0	0	0	0	$0	$0	$1,500,000	$1,500,000	$1,500,000	01/31/2018 06:59:24	
Township of Bloomfield	3	3	20	0	0	$6,000,000	$0	$0	$0	$6,000,000	02/27/2018 10:24:30	
	84	79	280	379	50	$ 8,921,450	$30,000	$1,900,000	$1,930,000	$10,851,450		

Back-Up Method for Damage Assessment Reporting. Attachments E and F provide duplicate versions of the MI CIMS EM Program Status and Damage Assessment boards which can be used as the back-up reporting method if the MI CIMS is inoperable or not accessible / available. These formats can be completed electronically and transmitted as an email attachment, they can be completed in hardcopy and transmitted via facsimile, or they can be transmitted via the LEIN. They should be transmitted to: 1) the appropriate MSP/EMHSD District Coordinator; and 2) the MSP/EMHSD office in Dimondale. If using email, facsimile, or the LEIN will delay the information, the telephone should be used. If telephone service is not available, radio may be used.

Mapping Damaged Areas. A map (or maps) should be electronically attached to the Damage Assessment board, outlining the locations of both public and private damage. If both types of damage can be clearly depicted on one map, then one map should be attached. (See Attachment G for instructions on how to properly depict public and private damage on a map or maps.)

Disaster Photography. Whenever possible, on-site inspection teams should also make a photographic or video record of the damage at the time the information is being gathered so that the damage can be fully documented before the cleanup begins. It is recommended that each damaged site be shot from three different positions to ensure proper image documentation. Those positions include a "context" image, a "curbside" image, and a "close-up" image. (See Attachment J for a set of guidelines for disaster photography.)

State Role in Damage Assessment. The SEOC Recovery Section continuously compiles, analyzes, synthesizes, and plots damage assessment information from local emergency management program jurisdictions, state departments / agencies, and tribal governments to provide a comprehensive, up-to-date, and accurate portrayal of the situation at all times. When a local emergency management program jurisdiction requests a Governor's emergency or disaster declaration (under 1976 PA 390, as amended) and SEOC monitoring and analysis reveals such action may be warranted in order to protect public health and/or safety, the SEOC Incident Commander will convene an internal committee to make a recommendation to the Governor's Office regarding the request.

If further monitoring and analysis reveals the need for federal disaster relief assistance to supplement local and state response and recovery efforts, the MSP/EMHSD will work in conjunction with the Governor's Office to take those actions necessary to request activation of the appropriate assistance programs. If a Presidential emergency or major disaster declaration is warranted, the Governor will request such a declaration through the FEMA Region V Office in Chicago, Illinois.

SEEKING STATE AND FEDERAL DISASTER RELIEF ASSISTANCE

Requesting State Assistance. Requests for state assistance must be submitted to the MSP/EMHSD using the template format found in Attachment D ("Format for Requesting a Governor's Emergency or Disaster Declaration and State Assistance"). This request for state assistance, which takes the form of a message to the Governor from the chief executive official (CEO) of a county (or municipality with a separate emergency management program from the county), must be attached to the MI CIMS EM Program Status board – either concurrently with the local "state of emergency" declaration, or separately at a later time, depending on the circumstances.

Background Note: The chief executive official of a county is not authorized to make such a request for state assistance for an incident occurring solely within the confines of a township, city, or village within the county unless requested to do so by the chief executive official of the affected township, city, or village. Refer to Section 14 of 1976 PA 390 for more information.

Generally, before state assistance is requested, counties or municipalities must ensure that local disaster relief forces are utilized to their maximum potential, including use of local contractors, activation of mutual aid, and use of nearby resources.

Back-Up Method for Requesting State Assistance. If the MI CIMS is inoperable or not accessible / available, the request for state assistance should be sent via email, facsimile, or LEIN in accordance with the instructions found on the form. It should be transmitted to: 1) the appropriate MSP/EMHSD District Coordinator; and 2) the MSP/EMHSD office in Dimondale. If using email, facsimile, or LEIN will delay the information, the telephone should be used. If telephone service is not available, radio may be used.

District Coordinator Assessment of Need. Once state assistance is requested, Section 14 of 1976 PA 390, as amended, prescribes the process that must be followed in order to determine if such assistance is warranted. The MSP/EMHSD District Coordinator, in conjunction with the local Emergency Manager, assesses the nature and scope of the situation and recommends the personnel, services, and equipment that are needed. The MSP/EMHSD District Coordinator also verifies that local resources are being used to their maximum potential. Upon

completing the joint assessment, the MSP/EMHSD District Coordinator notifies MSP/EMHSD command staff of the findings and recommendations. The MSP/EMHSD notifies the Governor, who takes whatever actions he or she considers appropriate to mitigate the disaster or emergency. If the MSP/EMHSD determines that immediate action is essential to the preservation of life and property, the MSP Director may initiate temporary assistance to the affected area as necessary and compatible with the policies and procedures of the Michigan Emergency Management Plan (MEMP).

It is important to remember that the purpose of state disaster assistance is to supplement local efforts and resources to protect public health and safety and to help relieve the extraordinary burden local jurisdictions may face. It is not intended to be used for simple budgetary relief.

Governor's Declaration. Pursuant to 1976 PA 390, as amended, the Governor may declare a "state of disaster" for affected areas if a disaster has occurred causing widespread or severe damage, injury, or loss of life, or an imminent threat thereof exists. The Governor may declare a "state of emergency" in those situations where state assistance is needed to supplement local efforts and capabilities to save lives, protect property and the public health and safety, or to lessen or avert the threat of a catastrophe. A Governor's "state of disaster" declaration acknowledges the severity of the situation and its impact upon the areas affected, while a "state of emergency" is used to target specialized assistance to meet specific needs which the state is uniquely able to provide.

The Governor may also declare a "heightened state of alert" if he/she believes that terrorists or members of terrorist organizations are within this state or that acts of terrorism may be committed in this state or against a vital resource. Such a declaration provides the Governor with many of the same authorities provided under a "state of emergency" or "state of disaster" declaration described above, and can be instituted to safeguard the interests of the state or a vital resource, to prevent or respond to acts of terrorism, or to facilitate the apprehension of terrorists or members of a terrorist organization and those acting in concert with them.

A Governor's declaration of a "state of disaster," a "state of emergency," or a "heightened state of alert" activates the response and recovery aspects of the MEMP and authorizes the deployment and use of state resources to provide assistance to the areas under the declaration. This includes all disaster relief forces under state authority, as well as supplies, equipment, materials, and facilities. The MSP/EMHSD coordinates the provision of such assistance with the involved state departments / agencies and affected local jurisdictions through the SEOC, if activated.

Seeking Federal Assistance. Upon declaring a "state of disaster" or a "state of emergency," the Governor may seek assistance (either financial or otherwise) from the federal government for those areas included in the declaration, including (if the situation warrants) requesting a Presidential emergency or major disaster declaration under the Stafford Act, through the FEMA Region V office in Chicago, Illinois.

Preliminary Damage Assessment. If the Governor requests or intends to request a Presidential declaration, a Joint Preliminary Damage Assessment (PDA) is conducted to determine if the situation warrants federal assistance. A Joint PDA is intended to validate already reported damage information, not identify additional damages. Damage assessment teams (composed of representatives of the federal government, state government, the affected local jurisdiction, and affected tribal governments – as applicable) are dispatched to the incident scene to survey and confirm the damage and impacts reported by the affected local jurisdiction(s), the State of Michigan, and affected tribal governments – as applicable. The local (and tribal – as applicable) representative(s) on the team(s) must be thoroughly familiar with the area and knowledgeable about the damage and impacts incurred.

The MSP/EMHSD will work closely with the affected local jurisdiction(s) to identify as early as possible those rare situations where a PDA should be conducted prior to the receipt and compilation of the final local damage assessment reports. The MSP/EMHSD will NOT recommend a PDA unless the situation clearly warrants it. Conducting a PDA is a time-consuming and expensive venture for all involved parties – FEMA, the State, and the affected local jurisdiction (and tribal government – as applicable). A PDA is called for only in those situations where there is a strong likelihood that a Presidential declaration may result. Political, social, and/or budgetary pressures will not be determining factors for the conduct of a PDA.

Damage Survey Worksheets and copies of damage maps, photographs / videos of the damage, etc. from local on-site inspection teams will be reviewed by the PDA teams prior to going into the field. This information provides the basis for further investigation by these teams to support the request for federal assistance, and greatly expedites the damage verification process. Damage assessment teams from the U.S. Small Business Administration (SBA) will also conduct their on-site damage surveys based on this information (if home and/or business damage has occurred and is being examined in the PDA).

Roles of State and Local Representatives during the PDA. Roles and responsibilities of state and local representatives during a Joint PDA with FEMA include:

State Representatives. The primary roles and responsibilities for state representatives on during the PDA include:

- Establish and maintain communication with local or county emergency managers conducting damage assessments
- Provide technical or subject matter expertise to local or county damage assessments as necessary
- Support IA and PA programmatic lead efforts to ensure that information provided by local or county damage assessment coordinators is verified in some manner, and that impacted jurisdictions are ready to receive Joint PDA teams
- Host the PDA teams and create team assignments
- Ensure specific instructions and applicable forms are sent to affected jurisdictions
- Establish an operational strategy, schedules and reporting requirements in conjunction with FEMA PDA Coordinator and IA/PA team leads
- Provide an overview of state conditions
- Assist in providing for and coordinating logistical needs (e.g., transportation, facilities, equipment, etc.)
- Identify and confirm local contacts
- Identify an External Affairs Representative to serve as the primary point of contact for media inquiries
- Coordinate with local representatives to schedule interviews and field assessments with potential PA applicants
- Provide state maps, if needed
- Reassign state members to different teams or locations, as required
- Provide other pertinent information related to unmet needs caused by the disaster
- Coordinate with FEMA officials regarding state, tribal (as applicable), and local concurrence regarding the degree of damage and impacts caused by the disaster, and the team findings

Local Representatives. The primary roles and responsibilities for local representatives on the PDA teams include:

- Identify and train personnel to assess damage to homes according to criteria defined by FEMA
- Provide copies of initial assessments performed at the local level and report to the State (to include Damage Survey Worksheets and maps or lists of damaged areas)
- Arrange for local representatives on each of the IA/PA assessment teams
- Guide and accompany PDA teams to damaged sites, as necessary
- Coordinate with potential PA applicants so they are prepared to schedule and attend the PA PDA briefing and interview
- Determine the routes the team will take to assess the damaged / affected areas in the most timely and efficient manner possible
- Ensure and confirm that all damaged areas are surveyed during the Joint PDA
- Assist the state and federal team member(s) in providing required information
- Provide demographic information, to include populations that may have greater needs such as functional and/or access needs, low income populations, the elderly, or the unemployed
- Serve as an expert on local issues, needs, concerns, and conditions
- Provide information on cultural or unique considerations of the affected community
- Provide impact statement information to state or tribal government as requested
- Provide insurance information for damaged areas and indicate how the information was derived (e.g., door-to-door surveys, local insurance companies, estimates based on demographic and housing information, etc.)
- Discuss team findings regarding the degree of damage and impacts caused by the disaster with state and tribal (as applicable) team members
- Coordinate with federal, state, and tribal (as applicable) team members regarding local media and public information issues

PDA Results. Based on the results of the PDA, FEMA will conclude whether or not sufficient damage and impacts have occurred to support a Presidential declaration. Damage assessment information collected by local emergency management program jurisdictions and confirmed by the PDA is provided to the State of Michigan and then used by the Governor's office and the MSP/EMHSD as the basis for the Governor's request to the President for a declaration. This information is also used by FEMA to document the recommendations made to the President in response to the Governor's request.

Background Note: The Stafford Act restricts the use of arithmetical formulas or other objective standards as the sole basis for determining the need for federal supplemental aid. As a result, FEMA assesses a number of factors to determine the severity, magnitude and impact of a disaster. In evaluating a Governor's request for a major disaster declaration, a number of primary factors, along with other relevant information, are considered in developing a recommendation to the President for supplemental disaster assistance. Primary factors considered include but are not limited to: 1) the amount and type of damage (number of homes destroyed or with major damage); 2) impacts on the infrastructure of affected areas or critical facilities; 3) imminent threats to public health and safety; 4) impacts to essential government services and functions; 5) the unique capability of the federal government; 6) the dispersion or concentration of damage; 7) the level of insurance coverage in place for homeowners and public facilities; 8) available assistance from other sources (federal, state, local, voluntary organizations); 9) state and local resource commitments from previous, undeclared events; and 10) the frequency of disaster events in the affected area over the recent time period. (Refer to 44 CFR Part 206.48 for more specific information on the factors FEMA uses to evaluate the need for federal assistance under the Stafford Act.)

Figure 8: Emergency / Disaster Declaration Process

LEVEL	MAJOR ACTIONS
INCIDENT OCCURS	• Initial incident intelligence collected / evaluated / reported by first responders. • Incident Command established in accordance with incident circumstances. • Initial life safety and property protection measures taken. • Key officials notified.
LOCAL EMERGENCY MANAGEMENT PROGRAM JURISDICTION; AFFECTED MSP POST	• Jurisdiction and affected MSP Post submit initial incident information and updates as necessary. • Jurisdiction collects / compiles assessment data per local procedures; field inspection teams collect data; local response agencies provide data through EOC. • Jurisdiction may activate local EOC to monitor situation and coordinate response. • Jurisdiction may declare local "state of emergency" and request state and federal assistance. • Local PIO issues media releases and public advisories per local procedures. • Jurisdiction submits detailed damage assessment information within 72 hours of incident; updates initial incident information as necessary.
MSP/EMHSD	• SEOC may be activated to monitor situation and coordinate response. • MSP/EMHSD District Coordinator assists jurisdiction in assessing and analyzing situation; determines scope and magnitude of event; determines supplemental resource needs. • MRIAT may be activated to provide supplemental assessment assistance. • SEOC Recovery Section compiles and analyzes incoming assessment data. • PIOs issue media releases and public advisories per MEMP; JIC may be activated. • Governmental agencies and private relief organizations are alerted to standby status; may provide immediate support to address threats to public health, safety and welfare.
GOVERNOR	• May declare "State of Emergency" or "State of Disaster" under 1976 PA 390, as amended; state assistance rendered to supplement local efforts. • May activate MEMAC / EMAC if appropriate. • May request federal disaster relief assistance, if warranted, through FEMA Region V in Chicago, Illinois.
FEMA	• May provide direct response assistance under National Response Framework (NRF) to save lives, prevent injuries, protect property and the environment. • Conducts Preliminary Damage Assessment (PDA); state and local personnel assist in PDA process. • FEMA Region V reviews and analyzes Governor's request; FEMA Headquarters (Washington, DC) makes recommendation to President.
PRESIDENT	**Issues Declaration:** • Federal disaster assistance programs are activated. **OR** **Denies Declaration:** • Limited federal assistance may still be available. • Governor may provide assistance through State Disaster and Emergency Contingency Fund under 1976 PA 390, as amended, if sufficient state resources (financial and/or materiel) are available.

Presidential Emergency / Major Disaster Declaration. The Governor's letter of request for a Presidential emergency or major disaster declaration is forwarded to the President through the FEMA Regional Administrator. After careful analysis of the request by Regional Office staff, the Regional Administrator makes a recommendation to the Director of FEMA in Washington, D.C., who in turn recommends a course of action to the President. Under the Stafford Act, the President has three options when a Governor's request for a declaration is submitted:

Declaration Request Denied. If the President does not find sufficient damage and impacts to warrant a declaration, he may deny the request outright. In those cases, limited disaster relief assistance may still be available from specific federal agencies and volunteer organizations, including SBA low-interest disaster loans and USDA emergency loans for agricultural damage. Refer to Attachment L for details on available programs.

Emergency Declaration. In those situations where the full range of assistance available with a major disaster declaration is not required, the President may declare that an "emergency" exists, which provides specialized assistance from federal agencies to meet a specific need that the federal government is uniquely able to provide. Examples of emergency assistance are: temporary housing; mass care; debris removal when in the public interest; emergency repairs to keep essential facilities operating; technical assistance with essential community services; public health and safety measures; and public information and warning. The federal share of such assistance is not less than 75% of eligible costs, with a cap of $5,000,000 for a single emergency unless additional assistance is approved by the President.

Major Disaster Declaration. The President may declare that a "major disaster" exists, which makes available the widest variety of federal assistance programs to jurisdictions within the designated disaster area. The three basic types of assistance available under a Presidential major disaster declaration through the Stafford Act are Public Assistance, Individual Assistance, and Hazard Mitigation Assistance. In addition, SBA and USDA loans and other appropriate federal assistance programs are made available as necessary.

Post-Declaration Activities. Upon approval of the Governor's request for a declaration, a number of support and coordination activities will be initiated by FEMA and the MSP/EMHSD within a relatively short period of time:

- Immediate notification of the emergency or major disaster declaration is made to the Governor, appropriate members of Congress, and affected federal agencies.

- A Federal Coordinating Officer (FCO) is appointed from FEMA to determine the type of relief needed, to coordinate federal disaster assistance programs to ensure their maximum effectiveness, and to help affected citizens and public officials obtain the assistance to which they are entitled.

- A counterpart State Coordinating Officer (SCO) is appointed at the state level and serves as the primary point of contact with the FCO and between state and local officials. The SCO is appointed from within the MSP/EMHSD.

- FEMA designates the counties that are eligible for federal assistance and the kinds of assistance to be made available.

- A Federal / State Agreement is jointly developed by FEMA and the MSP/EMHSD, covering a number of topics regarding delivery of the various disaster assistance programs. This agreement is signed by the FEMA Regional Administrator and the Governor.

- A Joint Field Office (JFO) is jointly established by the FCO and SCO to coordinate the federal disaster relief and recovery effort. This office is staffed with federal and state representatives having disaster assistance responsibilities.

- Disaster assistance registration processes (telephone and web-based) are initiated to allow disaster survivors to register for available assistance programs. This information is widely publicized within the declared area. In some situations, Community Outreach Teams may be dispatched to distribute disaster-related information and answer questions residents may have about available assistance programs and registration procedures.

- One or more Disaster Recovery Centers (DRCs) may be established by federal and state representatives in the declared area to advise disaster survivors of available programs and coordinate the provision of recovery assistance. Representatives of federal and state departments / agencies, affected local governments, private relief agencies, and other organizations which can provide assistance or counseling are normally present at the DRCs to advise and assist disaster survivors. These centers are kept in operation as long as required by the situation. In some cases, DRCs may be established in concert with appropriate community or cultural organizations in order to reach specific targeted populations. The use of "virtual" DRCs will also be considered in some situations.

- An Applicant Briefing is conducted jointly by FEMA and the MSP/EMHSD to inform all potentially eligible public entities and private nonprofit facilities of the assistance available through the Public Assistance Grant Program (PAGP, a.k.a. Public Assistance or simply PA) under the Stafford Act. In some situations, an Applicant Briefing may also be conducted for assistance available through the Hazard Mitigation Grant Program (HMGP), also under the Stafford Act. (In most cases, notification of available HMGP assistance is handled via alternate means.)

- An Inspector's Briefing for federal, state and local engineers and specialists appointed to survey damage to facilities under the PAGP and Individual Assistance Grant Program is conducted jointly by FEMA and the MSP/EMHSD. The purpose of this briefing is to inform these inspectors of PAGP requirements regarding eligibility of work, completion of necessary forms, cost estimation, etc. After the briefing, inspectors are organized into damage survey teams composed of engineers and specialists from federal and state departments / agencies and an authorized local engineer, assessor, planner, etc. from the applicant's jurisdiction. (This local representative is a key member of the team and is responsible for ensuring that all applicable damage in the jurisdiction is inspected.)

  Teams are assigned specific locations for on-site inspections based upon the damage information reported by the local emergency management program jurisdiction, and the findings of the PDA. Each team prepares Project Worksheets (PWs) which document the type and extent of damage and describe the scope and estimated cost of work needed to repair the damage. These Project Worksheets provide the basis for determination of eligible work under the PAGP.

- The FEMA Regional Administrator and/or the Federal Coordinating Officer typically deploy FEMA hazard mitigation support staff to the JFO. FEMA hazard mitigation staff are on hand to: 1) determine the extent, nature, and cause of the disaster; 2) identify potential hazard mitigation measures that could be utilized to reduce or eliminate damage from future disasters; 3) provide hazard mitigation educational support residents, 4) provide National Flood Insurance Program technical assistance to local governments, and 5) develop recommendations for implementing hazard mitigation measures.

At the JFO, FEMA mitigation staff coordinates with MSP/EMHSD to develop a Hazard Mitigation Strategy for the disaster. A number of federal and state departments / agencies may be involved in the development of the strategy. Local government representatives should also be involved in the effort. Local participation is essential to the successful identification and implementation of mitigation measures that are acceptable to the local community. In addition, many mitigation strategies involve the regulation or direction of development, which local government has the authority to do. Relevant aspects of the Hazard Mitigation Strategy are then incorporated into the Michigan Hazard Mitigation Plan (MHMP) and the applicable local hazard mitigation plans for future implementation consideration.

Many of the recommendations outlined in the Hazard Mitigation Strategy and then incorporated into the MHMP and local mitigation plans will be implemented using Hazard Mitigation Grant Program (HMGP) funds. The HMGP provides up to 75% federal funding for cost-effective mitigation measures that are consistent with the Hazard Mitigation Strategy, the MHMP and applicable local mitigation plans. In addition, the federal government may contribute up to 75% of the eligible costs of hazard mitigation measures determined to be necessary under the PAGP. Mitigation measures can also be implemented under the Pre-Disaster Mitigation program (PDM), the Flood Mitigation Assistance program (FMA), and other programs administered by various federal and state departments / agencies. (Refer to Attachment L for more information.)

State ("Section 19") Disaster Relief Funding. In the absence of federal disaster relief assistance for public damage (i.e., PA funding), state disaster relief funding under Section 19 of 1976 PA 390, as amended (MCL 30.419) may be available for eligible counties and political subdivisions severely affected by a disaster. To be eligible for this funding, affected counties and municipalities must meet a number of requirements or standards, including the timely submittal of damage assessment information. See the Administrative Rules to 1976 PA 390, as amended for Section 19 funding (R 30.51-30.61).

The amount of assistance that is available to eligible jurisdictions depends on the size of their population. Grants will be awarded up to the following amounts or 10% of the jurisdiction's total operating budget for the preceding fiscal year, whichever is less: jurisdictions with populations under 25,000 residents are eligible for grants of up to $250,000, jurisdictions with 25,000 to 75,000 residents for grants of up to $500,000, and jurisdictions with over 75,000 residents for grants of up to $1,000,000. It must be stressed that Section 19 funds are only available in the absence of federal PA funding, and only if approved by the Governor subsequent to a Governor's emergency or disaster declaration. The county or municipality applying for the funds must be included in the Governor's emergency or disaster declaration. Application is made by the governing body of the county or municipality by adopting a resolution according to the specified format in the Administrative Rules, and by completing form EMD-19 ("Application for Disaster Assistance"). The resolution and completed EMD-19 form are submitted to the appropriate MSP/EMHSD District Coordinator for processing. The Governor makes the final determination for funding, based at least partly on the recommendation made by the MSP/EMHSD. (Refer to Attachment M for a copy of the EMD-19 form.)

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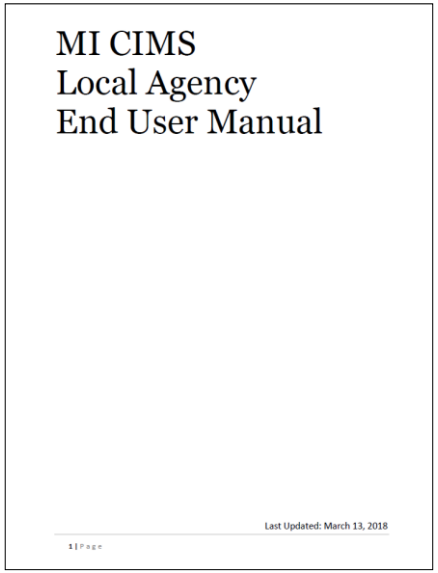
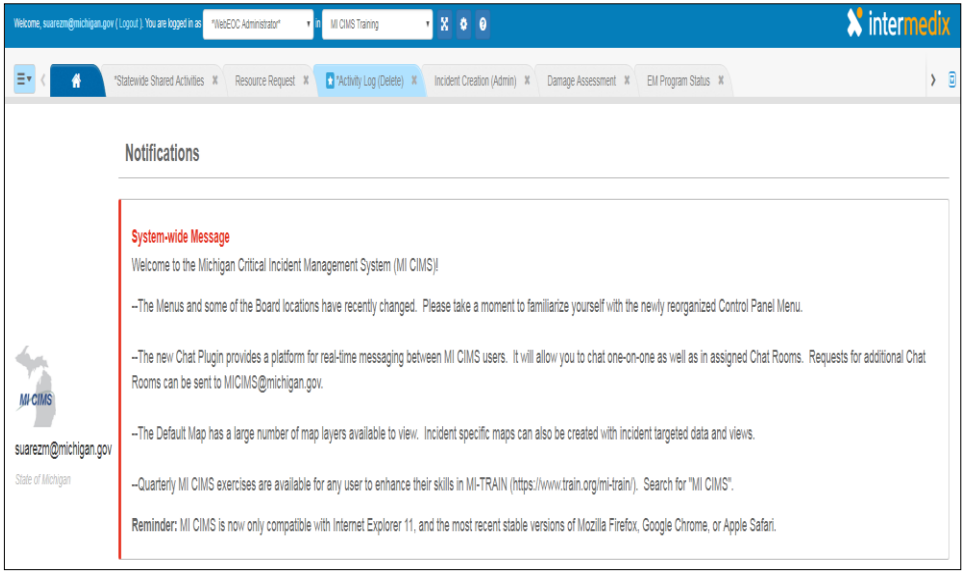
ATTACHMENTS:

Attachment A: MI CIMS Basic Instructional Resources

(WebEOC Version 8.4)

The MI CIMS Local Agency End User Manual (cover image, below left) provides detailed instructions for accessing, navigating, and entering information into the MI CIMS. It is posted in the MI CIMS File Library. When logging into the MI CIMS, a home screen will appear that looks similar to the screen below. Drop-down lists allow you to select your assigned position, and to select one of three options: 1) MI CIMS Training (for training and exercise); 2) Daily Operations (for real-world, non-incident specific operations); or 3) a specific, named incident.





Note: If you have trouble logging into the MI CIMS, contact the MSP/EMHSD MI CIMS Administrator via email at MICIMS@michigan.gov. If you have questions about or need examples of how to complete the various MI CIMS boards, please refer to the MI CIMS user manual.

Attachment B: Back-Up Incident Creation Board

To create an incident and notify key MSP/EMHSD staff of incident specifics as prescribed on the MI CIMS Incident Creation board, complete the following back-up table and submit it to the appropriate individuals via one of the designated back-up submittal methods:

Reminder: The line designators (Line 1, Line 2, etc.) in column 2 are for LEIN, radio, and telephone transmittal purposes only. They will not be found in the MI CIMS online version of the board. They can be eliminated electronically if so desired. To transmit information via the LEIN, simply type the board name on the first line and then identify each line by its line designator (e.g., Line 1, Line 2, Line 7a, etc.) followed by the damage figure or text. For example, Line 1: $45,000; Line 2: $250,000; Line 7a: 157 homes; etc. (The MI CIMS board formats have not been established in the LEIN so the labeling and incident-specific information must be typed in.)

	Incident Creation Board Back-Up Submittal Form	
Incident Name:	Line 1	
Incident Type: (Exercise/Training, Planned Event, Incident)	Line 2	
Date / Time:	Line 3	
Incident Location:	Line 4	
Incident Category:	Line 5	
Location:	Line 6	
Incident Summary:	Line 7	
Point of Contact: **Name / Title** **Telephone #**	Line 8	
Potential Issues: Life Safety	Line 9	
Potential Issues: Incident Stabilization	Line 10	
Potential Issues: Property Preservation	Line 11	

Attachment C: Format for Declaring a Local "State of Emergency"

Submission date: (insert date)

To: Deputy State Director of Emergency Management and Homeland Security – Emergency Management and Homeland Security Division, Michigan State Police; District (#) Emergency Management and Homeland Security Division Coordinator

On (insert date the incident occurred) the (insert name of political jurisdiction) sustained widespread or severe damage, injury or loss of life or property caused by (describe the type of incident – e.g., tornado, flood, ice storm, etc.). As a result of this situation, the following conditions exist: (describe the impact on the jurisdiction and the area affected – e.g., many homes and businesses destroyed; numerous deaths and injuries in the southern part of the county; high school and four elementary schools severely damaged; only bridge connecting the east and west sections of the county completely destroyed; etc.).

Therefore, as (insert title of chief executive) of (name of political jurisdiction), in accordance with Section 10 of 1976 PA 390, as amended, I hereby declare that a "state of emergency" exists within our jurisdiction as of (insert date), and that local resources are being utilized to the fullest possible extent. The response and recovery elements of our emergency operations plan have been activated.

Authorized by: (insert name/title of chief executive)

Signature: _____

Submittal Instructions

1. This declaration must be promptly forwarded **(via the MI CIMS as an attachment to the EM Program Status board, or by email, facsimile, or LEIN as a backup only if the MI CIMS is inoperable or not accessible / available)** to the Commanding Officer of the Emergency Management and Homeland Security Division, Michigan State Police (email address: MSP-EMHSD@michigan.gov; facsimile #: 517-284-3857; LEIN code: ELOP), and the appropriate MSP/EMHSD District Coordinator.

2. If the MI CIMS is inoperable or not accessible / available and using email, facsimile, or LEIN will delay the information, the telephone should be used. If telephone service is not available, radio may be used. MI CIMS or hardcopy confirmation must be forwarded as soon as possible.

3. A copy of this declaration should be kept on file with the local Clerk (County Clerk for counties; City or Township Clerk for municipal emergency management programs).

Attachment D: Format for Requesting a Governor's Emergency or Disaster Declaration and State Assistance

Submission date: (insert date)

To: Governor, State of Michigan

On (insert date), pursuant to Section 10 of 1976 PA 390, as amended, I declared that a "state of emergency" exists in (insert name of political jurisdiction) due to (describe the type of incident – e.g., tornado, flood, ice storm, etc.) which caused widespread and severe damage, injury or loss of life and property. The response and recovery elements of the (insert name of political jurisdiction) Emergency Operations Plan have been activated, and local resources are being utilized to the fullest possible extent. Despite these efforts, local resources are not sufficient to cope with the situation.

Therefore, in accordance with Section 12 of 1976 PA 390, as amended, I deem this incident to be beyond the control of this political subdivision and I respectfully request, for and on behalf of the citizens of this political subdivision, that you declare that a "state of disaster" or "state of emergency" exists therein and that consideration be given, if conditions warrant, to petitioning the President of the United States for assistance provided by Public Law 93-288, as amended. In support of this request, we will submit specific damage assessment information through official channels and in accordance with the guidance provided by the Emergency Management and Homeland Security Division of the Michigan State Police (MSP/EMHSD) within three to seven (3-7) days of this incident, unless circumstances dictate an earlier submittal as requested by the MSP/EMHSD. Furthermore, I understand that this request **will not** be acted upon without sufficient damage assessment information to substantiate the need for assistance, and I acknowledge that it is the responsibility of (insert name of political jurisdiction) to provide that information in the manner prescribed by the MSP/EMHSD.

Specifically, I request the following state assistance to supplement local response and recovery efforts: (Describe the assistance needed to cope with the situation – e.g., state law enforcement officers to staff eight access control points; five dump trucks and front-end loaders plus operators for debris removal; 50 traffic barricades for traffic control; state law enforcement officers to provide 24-hour security for eight severely damaged schools; forestry crews to assist with hazard tree removal; engineers to assess damaged roads, bridges, and drains; etc.).

Accordingly, be advised that (insert name/title of local official – usually the Emergency Manager) will provide liaison and coordination with state and federal authorities for assistance related to this incident, and in accordance with Section 14 of 1976 PA 390, as amended, he/she is directed to transmit this request to the MSP/EMHSD.

Authorized by: (insert name/title of chief executive)

Signature: _____

Submittal Instructions

1. This request must be promptly forwarded (**via the MI CIMS as an attachment to the EM Program Status board, or by email, facsimile, or LEIN as a backup only if the MI CIMS is inoperable or not accessible / available)** to the Commanding Officer of the Emergency Management and Homeland Security Division, Michigan State Police (email address: MSP-EMHSD@michigan.gov; facsimile #: 517-284-3857; LEIN code: ELOP, and the appropriate MSP/EMHSD District Coordinator, in the same manner as the local "state of emergency" declaration.

2. If the MI CIMS is inoperable or not accessible / available and using email, facsimile, or LEIN will delay the information, the telephone should be used. If telephone service is not available, radio may be used. MI CIMS or hardcopy confirmation must be forwarded as soon as possible.

3. This request **will not** be acted upon without sufficient information to substantiate the need for assistance.

4. In accordance with Section 12 of 1976 PA 390, as amended, the chief executive official of a county or municipality may initiate or authorize this request for their political subdivision.

5. A copy of this request should be kept on file with the local Clerk (County Clerk for counties; City or Township Clerk for municipal emergency management programs).

Attachment E: Back-Up EM Program Status Board

To report on the Essential Elements of Information (EEI) and the overall status of the jurisdiction's emergency operations for an incident as prescribed on the MI CIMS EM Program Status board, complete the following back-up table and submit it to the appropriate individuals via one of the designated back-up submittal methods:

Reminder: The line designators (Line 1, Line 17a, etc.) are for LEIN, radio, and telephone transmittal purposes only. They will not be found in the MI CIMS online version of the board. They can be eliminated electronically if so desired. To transmit information via the LEIN, simply type the board name on the first line and then identify each line by its line designator (e.g., Line 1, Line 2, Line 7a, etc.) followed by the damage figure or text. For example, Line 1: $45,000; Line 2: $250,000; Line 7a: 157 homes; etc. (The MI CIMS board formats have not been established in the LEIN so the labeling and incident-specific information must be typed in.)

EM Program Status Board Back-Up Submittal Form (Page 1)

EM Program Information			
EM Program:	(Line 1)	**EOC Facsimile #:**	(Line 4)
Region:	(Line 2)	**EOC Primary Contact/Contact #**	(Line 5)
EOC Telephone #:	(Line 3)	**EOC Alternate Contact/Contact #**	(Line 6)

Incident Information			
Form Status (initial; update; final):	(Line 7)	**Incident Name / Type:**	(Line 11)
Reported By:	(Line 8)	**Incident Date / Time:**	(Line 12)
Contact #:	(Line 9)	**Incident Location:**	(Line 13)
Email Address:	(Line 10)	**Incident Trend** (normal; stable; improving; worsening; recovery):	(Line 14)
Jurisdictions Impacted:	(Line 15)		
Incident Summary:	(Line 16)		

EOC Status					
EOC Activated:	(Line 17a)	**Expected to Open:**	(Line 17b)	**Expected to Close:**	(Line 17c)
Emergency Operations Plan Implemented (Y/N)?	(Line 17b)				

Declarations					
Local Emergency Declaration:	(Line 18a)	**State Declaration Requested:**	(Line 18b)	**Federal Declaration:**	(Line 18c)

Population Impacts					
Fatalities (Y/N)? If Y, # fatalities:	(Line 19a)	**Injuries (Y/N)? If Y, # injuries:**	(Line 19b)	**Evacuations (Y/N)? If Y, # evacuated:**	(Line 19c)
Shelters Open (Y/N)? If Y, # sheltered:	(Line 20a)	**Damage Assessment Complete (Y/N)?**	(Line 20b)	**Additional Resources Needed (Y/N)? (Specify)**	(Line 20c)

(Form continued on next page)

EM Program Status Board
Back-Up Submittal Form (Page 2)

EM Program:_____

Current Situation		
Type (EEI)	**Status** (Schools: Open or Closed; all others indicate Normal, Problem, or Failure)	**Comments**
Animal Issues	(Line 21a)	(Line 21b)
Civil Unrest	(Line 22a)	(Line 22b)
Debris	(Line 23a)	(Line 23b)
Emergency Services (Police)	(Line 24a)	(Line 24b)
Emergency Services (Fire)	(Line 25a)	(Line 25b)
Emergency Services (EMS)	(Line 26a)	(Line 26b)
Emergency Services (911)	(Line 27a)	(Line 27b)
Flooding	(Line 28a)	(Line 28b)
Government Offices	(Line 29a)	(Line 29b)
Haz Mat	(Line 30a)	(Line 30b)
National Terrorism Advisory System	(Line 31a)	(Line 31b)
Private Sector	(Line 32a)	(Line 32b)
Public Health	(Line 33a)	(Line 33b)
Schools	(Line 34a)	(Line 34b)
Transportation (Roads)	(Line 35a)	(Line 35b)
Transportation (Bridges)	(Line 36a)	(Line 36b)
Utilities (Communications)	(Line 37a)	(Line 37b)
Utilities (Electric)	(Line 38a)	(Line 38b)
Utilities (Gas)	(Line 39a)	(Line 39b)
Utilities (Water)	(Line 40a)	(Line 40b)
Utilities (Water Treatment)	(Line 41a)	(Line 41b)

Attachment F: Back-Up Damage Assessment Board

To report on damage and impacts to public and private facilities as prescribed on the MI CIMS Damage Assessment board, complete the following back-up table and submit it to the appropriate individuals via one of the designated back-up submittal methods:

Reminder: The line designators (Line 1, Line 17a, etc.) are for LEIN, radio, and telephone transmittal purposes only. They will not be found in the MI CIMS online version of the board. They can be eliminated electronically if so desired. To transmit information via the LEIN, simply type the board name on the first line and then identify each line by its line designator (e.g., Line 1, Line 2, Line 7a, etc.) followed by the damage figure or text. For example, Line 1: $45,000; Line 2: $250,000; Line 7a: 157 homes; etc. (The MI CIMS board formats have not been established in the LEIN so the labeling and incident-specific information must be typed in.)

Damage Assessment Board Back-Up Submittal Form (Page 1)

Details					
EM Program:	(Line 1)	**Telephone #:**		(Line 4)	
Region:	(Line 2)	**Facsimile #:2**		(Line 5)	
Prepared By (name / title):	(Line 3)	**Email Address:**		(Line 6)	

Part I: Private Property (Cumulative Damages)							
Property Type	**# Destroyed**	**# Major**	**# Minor**	**#**	**# Inaccessible**	**Estimated Dollar**	**Estimated Insurance %**
PERMANENT HOMES							
Single Family Homes	(Line 7a)	(Line 7b)	(Line 7c)	(Line 7d)	(Line 7e)	(Line 7f) $	(Line 7g)
Multi-Family Homes	(Line 8a)	(Line 8b)	(Line 8c)	(Line 8d)	(Line 8e)	(Line 8f) $	(Line 8g)
Mobile Homes	(Line 9a)	(Line 9b)	(Line 9c)	(Line 9d)	(Line 9e)	(Line 9f) $	(Line 9g)
BUSINESSES							
Business / Industry	(Line 10a)	(Line 10b)	(Line 10c)	(Line 10d)	(Line 10e)	(Line 10f)$	(Line 10g)
Non-Profit Orgs	(Line 11a)	(Line 11b)	(Line 11c)	(Line 11d)	(Line 11e)	(Line 11f)$	(Line 11g)

Part II: Public Property (includes eligible non-profit facilities) (Cumulative Damages)				
Type of Property		**# of Sites**	**Estimated Dollar**	**Insured (%)**
Category A (Debris Removal)		(Line 12a)	(Line 12b)$	(Line 12c)
Category B (Emergency Protective Measures)		(Line 13a)	(Line 13b)$	(Line 13c)
Category C (Roads and Bridges) Federal Aid		(Line 14a)	(Line 14b)$	(Line 14c)
Category C (Roads and Bridges) Non Federal Aid		(Line 15a)	(Line 15b)$	(Line 15c)
Category D (Water Control Facilities)		(Line 16a)	(Line 16b)$	(Line 16c)
Category E (Public Buildings and Equipment)		(Line 17a)	(Line 17b)$	(Line 17c)
Category F (Public Utilities)		(Line 18a)	(Line 18b)$	(Line 18c)
Category G (Parks and Recreation Facilities)		(Line 19a)	(Line 19b)$	(Line 19c)

(Form continued on next page)

Damage Assessment Board
Back-Up Submittal Form (Page 2)

EM Program: _____

Part III: Community Impacts	
Unresolved or Emerging Public Health/Safety/Welfare Threats	(Line 20)
Impacts on Essential Public Services and Facilities	(Line 21)
List (by location) of Roads and Bridges Closed as a Result of the Disaster	(Line 22)
Impacts on Specific Groups within the Community (e.g., elderly, young children, non-English speaking, homeless)	(Line 23)
Socio-economic Impacts on the Community (e.g., economy, environmental, historical, political, psychological)	(Line 24)
Cities, Townships, Villages Affected (Counties Only)	(Line 25)
Other Impacts (Specify)	(Line 26)

Comments
(Line 27)

Attachment G: Damage Survey Worksheet and Mapping Instructions, and Degree of Damage Categories

The Damage Survey Worksheet found on pages 38-40 is provided to assist on-site inspection teams in documenting damage to homes, businesses, and non-profit organizations (private damage). By using this worksheet, an accurate house-by-house, business-by-business, facility-by-facility, etc. survey can be completed in the shortest time possible. Each street, block, section, etc., (depending on how the surveys are conducted) should be recorded on a separate worksheet.

Mapping Private Damage. Damaged areas should be outlined on one or more maps (ideally one for private damage and one for public damage) and classified according to the predominant level of damage encountered. A common damage classification system is provided on pages 31-35. For example, if an on-site inspection team surveys a four square block area and, upon reviewing their completed worksheets, finds that 75% of the homes and businesses surveyed received major damage (category 2 in the classification system), then the area surveyed should be outlined on the map and assigned a "2;" if the majority of homes and businesses surveyed had received only minor damage (category 1 in the classification system), then a "1" would be assigned to that area, and so on. The number of damaged homes / businesses should be indicated (in parenthesis) in each outlined area. See the sample map on page 37.

Mapping Public Damage. Damaged public facilities should be listed on the Damage Survey Worksheet, and damage cost estimates should be entered in the "Description of Damage" column on the right side of the worksheet. On the public damage map, a short description of the damage (e.g., 50 ft. section of roadbed collapsed; road impassable) should be entered next to the damaged facility, incorporating photographs of damages into maps or diagrams can further illustrate location and extent of damage.

Facilitating the Preliminary Damage Assessment. Classifying and mapping damage in this way makes it easier for Preliminary Damage Assessment (PDA) teams to prioritize damage and complete their necessary damage surveys in the shortest time possible. It also helps ensure that the most serious damage is surveyed first so that assistance can be targeted where it is needed most. In addition, it also assists federal and state authorities in developing appropriate response and recovery strategies, and in determining the type and amount of assistance required.

Information Submittal. The completed Damage Survey Worksheets, along with the map(s) with damaged areas outlined and classified and any photography taken of the damaged facilities / areas, should be submitted to the EOC per local procedure. The EOC then compiles this information in MI CIMS Damage Assessment board, attaches applicable damage maps and photography (hardcopy maps and photographs must be scanned and attached), and submits the report to the SEOC and the appropriate MSP/EMHSD District Coordinator within the specified three (3) day time period. **IT IS NOT NECESSARY TO SUBMIT DAMAGE SURVEY WORKSHEETS TO THE MSP/EMHSD. THEY SHOULD BE RETAINED LOCALLY FOR PERMANENT RECORDKEEPING AND FOR USE IN A PDA, IF CONDUCTED.**

B**ack-up Submittal Instructions.** If the MI CIMS is not operable or available / accessible and the back-up submittal methods (email, facsimile, or LEIN) must be used instead, these instructions should be followed:

- *Map / Image Size and Quality.* If submitting by facsimile, the damage map(s) and photography must be no larger than 8 ½" X 11" in size and of appropriate resolution to be legible once transmitted. (Keep in mind that the image that comes out of the facsimile machine on the other end will in many cases be significantly lower in quality than the original. Maps must be compiled with this in mind. Similarly, photographs that have overly dark backgrounds or dark features may not transmit well by facsimile.) If submitting by email, maps and

photographs can be captured digitally and submitted as attachments (e.g., PDF). Maps and photographs cannot be submitted via the LEIN.

- *Page Numbering.* If submitting by facsimile, be sure to number the pages in chronological order (at the top or bottom of the page) in such a manner that the numbers will appear on each transmitted page. This will ensure that the package is arranged in the intended order, and that no pages are missing. The numbers can simply be hand written in and then circled for greater visibility.

- *List of Damaged Areas.* If submitting information electronically (email or LEIN), a list of damaged areas can be compiled in lieu of the damage map(s). For example, private damage could be described by street, block, section, etc., in any of the following manners:

  - Elm Street from Maple to Oak Streets – major damage to 12 homes, minor damage to 17 homes; OR
  - The area bounded by Elm, Maple, Oak, and Pine Streets – major damage to 12 homes, minor damage to 17 homes; OR
  - The northwest section of the city bounded by Elm Street on the south, M-60 on the west, the Pine River on the north, and US-23 on the east – major damage to 12 homes, minor damage to 17 homes.

  Public damage should be described using the exact (official) name of the facility (e.g., Maple Street Elementary School; Ingham County Courthouse; etc.) or, in the case of bridges, roads, sewer lines, etc., the approximate location (e.g., M-60, 1/4 mile south of Centerline Road; the intersection of Davis Road and Burke Highway; the bridge over Maple River on M-25; etc.).

  On the back-up Damage Assessment board, this information can be entered in the "Community Impacts" or "Comments" fields, or it can be included in a separate document and listed under "Attachments."

Damage Survey Considerations: Degree of Damage Categories. The degree of damage categories on the following pages are consistent with FEMA PDA for Individual Assistance (IA) guidelines and should be used for classifying private damage in Michigan.

FEMA Damage Survey Guidelines for Basements. FEMA has specific guidelines for PDA team members with regard to basements when considering the degree of damage to a structure during the PDA process. For the purpose of recording flood or sewer backup damage, a finished basement is defined as containing any of the following essential rooms: Occupied bedrooms, bathrooms, kitchens, and/or living room. When assessing basements, damage is recorded using the same water level measurements referenced for upper floors. Recreational and other common areas of the basements are considered non-essential living space, and should be evaluated as though the basement is unfinished.

Damage Survey Considerations: Degree of Damage Categories (cont.)

INACCESSIBLE: Structures that cannot be reached by reasonable means due to disaster-related loss of access and for which damages cannot clearly be viewed from a safe vantage point at the time of the assessment should be considered inaccessible. Structures can be inaccessible due to damage to bridges, roads that are severely eroded, washed out flooded or blocked by mudslides, etc. If structures can be safely reached through alternative routes, they should not be considered inaccessible.

If the damage is viewable from a safe vantage point, a damage level should be assigned. Individual apartment units that are not habitable due to damage to lower floors should also be included in the assessment.

▼

EXAMPLES OF INACCESSIBLE STRUCTURES:

Damage Survey Considerations: Degree of Damage Categories (cont.)

0 – AFFECTED: Structure has minimal damage, is habitable / usable, and requires mostly cosmetic repairs to return it to pre-disaster condition. Examples: partial missing shingles or siding, cosmetic damage such as paint discoloration or loose siding, broken screens, gutter damage and debris, damage to attached structures (porches, carports, garages, non-commercial outbuildings, etc.), downed trees that do not affect access to structure, and damage to landscaping and retaining walls. For flooding, the structure can be considered AFFECTED if there is any water line in the crawl space or basement (when essential living space or mechanical components are not damaged or submerged). Structures with minor access problems due to flooding can also be considered AFFECTED.

Non-flood disasters for manufactured (mobile) homes: The home's frame is not bent, twisted, or otherwise compromised, and no structural components of the home have been damaged (i.e., windows, doors, wall coverings, roof, bottom board insulation, ductwork, and/or utility hook-up).

Flood disasters for manufactured (mobile) homes: This category includes residences with cosmetic damage only that do not affect habitability. It also applies to residences with damage to a porch, carport, garage, and/or an outbuilding.

▼

EXAMPLES OF AFFECTED STRUCTURES (0):

Damage Survey Considerations: Degree of Damage Categories (cont.)

1 – MINOR DAMAGE: Encompasses a wide range of damages that do not affect structural integrity. Examples of minor damage: Nonstructural damage to roof components over essential living spaces, nonstructural damage to interior walls (including drywall and insulations), nonstructural damage to exterior components, multiple small vertical cracks in the foundations, damage to chimney, damage to mechanical components (furnace, water heater, boiler, HVAC, etc.), damage or disaster related contamination of private wells or septic systems. For flooding, a structure can be considered to have sustained MINOR DAMAGE if there is a water line of up to 18 inches in an essential living space, or there is water damage to mechanical components of the home.

Non-flood damage to manufactured (mobile) homes: The home's frame is not bent, twisted, or otherwise compromised, and it has not been displaced from the foundation. However, other structural components of the home have sustained minor damage (i.e., windows, doors, wall coverings, roof, bottom board insulation, ductwork, and/or utility hook-up).

Flood damage to manufactured (mobile) homes: The water line is below the home's floor system but the skirting or HVAC may be impacted.

▼

EXAMPLES OF STRUCTURES WITH MINOR DAMAGE (1):

Damage Survey Considerations: Degree of Damage Categories (cont.)

2 – MAJOR DAMAGE: Structure has sustained significant damage or requires extensive repairs before it can be made habitable again. Damage involves substantial failures of the structural elements of the roof over required rooms, failures of the structural elements of walls, and failures to the foundation (including crumbling, bulging, collapsing, horizontal cracks of more than two inches, and shifting of the residence on the foundation of more than six inches). For flood disasters, 18 inches or more of water in essential living spaces, water that covers electrical outlets, or any water line on the first floor if a basement is completely full can be considered MAJOR DAMAGE. For dwellings in this category, at least one photo should be stored.

Non-flood damage to manufactured (mobile) homes: The structure suffered significant damage that requires extensive repairs, or has been displaced from the foundation.

Flood damage to manufactured (mobile) homes: Water has impacted the floor system, and/or the mobile home has been displaced from the foundation and other structural components have been damaged.

EXAMPLES OF STRUCTURES WITH MAJOR DAMAGE (2):

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Damage Survey Considerations: Degree of Damage Categories (cont.)

3 – DESTROYED: Structure is a total loss or damaged to such an extent that repair is not feasible. What is left will have to be bulldozed off or dismantled for new construction. Any one of the following conditions of a structure may constitute a classification of DESTROYED: Complete failure of two or more structural components (e.g., collapse of basement walls, foundation, load-bearing walls, or roof), only the foundation remains, structure is in imminent threat of collapse because of disaster-related damage or confirmed imminent danger (e.g., impeding landslides, mudslides, or sinkholes).

Non-flood damage to manufactured (mobile) homes: The frame of the home must be bent, twisted, or otherwise compromised. The home is missing the roof or the structural ribbing has collapsed for the majority of the roof system.

Flood damage to manufactured (mobile) homes: The home is a total loss.

EXAMPLES OF DESTROYED STRUCTURES (3):

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Damage Survey Considerations: Degree of Damage Categories (cont.)

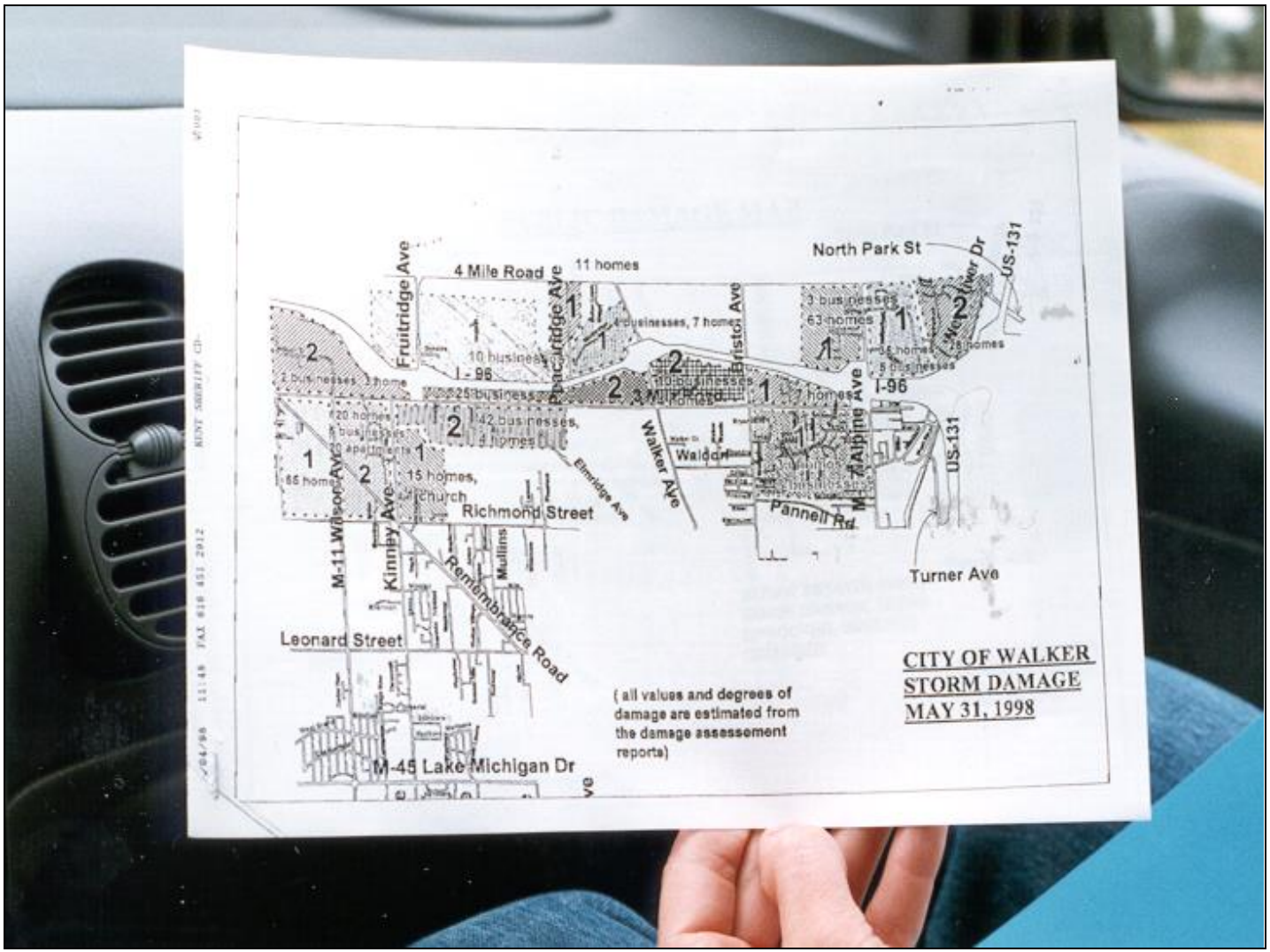
Damage Classification: Rapid Evaluation Matrix

Damage Classification	Definition	Flood Damage examples (Conventionally built homes)	Flood Damage examples (Manufactured homes)	Non-Flood Damage examples (Conventionally built homes)	Non-Flood Damage examples (Manufactured homes)
0 – AFFECTED	Minimal damage to exterior and/or contents of home.	• Any water line in crawl space or basement when essential living space or mechanical components are not damaged or submerged.	• No damage affecting habitability; cosmetic damage only.	• Partial missing shingles or siding. • Cosmetic damage such as paint discoloration or loose siding. • Broken screens. • Gutter damage and debris. • Damage to an attached structure, such as a porch, carport, garage, or outbuilding with non-commercial use. • Damage to landscaping, retaining walls, or downed trees that do not affect access to residence.	• The frame of the dwelling is not bent, twisted or otherwise compromised, and **no structural components have been damaged**.
1 – MINOR DAMAGE	Damages that do not affect structural integrity of residence.	• Water line up to 18 inches in an essential living space. • Damage to mechanical components (e.g., furnace, boiler, water heater, HVAC, etc.)	• Water line is below the floor system. • Skirting or HVAC is impacted.	• Nonstructural damage to roof components over essential living space. • Nonstructural damage to interior wall components. • Nonstructural damage to exterior components. • Multiple small vertical cracks in foundation. • Damage to chimney, including tilting, cracks or separation from residence. • Damage to mechanical components. • Damage or contamination of private well or septic system.	• No structural damage and residence has not been displaced from foundation. • Nonstructural components have sustained damage. • Skirting or HVAC is impacted.
2 – MAJOR DAMAGE	Significant structural damages requiring extensive repairs.	• Water line above 18 inches in an essential living space. • Water line above electrical outlets. • Water line on first floor of residence when basement is completely filled.	• Water has come into contact with floor system. • Residence has been displaced from foundation and other structural components have been damaged.	• Failure or partial failure to structural elements of the roof over required rooms. • Failure or partial failure to structural elements of the walls. • Failure or partial failure to foundation, to include crumbling, bulging, collapsing, horizontal cracks of more than two inches, and shifting of the residence on the foundation by more than six inches.	• Residence has been misplaced from the foundation and other structural components have been damaged.
3 – DESTROYED	Residence is a total loss or repair is not feasible.	• Complete failure of two or more structural components (e.g., collapse of basement walls, foundations, walls, roof)	• The residence is a total loss.	• Only foundation remains. • Immediate demolition or removal required because of disaster-related damage or confirmed imminent danger.	• The frame of the residence is bent, twisted or otherwise compromised. • Residence is missing the roof covering or the structural ribbing for the majority of the roofing system has collapsed.

Source: FEMA Damage Assessment Operations Manual, April 6, 2016

Damage Map(s)

Damage information recorded on the Damage Survey Worksheets should be recorded on one or more maps (ideally one for private damage, as shown below, and one for public damage) with the predominant level of damage clearly indicated within each survey area. This area had a mixture of major damage (“2”) and minor damage (“1”).



Damage Survey Worksheet

(Populated example)

Type of Disaster / Survey Date:	Flooding* / Severe Storm; 10/21/12	**County:**	Any County, MI
Street Name or Location:	Maple Street	**Local Jurisdiction:**	Any City / Township / Village, MI
Team Conducting Survey:	Smith / Jones / Thompson	**Damage Type (Public or Private):**	Private

Address or General Location	Degree of Damage					Type of Structure	Flood Level in Feet: B=basement F=first floor		Description of Damage (Include cost estimate for public facility damage. Include insurance coverage estimate for damage, if available / applicable. An alternative would be to use a simple alphabetic code for insurance coverage – e.g., N = no insurance; U = under insured; I = fully insured.)	Latitude / Longitude (if possible)
	In	0	1	2	3		B	F		
100 Block: 105 Maple Street			X			S	1.5	---	1.5 feet of water in basement only; has flood insurance (100%)	N42°57'19 / W085°07'45
108 Maple Street			X			S	1.5	---	1.5 feet of water in basement only; no flood insurance (0%)	N42°57'24 / W085°08'02
111 Maple Street				X		S	---	2.5	Water below door knob; basement inundated; no flood insurance (0%)	N42°57'19 / W085°07'58
114 Maple Street					X	M	---	1.5	1.5 feet of water above floor level – destroyed; has flood insurance (100%)	N42°57'19 / W085°08'58
200 Block: 207 Maple Street					X	S	---	---	Completely gone – destroyed; has insurance (100%)	N42°57'16 / W085°08'14
212 Maple Street					X	S	---	---	Front walls still standing; everything else gone; has insurance (100%)	N42°57'14 / W085°08'14
217 Maple Street					X	S	---	---	Roof / outside walls gone – destroyed; has insurance (100%)	N42°57'13 / W085°08'18
239 Maple Street		X				S	---	---	Downed tree damaged porch corner only; insurance info not available	N42°57'11 / W085°08'21
243 Maple Street	X					S	---	---	Could not reach home due to street flooding in the area.	N42°57'11 / W085°08'24
TOTALS:	1	1	2	1	4				**NOTE:** After the survey is completed, this worksheet should be **RETAINED** locally for reference and follow-up by federal and state officials. It is recommended that **SEPARATE WORKSHEETS** be used, wherever possible, to survey public and private damage.	

Damage Classification	Damage: Conventionally Built Structures	Damage: Manufactured (Mobile) Structure	Flood Depth: Conventionally Built Structures	Flood Depth: Manufactured (Mobile) Structure
INACCESSIBLE	The property cannot be accessed safely through reasonable methods and therefore cannot be assessed.			
AFFECTED (0)	Minimal damage to exterior of the home or non-essential basements. Residents can remain in the structure.	Home has suffered cosmetic damage only. Damage to outbuildings and detached structures.	Any water line in the crawl space or basement when essential living space or mechanical components are not damaged or submerged.	No damage affecting habitability; cosmetic damage only.
MINOR DAMAGE (1)	Structure sustained damage that does not affect structural integrity. For example, nonstructural damage to roof, interior or exterior walls.	Home is damaged and requires minimal repairs. There is no structural damage.	Water line below 18 inches in essential living spaces (bedroom, kitchen, etc.) or damage to mechanical components (furnace, water heater, HVAC, etc.).	Water line is below home's floor system but skirting or HVAC may be impacted. Visible water line below floor system.
MAJOR DAMAGE (2)	Home sustained significant structural damage and requires extensive repairs. For example, failure of structural elements of roof, walls or foundation	Residence has sustained structural or significant damage that requires extensive repairs. For example, the home has been displaced from the foundation.	Water line 18 inches above floor in essential living space, a water line above electrical outlets, or water line on first floor when basement is completely full.	Water has impacted floor system (to include belly board insulation, ductwork, and subflooring), or visible water line above the floor system.
DESTROYED (3)	Home is a total loss or damaged to such an extent that repair is not feasible.	Residence is a total loss. For example, if the frame is bent, twisted or otherwise compromised, roof covering is missing, the roof's structural ribbing has collapsed.	Complete failure of two or more major structural components. For example, collapse of basement walls, foundation, walls, or roof.	Water has compromised the living compartment

TYPE OF STRUCTURE: S – Single Family Home (Primary Residence); **M – Manufactured (Mobile) Home** (Primary Residence); **A – Apartment / Rental Unit** (Rental Residence); **V – Vacation Home / Cottage** (Secondary Residence); **B – Business** (For-Profit Organization); **NPO – Non-Profit Organization** (Not-For-Profit Organization); **P – Public Facility** (Also indicate the type of structure by name)

Damage Survey Worksheet

(Blank template for field use)

Type of Disaster / Survey Date:		**County:**	
Street Name or Location:		**Local Jurisdiction:**	
Team Conducting Survey:		**Damage Type (Public or Private):**	

Address or General Location	**Degree of Damage**					**Type of Structure**	**Flood Level in Feet: B=basement F=first floor**		**Description of Damage** (Include cost estimate for public facility damage. Include insurance coverage estimate for damage, if available / applicable. An alternative would be to use a simple alphabetic code for insurance coverage – e.g., N = no insurance; U = under insured; I = fully insured.)	**Latitude / Longitude** (if possible)
	In	**0**	**1**	**2**	**3**		**B**	**F**		
TOTALS:									**NOTE:** After the survey is completed, this worksheet should be **RETAINED** locally for reference and follow-up by federal and state officials. It is recommended that **SEPARATE WORKSHEETS** be used, wherever possible, to survey public and private damage.	

Damage Classification	**Damage: Conventionally Built Structures**	**Damage: Manufactured (Mobile) Structure**	**Flood Depth: Conventionally Built Structures**	**Flood Depth: Manufactured (Mobile) Structure**
INACCESSIBLE	The property cannot be accessed safely through reasonable methods and therefore cannot be assessed.			
AFFECTED (0)	Minimal damage to exterior of the home or non-essential basements. Residents can remain in the structure.	Home has suffered cosmetic damage only. Damage to outbuildings and detached structures.	Any water line in the crawl space or basement when essential living space or mechanical components are not damaged or submerged.	No damage affecting habitability; cosmetic damage only.
MINOR DAMAGE (1)	Structure sustained damage that does not affect structural integrity. For example, nonstructural damage to roof, interior or exterior walls.	Home is damaged and requires minimal repairs. There is no structural damage.	Water line below 18 inches in essential living spaces (bedroom, kitchen, etc.) or damage to mechanical components (furnace, water heater, HVAC, etc.).	Water line is below home's floor system but skirting or HVAC may be impacted. Visible water line below floor system.
MAJOR DAMAGE (2)	Home sustained significant structural damage and requires extensive repairs. For example, failure of structural elements of roof, walls or foundation	Residence has sustained structural or significant damage that requires extensive repairs. For example, the home has been displaced from the foundation.	Water line 18 inches above floor in essential living space, a water line above electrical outlets, or water line on first floor when basement is completely full.	Water has impacted floor system (to include belly board insulation, ductwork, and subflooring), or visible water line above the floor system.
DESTROYED (3)	Home is a total loss or damaged to such an extent that repair is not feasible.	Residence is a total loss. For example, if the frame is bent, twisted or otherwise compromised, roof covering is missing, the roof's structural ribbing has collapsed.	Complete failure of two or more major structural components. For example, collapse of basement walls, foundation, walls, or roof.	Water has compromised the living compartment

TYPE OF STRUCTURE: S – Single Family Home (Primary Residence); **M – Manufactured (Mobile) Home** (Primary Residence); **A – Apartment / Rental Unit** (Rental Residence); **V – Vacation Home / Cottage** (Secondary Residence); **B – Business** (For-Profit Organization); **NPO – Non-Profit Organization** (Not-For-Profit Organization); **P – Public Facility** (Also indicate the type of structure by name)

Damage Survey Worksheet

(Blank template for field use)

Type of Disaster / Survey Date:		**County:**	
Street Name or Location:		**Local Jurisdiction:**	
Team Conducting Survey:		**Damage Type (Public or Private):**	

Address or General Location	**Degree of Damage**					**Type of Structure**	**Flood Level in Feet: B=basement F=first floor**		**Description of Damage** (Include cost estimate for public facility damage. Include insurance coverage estimate for damage, if available / applicable. An alternative would be to use a simple alphabetic code for insurance coverage – e.g., N = no insurance; U = under insured; I = fully insured.)	**Latitude / Longitude** (if possible)
	In	**0**	**1**	**2**	**3**		**B**	**F**		
TOTALS:									**NOTE:** After the survey is completed, this worksheet should be **RETAINED** locally for reference and follow-up by federal and state officials. It is recommended that **SEPARATE WORKSHEETS** be used, wherever possible, to survey public and private damage.	

Geospatial Data Collection. If possible, geospatial coordinates (latitude and longitude) should be collected (in addition to the street address) for each damaged structure / facility (or clusters of damaged structures / facilities, as appropriate). This information can be entered in the last (far right hand) column of the Damage Survey Worksheet. Collecting this information will assist the MSP/EMHSD in mapping the damaged areas using its GIS capability. For some public facility sites (e.g., drains, bridges, culverts, etc.) it will not be possible to include a street address so the geospatial coordinates will be the only method to accurately locate the damaged sites.

Background Note: If the community has already geo-located structures as part of the property assessment process, it will not be necessary to duplicate that effort in the field when conducting damage surveys.

Collection Methodology. It is recommended that geospatial data be collected in the following manner:

Standards. The standard datum of GPS latitude / longitude collection is the North American Datum of 1983 (NAD-83) or the World Geodetic System of 1984 (WGS-84) of the U.S. Defense Mapping Agency. Coordinates ideally will be in decimal degrees longitude and latitude with at least 6 decimal places for property locations and include a negative sign (-) to show west longitude or south latitude (e.g., latitude 36.999221 longitude -109.044883). However, in most instances it will not be feasible to collect and report data in this manner. Therefore, it is acceptable to record the coordinates in the standard format of degrees, minutes and seconds (e.g., latitude 36°42'36" longitude 085°81'18"). The MSP/EMHSD can convert coordinates in this format to decimal format for database and map production purposes. It is also possible, on many GPS units, to simply enter the location as a "waypoint" and the coordinates can then be copied from the GPS unit to the MSP/EMHSD's GIS for database and map production.

FEMA Guidelines. FEMA guidelines specify that geospatial coordinates (latitude and longitude) should be taken from one of the following places, listed in order of preference:

- The front door of the structure
- The center of the beginning of the driveway, road, or access way that is used to access the property
- From the westernmost or easternmost point of the property closest to the road or access way (either the SW, SE, NW or NE corner of the property). This specifically applies to areas / facilities / structures where actual addresses and easily recognizable property divisions may not exist.

Survey Priorities. Although collection of geospatial data is important to the State's assessment and response / recovery efforts, it is also important to remember that the actual assessment of the damaged facility is the ultimate purpose of the assessment effort. Therefore, keeping geospatial data collection as simple as possible is important to keeping the assessment operations on track and on time. Geospatial data collection helps ensure an accurate geographic portrayal of the damage; however, the actual assessment of the damage should remain the focus of the assessment effort. In some instances this may mean that NO geospatial data will be collected – depending on the incident circumstances and the time available for collecting information.

Attachment H: Damage Survey Form for Businesses and Non-Profit Organizations

Usage Note: This customizable and expandable information collection tool can be used by businesses and non-profit organizations / facilities to independently assess and report on their own damages and impacts. The completed form should be returned to the EOC or other designated (local) location for compilation, analysis, synthesis, and reporting by the requested due date.

PURPOSE OF THIS SURVEY:

The **(name of jurisdiction)** Emergency Management Office needs accurate and timely information about this incident in order to determine its overall impacts and to facilitate appropriate response and recovery efforts. The information you provide will help aid in determining the nature, scope, magnitude, extent of loss, and anticipated duration of the incident. **DIRECTIONS:** Please fill out this form completely and submit it by **(due date)** to the **(name of jurisdiction)** Emergency Management Office using the contact information provided at the end of the form. If you have **immediate needs at your facility related to health and safety, please dial 911. Do NOT use this form to mobilize life safety assistance.** Also, this is **NOT** an application for state or federal disaster assistance; rather, it is an information gathering tool that will aid local, state and federal officials in determining whether or not such assistance may be required or warranted.

BASIC FACILITY INFORMATION:

Incident type:		Facility address:		Facility type: (i.e., business; non-profit)	
Incident date:		Facility contact person:		Primary facility function(s):	
Facility latitude / longitude:		Contact phone #(s):		Facility owner / operator:	
Facility name:		Email address:		Current operational status: (i.e., full service; partial service; closed; relocated)	

DAMAGE AND IMPACTS TO FACILITY:

Was facility damaged (Y/N)?		Assessment of damage: (i.e., minor damage; major damage; destroyed)		Other incident impacts: (e.g., facility evacuated or locked down; staff sheltered onsite; etc.)	
If Y, describe damage to buildings / structures:		Critical systems / infrastructure currently inoperable, if any:		Is facility on state or federal historic places registry (Y/N)?	
If Y, describe damage to equipment, furnishings, other contents:		Number of injuries at facility from incident:		If Y, describe damage / impacts to historic items:	
If Y, describe damage to critical systems / infrastructure:		Number of casualties at facility from incident:		Other information related to facility damage / impacts: (e.g., facility staff unemployed due to incident and anticipated duration; special events relocated or cancelled and financial impact)	

SPECIFIC NEEDS:

Access and functional needs populations at facility (Y/N)?		Special services required for these populations (Y/N)?		Does facility require assistance (Y/N)?	
If Y, specify population(s) and numbers at facility: (i.e., elderly, non-English speaking, children, etc.)		If Y, specify services facility is unable to provide:		If Y, specify type(s) of assistance required and anticipated duration:	

INSURANCE COVERAGE:

Does facility have property / casualty insurance (Y/N)? (If Y, indicate full or partial)		Percent of damage covered by insurance:		If Incident is flood, does facility have flood insurance (Y/N)?	

SUBMIT COMPLETED FORM BY (desired date) TO: (provide specific submittal instructions, i.e., contact person, address, email address, facsimile and phone numbers, etc.)

THANK YOU IN ADVANCE FOR ASSISTING (NAME OF JURISDICTION) IN DETERMINING THE EXTENT OF DAMAGE AND IMPACTS FROM THIS INCIDENT.

Attachment I: Disaster Debris Estimating Techniques

Background Note: The following guidelines can be used to aid in estimating the amounts of disaster debris on the ground. By using these measures and some simple mathematical calculations, approximate debris figures can be generated in a relatively short amount of time. Determining the amount and types of disaster debris is a necessary first step in setting up a debris removal and disposal operation, and in determining potential costs associated with Category A (Debris Removal and Disposal) work under federal Public Assistance (PA), or Section 19 of 1976 PA 390 (MCL 30.419) state funding in the absence of federal PA funding. This information should be reported in the Public Property section of the MI CIMS Damage Assessment board. It can also be reported in the Current Situation (Debris) section of the MI CIMS EM Program Status board if early debris estimates are generated.

USACE "Quick" Debris Forecasting Formulas and Tables

(Sources: FEMA Public Assistance Debris Management Guide, FEMA 325)

Standard Acronyms / Terms. L – Length; W = Width; H = Height; CY = Cubic Yards; T = Tons; SF = Square Feet; C & D = construction and demolition debris (materials from damaged buildings / related); vegetative debris = downed trees / shrubbery (also called "woody debris")

Vegetative Cover Multiplier. The USACE vegetative cover multiplier is a measure of the amount of debris within a subdivision or neighborhood. The following table describes the three vegetative cover categories used by the USACE in debris forecasting:

Vegetation Cover	Description	Multiplier
Light	Includes new home developments where more ground is visible than trees. These areas will have sparse canopy cover.	1.1
Medium	Generally has a uniform pattern of open space and tree canopy cover. This is the most common description for vegetative cover.	1.3
Heavy	Found in mature neighborhoods and woodlots where the ground or houses cannot be seen due to the tree canopy cover.	1.5

Destroyed Single-Family Residence Debris. The following table developed by the USACE provides forecasted debris quantities for totally destroyed single-family, one-story, residential structures in the applicable vegetative cover category:

Typical House (SF)	Vegetative Cover: None	Vegetative Cover: Light (1.1)	Vegetative Cover: Medium (1.3)	Vegetative Cover: Heavy (1.5)
1,000 SF	200 CY	220 CY	260 CY	300 CY
1,200 SF	240 CY	264 CY	312 CY	360 CY
1,400 SF	280 CY	308 CY	364 CY	420 CY
1,600 SF	320 CY	352 CY	416 CY	480 CY
1,800 SF	360 CY	396 CY	468 CY	540 CY
2,000 SF	400 CY	440 CY	520 CY	600 CY
2,200 SF	440 CY	484 CY	572 CY	660 CY
2,400 SF	480 CY	528 CY	624 CY	720 CY
2,600 SF	520 CY	572 CY	676 CY	780 CY

Attachment I: Disaster Debris Estimating Techniques (cont.)

Mobile Home Debris. The typical mobile home generates more debris by volume than a single-family "stick built" home. Historically, the USACE has found the volume of debris from mobile homes to be 290 CY of debris for a single-wide unit and 415 CY of debris for a double-wide unit.

Personal Property Debris – Floods. The amount of personal property within an average flooded single-family home has been found to be 25-30 CY for homes without a basement and 45-50 CY for homes with a basement.

Damaged Single-Family Residence Debris. The USACE debris forecast table on the previous page only provides figures for totally destroyed, single-family, one-story, residential structures in the applicable vegetative cover category. Adjustments must be made for structures that incur major damage or minor damage based on Michigan's damage assessment "Degree of Damage Categories" found at Attachment G to this handbook. The MSP/EMHSD has modified the USACE table to provide figures for structures with major and minor damage, based on generalized percentage of damage estimates for each level of damage. For **major damage** (which indicates 50 percent or more and up to 99 percent of the structure is damaged), the debris forecast figure is set at **65 percent** of the USACE figure for each residential structure size. For **minor damage** (which indicates less than 50 percent of the structure is damaged), the debris forecast figure is set at **25 percent** of the USACE figure for each residential structure size. These modified figures are presented in the following table:

Typical House (SF)	Vegetative Cover: None	Vegetative Cover: Light (1.1)	Vegetative Cover: Medium (1.3)	Vegetative Cover: Heavy (1.5)
1,000 SF	**Major Damage: 130 CY** Minor Damage: 50 CY	**Major Damage: 143 CY** Minor Damage: 55 CY	**Major Damage: 169 CY** Minor Damage: 65 CY	**Major Damage: 195 CY** Minor Damage: 75 CY
1,200 SF	**Major Damage: 156 CY** Minor Damage: 60 CY	**Major Damage: 172 CY** Minor Damage: 66 CY	**Major Damage: 203 CY** Minor Damage: 78 CY	**Major Damage: 234 CY** Minor Damage: 90 CY
1,400 SF	**Major Damage: 182 CY** Minor Damage: 70 CY	**Major Damage: 200 CY** Minor Damage: 77 CY	**Major Damage: 237 CY** Minor Damage: 91 CY	**Major Damage: 273 CY** Minor Damage: 105 CY
1,600 SF	**Major Damage: 208 CY** Minor Damage: 80 CY	**Major Damage: 229 CY** Minor Damage: 88 CY	**Major Damage: 270 CY** Minor Damage: 104 CY	**Major Damage: 312 CY** Minor Damage: 120 CY
1,800 SF	**Major Damage: 234 CY** Minor Damage: 90 CY	**Major Damage: 257 CY** Minor Damage: 99 CY	**Major Damage: 304 CY** Minor Damage: 117 CY	**Major Damage: 351 CY** Minor Damage: 135 CY
2,000 SF	**Major Damage: 260 CY** Minor Damage: 100 CY	**Major Damage: 286 CY** Minor Damage: 110 CY	**Major Damage: 338 CY** Minor Damage: 130 CY	**Major Damage: 390 CY** Minor Damage: 150 CY
2,200 SF	**Major Damage: 286 CY** Minor Damage: 110 CY	**Major Damage: 315 CY** Minor Damage: 121 CY	**Major Damage: 372 CY** Minor Damage: 143 CY	**Major Damage: 429 CY** Minor Damage: 165 CY
2,400 SF	**Major Damage: 312 CY** Minor Damage: 120 CY	**Major Damage: 343 CY** Minor Damage: 132 CY	**Major Damage: 406 CY** Minor Damage: 156 CY	**Major Damage: 468 CY** Minor Damage: 180 CY
2,600 SF	**Major Damage: 338 CY** Minor Damage: 130 CY	**Major Damage: 372 CY** Minor Damage: 143 CY	**Major Damage: 439 CY** Minor Damage: 169 CY	**Major Damage: 507 CY** Minor Damage: 195 CY

Attachment I: Disaster Debris Estimating Techniques (cont.)

Other Useful Quick Reference Techniques. The following formulas and tables were developed by the USACE and are based on extensive field observations and calculations in catastrophic hurricanes and other storm events.

One story building: L' x W' x H' / 27 = (#) Cubic Yards x .33 (compaction factor) = **(#) Cubic Yards**
*(For example: the formula for a building that is 100' long x 50' wide x 10' high is….100 x 50 x 10 / 27 = 1,852 CY x .33 = **611 CY**)*

Debris pile: L' x W' x H' / 27 = **(#) Cubic Yards**
*(For example: the formula for a debris pile that is 50' long x 75' wide x 4' high is….50 x 75 x 4 / 27 = **556 CY**)*

Quick Reference Table – Debris Piles:

Length (Ft.)	Width (Ft.)	Height (Ft.)	Volume (CY)	Tons (T) – C & D Debris	Tons (T) – Woody Debris	Approximate Size Reference
10	10	4	15	7.5	3.75	Small above ground pool
20	10	4	30	15	7.5	Medium above ground pool
30	10	4	45	22.5	11.25	Medium above ground pool
40	10	4	60	30	15	Large above ground pool
50	10	4	75	37.5	18.75	Large above ground pool

Quick Reference Table – Other:

Type of Debris	Volume (CY)	Tons (T)	Approximate Size Reference
Trees (15 @ 8" diameter)	40	10	8" diameter is roughly the size of a football at its widest point in the middle
One acre of mixed debris, 3.33 yards high	16,117	4029.25	Football field without the end zones, piled as high as a basketball rim

Volume to Weight Conversion Table:

Type of Debris	Tons (T)	Cubic Yards (CY)
Vegetative Debris (mixed)	CY / 4	T x 4
Softwood Vegetation	CY / 6	T x 6
Construction and Demolition (C & D)	CY / 2	T x 2

Debris Composition. Although there is no standard composition data that can be applied to all hazard events, the USACE has developed general guidelines based on its years of experience in being involved in disaster debris management for hurricanes and other severe storms. As a general rule of thumb, most storm generated debris will be **30 percent clean woody (vegetative) debris and 70 percent mixed construction and demolition (C & D) debris**, in total. However, land use, land cover, and existing infrastructure (types of buildings) must be considered, as they will influence these estimates.

Attachment J: Guidelines for Disaster Photography

Taking photographs and/or video footage of incident scenes is a critically important part of the damage assessment process, yet it is a skill that is often overlooked in damage assessment training. As a result, many incident scene images do not adequately identify the site or portray the nature and extent of the physical damage. These guidelines are meant to help minimize sub-standard disaster photography by providing a simple process to follow when shooting photographs and/or video footage in the field.

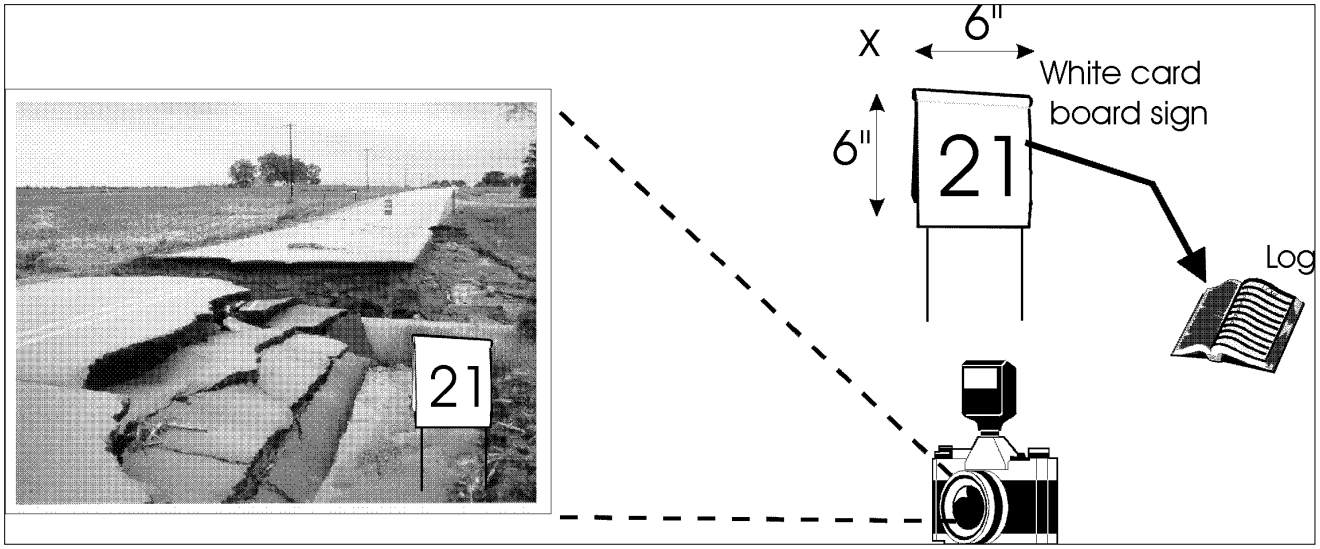
Step 1: Site Identification. Proper identification of the site being shot is the first step in the process. Even the best image is worthless if the person reviewing the photograph or video cannot determine where the image was taken. In most instances, the person that actually took the photo or shot the video footage in the field is not the person that ultimately ends up reviewing the images at a later time. In addition, in many disaster situations, it is not uncommon for dozens of sites to be photographed or video recorded, greatly increasing the likelihood that the person shooting the images may not remember where each and every image was taken. Therefore, there is a definite need to establish the identification of the site when it is actually being recorded in the field.

Video Images. The person shooting the scene should verbally identify the name and general location of the site, as well as the date and time that the video is being shot. This should be done for every site being shot. That way, any chance for misinterpretation of the site location is eliminated. It is also important to remember to keep the video camera as still as possible when shooting the footage, to avoid the "ocean motion" that is prevalent in many amateur videos. Unnecessary and excessive movement of the video camera greatly detracts from the video images. In addition, unnecessary background conversation and noises should be kept to a minimum to provide for the best possible audio quality. Lastly, as a rule of thumb, you should not focus on a particular site image for more than 15 seconds. For example, you may want to show the "context" image for 15 seconds, the "curbside" image for 15 seconds, and the "close-up" image for 15 seconds. Focusing any longer on a site image will make the footage monotonous and unnecessarily long.

Photographic Images. If using a digital camera or other personal electronic device (PED) that allows image notes to be created, the site name and an identifying number can be established as each location is photographed. This could also be done electronically as the images are uploaded onto a computer in the EOC. If this is not technically possible or feasible because of time and/or device constraints, the photographer must use an alternate method to properly identify each location in the field.

A simple but effective "manual" method that can be used is for the photographer to assign a number to each site, and record that number and site location in a notebook. For example: **Site 1:** Smith Street Bridge, over the Green River; **Site 2:** Maple Drain culvert under River Road; **Site 3:** Oak Street Senior Center, Pine City; etc. A small cardboard sign (approximately 6" X 6" in size), attached to a wire or wood stake, with the site number clearly marked in black permanent marker, should be placed in the ground at the edge of the site so that it is visible within the camera image frame. This sign will clearly identify the site in the photograph. The sign should be placed in such a manner that it will be in reasonable focus in the final photograph. Each site should be numbered chronologically in this manner, not each image. In other words, all images at site XYZ should be labeled with the number 1; all images at site PDQ should be labeled with the number 2; and so on. Numbering should be continuous (i.e., not repeated). The graphic on the following page provides an example of how this method can be used in the field.

Attachment J: Guidelines for Disaster Photography (cont.)

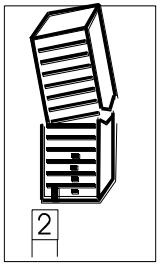


Each disaster site should be photographed from a minimum of three different positions to ensure proper image documentation.

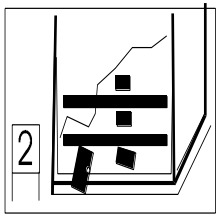
Step 2: Context Image. The context image will show the damaged site in relationship to other surrounding structures and land uses. In other words, this image would be shot from a distance such that the site in question, plus the immediate surrounding properties, can be easily viewed within the frame. Such an image would provide the "big picture" of where the site sits in relationship to everything around it. For example:

Attachment J: Guidelines for Disaster Photography (cont.)

Step 3: Curbside Image. The curbside image will show the damaged site as it would appear if you were standing in front of it in the street. The site should fill the image frame from edge to edge. For some sites, it may be necessary to stand a little further back than curbside to obtain the proper edge to edge image, but the principle remains the same. This image should contain only the site, and not the surrounding properties. This image will provide a mid-range view of the damage at the site. For example:



Step 4: Close-Up Image. The close-up image will show the damaged site, or portion of the site, as it would appear if you were standing directly in front of it, approximately 5' - 15' away. This image would be particularly useful in highlighting specific details of the damage, such as focusing on a damaged doorway to a building or a hole in a roadway. In some cases, more than one close-up image will be necessary to adequately portray the damage. For example:



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Attachment J: Guidelines for Disaster Photography (cont.)

Step 5: Aerial Image (as appropriate). Some incidents lend themselves to aerial imagery for damage assessment purposes better than others. MSP has two aircraft types that are available for image collection: the Trooper 2 helicopter and an Unmanned Aircraft System (UAS). Both can capture video, but the UAS can also capture geotagged still photos. Both aircraft are capable of relaying their video signal back to an EOC in real time via a relay truck. The helicopter can cover large areas, only limited by weather and daylight. Due to legal restrictions, the UAS is capable of covering areas less than 1 square mile. Orthomosaic products can be created with video from the helicopter or still photos from the UAS if specific flight patterns are flown. Types of incidents for which aerial photographs may be most beneficial in determining the scope and magnitude of damage include, but are not necessarily limited to the following situations:

- Particularly widespread incidents where the sheer magnitude of the damage makes ground surveys impractical from a time and human resource standpoint and/or physical standpoint; the impacted area is simply too large to survey from the ground. (This is particularly relevant in tornado / severe storm incidents or large wildland fires where thousands of acres may be affected.)

- Incidents where whole communities or major segments of a community have been destroyed or damaged to such a degree that little, if anything remains on the ground to match up with pre-incident conditions. (This is particularly relevant in tornado / severe storm incidents where small towns or entire sections of larger communities might be virtually wiped away.)

- Incidents that occur in physically inaccessible terrain for ground crews (e.g., such as a wildland fire in heavily forested land or a marshy, low-lying area, or an oil spill involving miles of waterway).

- Incidents that involve an evacuation of large numbers of individuals (e.g., nuclear power plant accident, terrorist incident, etc.) which requires an aerial viewpoint to properly assess and monitor traffic flow and traffic impediments; generally, ground level assessment will not be effective in this type of scenario.

- Incidents at state or local correctional facilities (e.g., a riot) which require an aerial viewpoint to properly assess and monitor damage (and where ground level assessment would be nearly impossible due to inaccessibility, security, and personal danger issues).

- Incidents where aerial assessment is required to verify / substantiate the “completeness” of assessments conducted on the ground (i.e., to assure that all damaged areas have been assessed in situations where it might otherwise be difficult to make that assurance, such as a wildland fire with multiple burn sites, a tornado with multiple impact areas, or an oil spill involving miles of waterway).

- Incidents where aerial photographs of damage, the impacted area, and general incident conditions are required or desired for decision making and/or to verify the thoroughness and/or results of assessments.

- Incidents where it is necessary to provide a situational overview for “VIPs” (e.g., major political office holders) for the purpose of obtaining support for additional resources and/or a state or federal declaration

For most incidents, aerial imagery will not be required for damage assessment; rather, ground assessment will be the most effective (operationally and cost-wise) method for obtaining the necessary assessment information. However, in the above (and similar but not specified) scenarios, aerial reconnaissance can be an effective and time-saving assessment method. Aerial imagery can also be valuable in for gaining situational awareness in early stages of incidents.

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Attachment J: Guidelines for Disaster Photography (cont.)

Aerial Photography Assets. Unfortunately, not all local emergency management program jurisdictions in Michigan have, or have ready access to, the aerial assets required to take aerial photographs. This limits their use in most incidents. In addition, conducting aerial reconnaissance operations can be very expensive and therefore, for most jurisdictions, this is not a particularly viable option for all but the most severe and/or widespread of incidents. However, if it is determined that aerial imagery is required for assessment purposes, there are several potential sources of aerial assets if the jurisdiction does not own or have ready access to them. The following sources (listed in general order of preference) potentially can be tapped if aerial assessment assets are required:

- MSP (helicopter, UAS), or other state agencies, via request through MSP/EMHSD
- Private / NGO entities such as local television / radio stations, private flying services, or local corporations
- Surrounding jurisdictions (through mutual aid)
- Local college / university aerial programs, if applicable
- The Civil Air Patrol (in accordance with the established MOU with the State of Michigan, via request through the MSP/EMHSD)
- Surrounding states (via EMAC request through the MSP/EMHSD, or by mutual aid)
- Federal agencies under NRF mission assignment by FEMA (if the incident has or is likely to result in a federal Stafford Act declaration)
- Federal agencies and/or other states under interagency wildfire response protocols (if the incident is a wildland fire)

Local EMCs should consult first with their MSP/EMHSD District Coordinator to determine the need for aerial damage assessment photographs. In most cases, aerial photographs will not be necessary, and this consultation may save the jurisdiction from the need to mobilize (and possibly incur expenses for the use of) aerial assets.

Step 6: Submit Images in MI CIMS. The final step of the process is to properly attach and submit the photographs in the MI CIMS. If there are a large number of disaster sites which have been photographed and/or a large number of photographs have been taken, it is not necessary to submit all of them with the MI CIMS Damage Assessment board. Rather, a representative sampling of the most severely damaged sites / facilities can be submitted as attachments, along with appropriate explanation, to provide examples of the nature and extent of damage in the worst-hit areas. The remaining photographs can be retained locally (along with the corresponding Damage Survey Worksheets) for possible use later by federal and state inspectors if a PDA is conducted.

Attachment K: Hazardous Tree Survey Worksheet

Background Note: This worksheet can be used to compile information about damaged or fallen trees that pose an imminent threat to public health / safety and/or property. The worksheet will be particularly useful when surveying damage from strong winds caused by severe storms or tornadoes, or when surveying damage caused by excessive ice and/or snow accumulation.

Survey Conducted By: _____ Date / Time of Survey: _____ Street Surveyed: _____

Address or General Location	Tree / Major Branches in Roadway or Public Alley	Tree / Major Branches Blocking Sidewalk	Tree Leaning over Roadway, Sidewalk, or Public Alley	Tree Leaning on Utility Lines	Tree Leaning on Home, Garage, or Other Structure	Hazardous Stump Present?	Approximate Tree Diameter < 12" 12-24" > 24"	Description of Hazardous Condition
Sample: 100 Oak		***X***				***X***	*> 24"*	*Stump has sharp edges exposed.*
TOTALS:								

INSTRUCTIONS

- Use separate worksheet for each STREET.
- Check the appropriate condition that you observe. Some situations may require more than one checkmark (e.g., tree blocking both roadway and sidewalk).
- The tan shaded columns are for DOWNED trees / branches. The blue shaded columns are for LEANING trees. The pink shaded column is for HAZARDOUS STUMPS. The gray shaded column is for the TREE DIAMETER. The purple shaded column is for a DESCRIPTION of the hazardous condition. The yellow shaded row is for the column totals for each hazard condition.
- Estimate the tree diameter. This is simply to separate out the largest, most potentially problematic tree hazard locations.
- Provide a description of the hazardous condition as appropriate. If structural damage is apparent, note that in the description. Leave blank if no explanation is required.
- If a street address is not readily apparent, use a general description instead (e.g., middle of 300 block of Maple Street).

Attachment L: Federal Disaster Assistance Programs

The Robert T. Stafford Disaster Relief and Emergency Assistance Act (PL 93-288, as amended) provides the greatest single source of federal disaster assistance. A Presidential major disaster declaration is required to activate the full range of disaster assistance programs available under the Stafford Act. FEMA administers the President's Disaster Relief Fund under the Stafford Act. In the event of a Presidential major disaster declaration, FEMA coordinates the disaster assistance activities of all federal agencies, whether authorized under the Stafford Act or their own authorities.

In those situations where the full range of assistance available with a Presidential major disaster declaration is not required, the President may declare that an "emergency" exists. An emergency declaration provides assistance to supplement state and local efforts to save lives and protect property, public health and safety, or to avert or lessen the threat of a disaster. The purpose of such a determination is to make available emergency assistance which, because of the pressures of time or because of the unique capabilities of a federal agency, can be more readily provided by the Federal Government. It is specialized assistance to meet specific needs.

Assistance Available with a Presidential Major Disaster Declaration

INDIVIDUAL ASSISTANCE (IA): Programs that assist individuals, families, and businesses in recovering from a disaster.

Individuals, families and businesses may be eligible for federal Individual Assistance if they live, own a business, or work in a county declared a Major Disaster Area, incur sufficient property damage or loss, and (depending on the type of assistance) do not have the insurance or other resources to meet their disaster recovery needs. Most but not all federal Individual Assistance is in the form of low-interest loans to cover expenses not covered by state and local programs or private insurance. Individuals that do not qualify for loans may be able to apply for a cash grant.

Assistance to Individuals and Households. The Individual and Households Program (IHP) provides cash grants to meet disaster-related necessary expenses or serious needs of individuals or families not provided for by other programs (including SBA loans), insurance or other means. The IHP provides Housing Assistance and Other Needs Assistance, which cover the following:

Housing Assistance

- Rental Assistance (financial assistance to homeowners and renters to secure temporary housing while repairs are being made to their pre-disaster primary residence or while they transition to permanent housing)
- Direct Temporary Housing Assistance (direct assistance in the form of rental units or manufactured housing units provided to homeowners or renters for temporary use)
- Lodging expenses reimbursement (for a hotel or motel)
- Home repair (financial assistance to help homeowners repair disaster damages to their primary residence not covered by insurance or available through other sources)
- Home replacement (financial assistance to help homeowners replace an uninsured or underinsured disaster-damaged home.
- Permanent housing construction (in rare circumstances, financial or direct assistance is provided to repair a home damaged by disaster, or construct a new home)

Other Needs Assistance (ONA)

- Medical, dental and funeral costs
- Transportation costs, repair or replacement of a vehicle damaged by a disaster, and other transportation-related costs
- Child care (financial assistance to pay for disaster-related increase in financial burden for child care expenses)
- Miscellaneous items (financial assistance for items purchased or rented after a disaster to assist with recovery, such as gaining access to the property or assisting with cleaning efforts)
- Personal property (financial assistance to relocate and store personal property from the damaged primary residence while repairs are being made to return the property to the primary residence)
- Other disaster-related needs

The IHP is administered by FEMA in conjunction with the State Individual Assistance Officer, who will act as the State of Michigan's liaison designated on behalf of MSP/EMHSD and the Michigan Department of Health and Human Services (MDHHS). Housing Assistance is funded at 100% federal share. Other Needs Assistance (ONA) is funded on a 75% federal / 25% state cost share arrangement.

The **Farm Service Agency (FSA) / U.S. Department of Agriculture (USDA)** and the **Small Business Administration (SBA)** offer low interest loans to eligible individuals, farmers and businesses to repair or replace damaged property and personal belongings not covered by insurance:

FSA Emergency Loans. The FSA can provide up to $500,000 in emergency loans to farmers, ranchers, and agriculture operators that have suffered at least a 30% loss of crops or enterprise. These loans are intended to cover losses resulting from a natural disaster, to help return the operation to a financially sound position. Two types of loans are available – physical loss loans and production loss loans. These loans may be used for such things as repairing or replacing damaged or destroyed farm property, improving buildings, buying machinery / equipment, and paying farm operating debt. Application is made at the FSA County Office. A Presidential major disaster declaration (or Secretary of Agriculture emergency declaration) is required to activate the program. (NOTE: The FSA requires a county to have sustained a minimum of 30% qualifying physical loss or crop loss county-wide to qualify for a Secretary of Agriculture emergency declaration.)

SBA Disaster Loans. The SBA can provide both direct and bank-participation low-interest disaster loans to qualified homeowners and businesses to repair or replace damaged or destroyed private property. This loan program is activated when a Presidential major disaster declaration is issued, or (in cases where the damages are less extensive) when the SBA Administrator declares a "disaster loan area" (SBA administrative declaration) under the SBA's own statutory authority. These loans can be used to cover uninsured personal property damage (this portion is also available to renters), real property damage, or both. Small businesses suffering economic losses as a result of a disaster may also be eligible to receive economic injury loans in addition to the physical damage loans. The loan interest rate varies depending upon the applicant's ability to secure credit elsewhere. Actual interest rates are published at the time of the disaster.

SBA Low-Interest Disaster Loan Provisions

Recipient	Maximum Loan	Purpose	Notes
Homeowner	$200,000	Real Property	Physical damage loan amounts may be increased by up to 20% for implementation of mitigation measures that protect damaged real property from possible future disasters of the same kind.
Homeowner	$40,000	Personal Property	Loans can be used to help repair or replace personal property, such as clothing, furniture, automobiles, etc., lost in a disaster. (As a rule of thumb, personal property is anything that is not considered real estate or a part of the actual structure.) These loans may not be used to replace extraordinarily expensive or irreplaceable items, such as antiques, collections, pleasure boats, recreational vehicles, fur coats, and planes. Also, amounts for landscaping, family swimming pools, etc., are limited.
Renter	$40,000	Personal Property	See homeowner personal property loan notes above.
Business	$2,000,000	Business Property	Physical damage loan amounts may be increased by up to 20% for implementation of mitigation measures that protect damaged real property from possible future disasters of the same kind.
Business	$2,000,000	Economic Injury	Economic injury loans are available to provide necessary working capital to small businesses suffering economic losses as a result of a disaster. The maximum amount a business and any affiliates may borrow for any one disaster is limited to $2,000,000 for both physical damage and economic injury combined.

To qualify for an SBA administrative declaration for **PHYSICAL DAMAGE**, the following minimum criteria must be met:

(1) A minimum of 25 businesses and/or homes (primary residences) in one county have sustained uninsured losses equal to 40% or more of their estimated fair market replacement value. Example: A home valued at $100,000 would have to sustain at least $40,000 in damages not covered by insurance in order to be counted. Each apartment in an apartment building is considered a separate residence. (Residences used for seasonal / recreational purposes, whether secondary homes, condominium units, cabins, camps, lake homes, etc., are not included in the count.)

To qualify for an SBA administrative declaration for **ECONOMIC INJURY**, the following minimum criteria must be met:

(1) The Governor certifies that at least five businesses in a disaster area have suffered substantial economic injury as a result of the disaster and are in need of financial assistance not otherwise available on reasonable terms. ***OR…***

(2) The Secretary of Agriculture designates an area as an agricultural disaster area. The SBA will make Economic Injury Disaster Loans to small business concerns and small agricultural cooperatives in the designated counties without credit available elsewhere. ***OR…***

(3) The Secretary of Commerce makes a commercial fishery failure or fishery resource disaster declaration under Section 308(b) of the Interjurisdictional Fisheries Act of 1986.

Veterans Benefits. The U.S. Department of Veterans' Affairs provides death benefits, pensions, insurance settlements and adjustments to home mortgages for veterans.

Unemployment Benefits. Disaster unemployment assistance and job placement assistance may be provided to persons unemployed as a result of a major disaster who are not eligible for other unemployment compensation benefits. This program is administered by the Michigan Talent Investment Agency (TIA), in cooperation with the U.S. Department of Labor.

Crisis Counseling. Professional counseling services may be available to assist affected individuals in relieving grief, stress or other mental health problems caused or aggravated by the disaster or its aftermath. These short-term services are funded by FEMA and provided by local mental health agencies in the form of counseling services, community outreach, consultation and education services, and training of disaster workers. The crisis counseling effort in Michigan is coordinated by the Michigan Department of Health and Human Services (MDHHS).

Background Note: Individuals that may require this service should inquire about it while registering for disaster assistance, or they may contact FEMA's toll free Helpline number (1-800-621-FEMA [3362] / TTY 1-800-462-7585) to find out where service can be obtained. Information may also be obtained via the federal online disaster assistance web site (www.disasterassistance.gov) and at Disaster Recovery Centers (DRCs), if established. Crisis counseling services may also be offered by the American Red Cross, the Salvation Army and other voluntary agencies or religious organizations.

Tax Refunds. The Internal Revenue Service (IRS) allows certain casualty losses to be deducted on federal income tax returns for the year of the loss or through an immediate amendment to the previous year's return.

Disaster Legal Services. Free legal advice may be available to low-income individuals who require legal services as a result of a major disaster. This program is coordinated by FEMA and services are provided by the Young Lawyers Division of the American Bar Association.

FSA Emergency Conservation Grants. The U.S. Department of Agriculture (USDA) Farm Services Agency (FSA) administers the Emergency Conversation Grant Program (ECP) to provide emergency funding and technical assistance to rehabilitate severely damaged farmland following a natural disaster, and to implement emergency water conversation measures in periods of severe drought. County committees determine land eligibility based on type and extent of damage. The ECP share may be up to 90% of the cost of restoring the loss for limited resource producers. Payments are limited to $200,000 per person or legal entity per disaster.

National Flood Insurance Program. Homeowners and business owners that incur flood damages and that have a flood insurance policy under the National Flood Insurance Program (NFIP) may be eligible for payments to assist in repairing or restoring their damaged property. (A Presidential declaration is not required to activate this assistance – only a qualifying flood event.)

HUD Disaster Recovery Assistance. The U.S. Department of Housing and Urban Development (HUD) has several programs that can provide critical housing and community development resources to aid in the recovery from a Presidentially-declared disaster:

FHA Mortgage Assistance. The Federal Housing Administration (FHA) will activate programs that: 1) make available mortgage insurance for individuals / families whose homes were destroyed or substantially damaged; 2) relax certain home mortgage provisions for disaster survivors with FHA loans; and 3) place a temporary moratorium on foreclosures for properties for homeowners with FHA loans directly affected by a disaster.

GNMA Mortgage Assistance. The Government National Mortgage Association (GNMA or "Ginnie Mae") will: 1) encourage all single-family, manufactured housing, and multi-family GMNA issuers to provide forbearance to mortgagors in declared areas; and 2) authorize issuers of GNMA loan pools to buy loans on damaged properties for the remaining principal balance of each loan – thereby assisting affected homeowners from becoming delinquent on their loan and possibly being subject to default and foreclosure.

Public and Native American Housing Assistance. HUD will authorize public housing authorities to reprogram certain housing funds to address damage to public housing property caused by the disaster. HUD can also provide emergency funding to public housing authorities from a special reserve fund for such purposes.

Community Development Block Grants. HUD will provide statutory and regulatory waivers to allow grantees (metropolitan cities, urban counties and states) to reprogram Community Development Block Grant (CDBG) and HOME Investment Partnerships for disaster recovery activities.

FEMA, the MSP/EMHSD and other involved agencies will disseminate information on these and other aid programs for individuals, families and businesses through radio, television, newspapers, mass distribution of pamphlets, outreach teams, and telephone hotlines. Disaster victims can register for most of the various aid programs via a toll-free telephone number to one of FEMA's National Processing Service Centers (1-800-621-FEMA [3362] / TTY: 1-800-462-7585), or they can register online at www.disasterassistance.gov.

Public Assistance (PA) assists in the repair, replacement, or restoration of damaged public and certain PNP facilities.

The Public Assistance Program under the Stafford Act provides supplemental grant assistance for the repair, replacement, or restoration of disaster-damaged, publicly-owned facilities and the facilities of certain private non-profit (PNP) organizations. Assistance under PA is provided on a 75% federal / 25% non-federal basis. In certain extreme cases, the federal share may be increased above 75% by the President. The 25% non-federal cost share is the responsibility of each responding state agency organization or local jurisdiction unless the Michigan Legislature approves a special appropriation to assist with cost share.

The MSP/EMHSD, as recipient of the federal grant funds, administers all subgrants provided to eligible applicants in accordance with the provisions set forth in the "State of Michigan Administrative Plan for the Public Assistance Grant Program." Following a Presidential

declaration involving public assistance, an Applicant Briefing is conducted jointly by FEMA and the MSP/EMHSD to inform potential applicants of the assistance available, and the means by which funds will be provided for eligible public assistance projects.

Eligible applicants for PA include states, local governments, Indian tribes, and certain PNP organizations. Eligible PNP facilities must provide essential social services to the general public. Eligible PNP facilities generally include the following:

- Medical facilities such as hospitals, outpatient and rehabilitation facilities
- Custodial care facilities that provide institutional care for persons who require close supervision and some physical constraints in their daily activities
- Educational facilities (without regard to the religious character of the facility) such as primary and secondary schools, colleges and universities
- Emergency facilities such as fire departments, rescue squads and ambulance services
- Utilities such as water, sewer and electrical power systems
- Museums, zoos, performing arts facilities, community centers, libraries, homeless shelters, senior citizen centers, rehabilitation facilities, shelter workshops, houses of worship, and facilities which provide health and safety services of a governmental nature

To be eligible, all work must be required as the result of the disaster, be located within the designated disaster area, and be the legal responsibility of an eligible applicant. Work that is eligible for supplemental federal grant assistance is classified as either emergency work or permanent work, as follows:

Emergency Work – Work which must be done immediately to save lives, protect public health and safety, protect improved property, or to avert or lessen the threat of additional damage from the declared incident. Categories of emergency work include:

- Category A: Debris removal activities, such as clearance, removal, and disposal of incident-related debris (including, but not limited to vegetative debris, components of structures, sand, mud, silt, gravel, rocks, boulders, vehicles, and vessels) from improved public property and public rights-of-way (ROWs), including Federal-aid roads.
- Category B: Emergency protective measures, including search and rescue, warning of hazards, and demolition of unsafe structures, performed before, during and after an incident to eliminate or lessen immediate threat to lives, public health, safety or threats of significant additional damage to improved public or private property in a cost-effective manner.

Permanent Work. Work required to restore an eligible damaged facility to its pre-disaster design (size and capacity). The work may range from minor repairs to replacement. Categories of permanent work include:

- Category C: Roads, streets, bridges and normal right-of-way elements such as culverts, curbs, gutters, shoulders, ditches, lighting and signs. Note: Permanent repair of FAS roads is not eligible. Permanent repair of FAS roads is funded by the Federal Highway Administration (FHWA) Emergency Relief Program. However, PA will fund repair and restoration activities on non-FAS roads.
- Category D: Water control facilities (e.g., dikes, levees, irrigation works, drainage channels, pumping facilities). Note: Permanent repair of flood control works is the responsibility of the U.S. Army Corps of Engineers (USACE) and the Natural Resource Conservation Service (NRCS).

- Category E: Public buildings and related contents and equipment.
- Category F: Public utilities (e.g., water storage facilities, treatment plants and delivery systems, power generation, transmission and distribution facilities, natural gas transmission and distribution facilities, sewage collection and treatment facilities, and communications systems).
- Category G: Public parks, recreational, and other facilities (e.g., mass transit facilities such as railways, beaches, parks, playground equipment, swimming pools, piers, ports, harbors, etc., and other facilities that do not fit in Categories C-F).

Hazard Mitigation Assistance (HMA) provides funds to implement measures to reduce the loss of life and property.

FEMA currently has three hazard mitigation grant programs: 1) the Hazard Mitigation Grant Program (HMGP); 2) the Pre-Disaster Mitigation program (PDM); 3) and the Flood Mitigation Assistance program (FMA). Collectively, these programs are called Hazard Mitigation Assistance (HMA). The PDM and FMA are annual, pre-disaster grant programs, while the HMGP is only implemented subsequent to a Presidential major disaster declaration.

Section 404 of the Stafford Act establishes the Hazard Mitigation Grant Program (HMGP) to fund state and local post-disaster mitigation measures which help reduce the risk of future damage, hardship, loss, or suffering caused by a major disaster. The HMGP allows mitigation measures to be implemented during the immediate recovery period of the disaster when the "window of opportunity" is often greatest due to increased public concern and attention.

Under the HMGP, FEMA may contribute up to 75% of the cost of hazard mitigation measures in the declared area. In Michigan, the 25% non-federal share is the responsibility of the applicant. Total federal contributions under the HMGP cannot exceed 15% of the estimated aggregate amount of Individual Assistance and Public Assistance grants to be made for the disaster (less any associated administrative costs) under the Stafford Act. The MSP/EMHSD administers all subgrants provided to eligible applicants in accordance with the provisions set forth in the "State of Michigan Administrative Plan for the Hazard Mitigation Grant Program."

Eligible applicants for the HMGP include states, local governments, Indian tribes and certain PNP organizations. Eligible PNP facilities must be open to the public and perform essential services of a governmental nature. Eligible PNP facilities are generally the same as those that are eligible under the Public Assistance Grant Program. (Refer to that section for details.) Individual homeowners and businesses may not apply directly for HMGP funds; however, a community may apply on their behalf.

Background Note: Applicants for the mitigation grant programs must have or be covered by a federally-approved and locally-adopted hazard mitigation plan in order to receive grants.

HMGP funds must be used to fund projects that will reduce or eliminate the long-term risk and losses from future disasters. For example, the elevation of a flood prone home provides a long-term solution and reduces the risk of future flood damages, as opposed to simply buying sandbags and pumps to fight the flood. In addition, projects must be cost effective (potential savings must be more than the cost of implementing the project). For example, it would make no sense to spend $750,000 on a project that might only result in $200 in benefits per year. HMGP funds may be used to protect either public or private property or to purchase property that has been subjected to, or is in danger of, repetitive damage.

Fire Management Assistance Grant Program (FMAGP) provides funds to mitigate, manage, and control wildfires.

The Fire Management Assistance Grant Program (FMAGP) is available to states, local and tribal governments for the mitigation, management and control of fires on publicly- or privately-owned forests or grasslands, which threaten such destruction as would constitute a major disaster. The Fire Management Assistance declaration process when a State submits a request for assistance to FEMA at the time a "threat of major disaster" exists. The declaration process, which involves representatives of the MSP/EMHSD, the Michigan Department of Natural Resources (MDNR), the U.S. Forest Service, and FEMA, is accomplished on an expedited basis and a FEMA decision is rendered in a matter of hours. The MSP/EMHSD and MDNR jointly manage the FMAGP process, from initial assessment activities through final grant closeout.

The FMAGP is funded on a 75% federal / 25% state cost sharing arrangement. Before a FMAGP grant can be awarded, the State must demonstrate that total eligible costs for the declared fire meet or exceed FEMA's individual fire cost threshold (which is applied to each fire) or FEMA's cumulative fire cost threshold, which recognizes numerous smaller fires burning throughout the state. Eligible firefighting costs covered under the grant may include expenses for:

- Field camps
- Equipment use, repair and replacement
- Tools, materials and supplies
- Mobilization and demobilization activities
- Emergency work (evacuations and sheltering, police barricading and traffic control, arson investigation)
- Pre-positioning of federal, out-of-state, and international resources for up to 21 days
- Personal comfort and safety items for firefighter health and safety
- Temporary repairs of damage caused by firefighting activities

Background Note: When referring to mitigation in the context of the FMAGP, it is not defined as activities to prevent future fires, but as the necessary actions to minimize the damage caused by the declared fire.

Other Major Assistance Programs

Debris Removal / Public Facility Restoration. The Department of Defense (DOD) may be able to provide assistance for debris removal and temporary restoration of essential public facilities and services. Normally, such assistance is provided only during the immediate aftermath of an incident which resulted in, or in all likelihood will result in a Presidential emergency or disaster declaration, and then only when threats to life and property are present which cannot be effectively dealt with by the State or its local governments.

Flood Protection and Recovery. The U.S. Army Corps of Engineers (USACE) can provide flood protection and recovery assistance, which, depending on the disaster circumstances, could consist of: 1) flood emergency preparation; 2) flood fighting and rescue operations; 3) emergency repair and restoration of flood control works; and 4) emergency repair and restoration of any completed federally-authorized flood or shore protection project threatened or damaged by abnormal wind, wave or water action. The Corps emergency response authority also allows for emergency channel and bridge debris removal following a flood. However, the Corps is not authorized to participate in a general, widespread debris removal unless the material is certified as an imminent public health hazard. Generally, Corps emergency work provides only the minimum necessary actions to restore essential public services and preserve life and property. It is not intended to take the place of or eliminate the necessity of subsequent general clean-up, debris removal, and recovery work done through the federal PA program.

Repair / Restoration of Federal Aid Highways. The Federal Highway Administration (FHWA) can provide assistance for the repair and restoration of roads, bridges and standard right-of-way elements on the Federal Aid System (FAS). The FHWA emergency relief funds are coordinated through the Michigan Department of Transportation (MDOT), although all funding decisions are made by the FHWA. This assistance does not specifically require a Presidential major disaster declaration, although it is often activated when a declaration is granted.

Search and Rescue. Depending on the incident circumstances, the U.S. Coast Guard or U.S. Armed Forces units may be able to provide assistance with search and rescue operations.

Health and Sanitation. Either by mission assignment under the National Response Framework (NRF) or under its own statutory authorities, the U.S. Department of Health and Human Services (HHS) may be able to provide supplemental emergency health and sanitation assistance in order to mitigate, manage and control immediate threats to public health and safety. All such assistance would be coordinated through the affected local health departments and the Michigan Department of Health and Human Services (MDHHS).

Background Note: Refer to the FEMA web site (www.fema.gov) and/or the federal online disaster assistance web site (www.disasterassistance.gov) for the most comprehensive and up-to-date information on currently available federal disaster relief programs and their implementation processes.

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Attachment M: Application for Disaster Assistance and Local Resolution (Section 19, 1976 PA 390, as amended)

EMD-019 (1/2015)
MICHIGAN STATE POLICE
Emergency Management and Homeland Security Division

APPLICATION FOR SECTION 19 ASSISTANCE

Authority: MCL 30.419, Michigan Administrative Code R 30.54-30.58; **Compliance:** Required;
Penalties: County or municipality will not be considered for funding.

Instructions:

1. Applications may be submitted by a county or municipality.
2. Local units submitting applications shall appoint an agent to act on their behalf.
3. In accordance with the Michigan Administrative Code R 30.54, this application shall be accompanied by a resolution of the governing body (see reverse side).
4. Applicant shall complete sections I-VI of this form.

I. POLITICAL SUBDIVISION		
Name		Population
Street	City	ZIP Code

II. APPLICANT'S AGENT		
Name		Title
Street	City	ZIP Code

III. ELIGIBLE DISASTER EXPENDITURES AND COSTS See Michigan Administrative Code R 30.56

Overtime for police department		Equipment repair costs for disaster	
Overtime for fire department		Volunteer Costs	
Overtime for public works department		Costs to repair damage to public facilities or road systems caused by disaster	
Overtime for county road commission			
Overtime for emergency medical services		Other (name each)	
Overtime for other employees			
Salaries of added employees			
Contracts with other jurisdictions			
Fuel for equipment used			
Shelter supplies for disaster		TOTAL	**$0.00**

NOTE: Normal or day-to-day expenses; any costs reimbursed by a federal, state or local agency; any costs reimbursed by insurance; or any capital outlay expenditures are not eligible.

IV. DISASTER BURDEN See Michigan Administrative Code R 30.53 (d)

Dates of Consecutive 5-Day Period From to	Normal Budget Funds for Listed Agencies During 5-Day Period
One (1) Percent of Listed Agencies' Annual General Kind Operating Budget	Amount of Actual Expenses for Listed Agencies During 5-Day Period
List of Activated Disaster-Related Agencies:	

V. PREVIOUS OPERATING BUDGET See Michigan Administrative Code R 30.58

Applicant's Total Operating Budget for Preceding Fiscal Year	Ten (10) Percent of the Total Operating Budget **$0.00**

VI. SIGNATURE OF APPLICANT'S AGENT

Signature	Date

VII. DISTRICT COORDINATOR REVIEW

	Yes	No	N/A		Yes	No
Application and resolution complete	☐	☐	☐	Applicant eligible	☐	☐
Copy of local emergency declaration	☐	☐	☐	Amount claimed	☐	☐
Exhaustion of local effort	☐	☐	☐	Amount eligible	☐	☐
Emergency management program	☐	☐	☐	Comments		
Work agreement form	☐	☐	☐			
Annual exercise	☐	☐	☐			
Current plan standard	☐	☐	☐			
Adequate plan standard	☐	☐	☐			
Plan implementation standard	☐	☐	☐			
Support Plan (if applicable)	☐	☐	☐	**District Coordinator's Signature**	Date	
Substation of claims standard	☐	☐	☐			
Damage assessment standard	☐	☐	☐			

EMD-019 (1/2015)
MICHIGAN STATE POLICE
Emergency Management and Homeland Security Division

VIII. EMHSD DIRECTOR'S RECOMMENDATION		
Grant Approval Recommended ☐	Grant Amount Recommended	Grant Disapproval Recommended ☐
Reasons for Disapproval:		
Signature	Date	

INTERNAL USE ONLY			
Date Received	Date Reviewed	Incident Name	Phone Number

STATE DISASTER CONTINGENCY FUND GRANT RESOLUTION

BE IT RESOLVED BY (1) OF (2),

WHEREAS, (2), Michigan, is a political subdivision within the State of Michigan with an official emergency operations plan in compliance with Section 19 of the Emergency Management Act, 1976 PA 390, MCL 30.419, as amended.

WHEREAS, (2), sustained severe losses of major proportions brought on by the (3) resulting in the following conditions: (4).

WHEREAS, (1) certifies that the (5) Emergency Operations Plan was implemented at the onset of the disaster at (6) and all applicable disaster relief forces identified therein were exhausted.

WHEREAS, as a direct result of the disaster, public damage and expenditures were extraordinary and place an unreasonably great financial burden on (2) totaling (7).

NOW, THEREFORE BE IT RESOLVED THAT (1) requests the Governor authorize a grant to the (2) from the State Disaster Contingency Fund pursuant to Section 19 of the Emergency Management Act, 1976 PA 390, MCL 30.419, as amended.

FURTHERMORE, (8) is authorized to execute for and in behalf of (2) the application for financial assistance and to provide to the State any information required for that purpose.

Action taken and incorporated in the minutes of a meeting of

(name of governing body)

on (date)

Attest; (name of clerk)

Notes:
1. Insert name of governing body (City Council, County Board of Commissioners, Township Board, etc.).
2. Insert name of political subdivision (City of ___, ___County, Township of ___ etc.).
3. Insert the type of disaster (tornado, flood, explosion, etc.).
4. Insert a brief description of the effects of the disaster on the community.
5. County governments and municipalities under 10,000 population insert the term 'county'; municipalities over 10,000 population insert the term 'municipal' if they maintain a separate plan; or the term 'county/municipal' if they are included in the county plan.
6. Insert the time and date the plan was implemented.
7. Insert the total dollar value of eligible disaster expenditures and costs (from Section III of the application).
8. Insert the name of the applicant's agent who is authorized to act for and on behalf of the political subdivision.

Attachment N: Assessment Protocols for Weapons of Mass Destruction Attacks

A prompt and comprehensive assessment at the scene of a Weapons of Mass Destructions (WMD) attack is necessary to protect the health, safety and welfare of emergency responders and the general public. When planning and conducting assessment operations in a WMD environment, assessment personnel should consider these factors:

- There may be a variety of public safety, health and environmental hazards and risks present at suspected, threatened and actual sites of terrorist attacks
- The hazards at the scene may not be apparent to emergency responders
- The hazards may pose significant short- and long-term health, environmental, physical and economic consequences on-site as well as off-site
- The assessment process will involve the gathering of pertinent information through observation, investigation, and the use and application of technical knowledge and resources
- The U.S. Occupational Health and Safety Administration (OSHA) requires anyone entering a potentially hazardous scene to have completed Hazwoper training

Role in a WMD Attack. Depending on the incident circumstances, damage assessment teams could be called upon to provide early assistance in assessing the nature, scope, magnitude, and extent of damage and impact of a WMD attack. While damage assessment teams generally do not have the expertise or equipment to identify particular agents that might be used in a WMD attack, they certainly could help determine actual / potential damage and impacts once the appropriate response elements (e.g., biological laboratories, hazardous material teams, regional response teams, etc.) identify the agent involved and the scene is stabilized. (Specialized federal response and support assets are available to assist local and state departments / agencies in identifying the particular type of agent used in a WMD attack. Refer to the WMD Attack Procedures in the Michigan Emergency Management Plan – MSP/EMHSD Publication 101 – for a listing of these federal resources.)

In the event of a WMD terrorist attack where there are mass casualties and/or significant property damage has occurred, assessment teams will conduct assessment operations with the assistance of the technical experts from various state and federal agencies as described above, and likely the Michigan Rapid Impact Assessment Team (MRIAT). The assessment teams and the support elements / MRIAT will conduct appropriate sampling and monitoring operations to ensure public (and responder) safety and to address on- and off-site environmental concerns. The assessment process will generally consist of these six components:

- Identification of any substance in the air (e.g., toxic, corrosive, asphyxiant) that may be immediately dangerous to the life and health (IDLH) of emergency responders and/or the public
- Identification of any other hazards in the area that could endanger emergency responders and/or the public (e.g., structural hazards, potential explosives, flammable materials, etc.)
- Potential or actual off-site consequences of the identified hazard(s)
- Characteristics of the site (e.g., geography, topography, meteorology, development patterns, etc.) that may impact response and recovery operations and/or the safety of the public

- Identification of facilities, infrastructures, critical systems, community groups, essential services, etc. that may be (or have been) affected and the level of damage / impacts
- Information that may assist in identifying the type of tactics, hazards and risks confronting responders and those involved in recovery operations

Reporting. Damage assessment information will be reported to the MSP/EMHSD using the MI CIMS EM Program Status board and Damage Assessment board, as described earlier in this document. However, for security reasons the MSP/EMHSD may require that damage assessment reports for WMD attacks be submitted via the LEIN or other secure means. (The MSP/EMHSD will provide guidance regarding secure submittal of information as needed.)

Self-Protection in a WMD Attack. Assessment teams would not normally be considered a "first responder" at the scene of a WMD attack and therefore would not enter affected areas until the scene had been somewhat stabilized. However, even with a secondary response role it is likely that assessment teams would still have to operate in potentially hazardous conditions which may include dust, dirt, hazardous / contaminated debris, smoke, and possibly the residual effects of the WMD agent employed in the attack. For that reason, it is essential that adequate self-protection measures be taken to protect all members of the assessment team while conducting assessment operations.

Basic self-protection measures taken at a WMD attack would be similar to those used at any other hazardous material incident and involve **time, distance, shielding, and decontamination:**

Time. Time as a self-protection action simply refers to minimizing the amount of time spent in the hazard area. Entries into the hazard area for assessment purposes should be done in a rapid, organized manner to minimize the duration of exposure. Less time spent in the hazard area reduces the chance for injury or illness. It is difficult to suggest a universal time limit for assessment activities at a WMD attack scene because each incident has unique circumstances. However, the Incident (Unified) Command should establish guidelines for duration of assessment operations within the hazard area and those guidelines must be strictly followed by all assessment personnel. Minimizing time in the hazard area also helps preserve criminal evidence.

Distance. As with hazardous material incidents, first responders must maintain a safe distance from the hazard area unless they have been authorized to enter the area and have employed appropriate protection measures. The Incident (Unified) Command will provide guidance to assessment teams regarding safe distances from the incident scene. If potentially hazardous conditions still exist at the incident scene at the time of assessment operations, it may be necessary for assessment activities to be conducted remotely with the aid of binoculars or other enhanced viewing devices, or they may have to be conducted at a later time when the scene has stabilized.

Shielding. Assessment teams must use appropriate shielding to protect against the hazards that might be present at the incident scene. The Incident (Unified) Command will determine the appropriate level of shielding that must be employed by assessment personnel based on the hazards present. In general, shielding may consist of buildings and vehicles as well as personal protective equipment (PPE) such as chemical protective clothing.

Decontamination. Assessment personnel exposed to potentially hazardous substances at the WMD attack scene must employ immediate and effective decontamination measures to minimize the effects of the substances and to prevent their spread from the hazard area. Decontamination must be considered and planned for prior to entering the hazard area. The Incident (Unified) Command will establish

decontamination procedures for all persons working in the hazard area. Decontamination procedures will be determined based on the substances present at the scene, the duration of exposure and the type of personal protection employed. In general, decontamination will consist of the following steps:

- Washing with water
- Removing and properly disposing of contaminated clothing
- Flushing with water again (if needed)
- Exposure to some chemical or biological agents may require more extensive decontamination at the scene

WMD Attack Hazards. Terrorist WMD attacks may involve one or more of several types of agents / devices, each creating its own set of unique problems which must be addressed with distinct tactical considerations and response procedures. These include:

- Biological agents
- Nuclear / radiological devices
- Incendiary devices
- Chemical agents
- Explosive devices

Biological Agents. Biological agents are divided into three types – bacteria and rickettsia, viruses, and toxins. Toxins are strong poisons produced by living organisms, while bacteria, rickettsia and viruses are disease causing organisms. Biological agents can be dispersed by aerosol means (through the air), by oral dissemination (through food, water, etc.), or dermal exposure (through direct contact or injection). Although various biological agents cause different symptoms in humans, some of the more common ones include itchy skin, fever, shortness of breath, bloody sputum, headaches, rash, diarrhea, gastric bleeding, lesions, fatigue, cyanosis, chills, brain inflammation, vomiting, paralysis and pulmonary congestion.

Nuclear / Radiological Devices. Nuclear / radiological terrorism could be carried out in one of three ways. The first is by detonating a device such as an atomic bomb (nuclear fission), although this method is not likely due to the complexities involved in building such a bomb and the tight security surrounding existing nuclear devices. The second and most likely possibility involves the packing of radiological material around a conventional explosive device. When the device is detonated, the radiological material is dispersed into the air, contaminating everything it comes in contact with. This device is commonly referred to as a “dirty bomb.” The third method requires the detonation of a large explosive device in close proximity to a target containing large quantities of radiological material such as a nuclear power plant or nuclear research facility.

Incendiary Devices. Incendiary devices utilize fire to cause extensive physical damage, injury and loss of life. They may be triggered by either chemical reaction or electronic / mechanical ignition and delivered as a stationary device, hand thrown, propelled, or self-propelled. Incendiary devices require an ignition source, a filler material that is combustible, and a container to hold the filler. Many common materials can be used to construct these devices including flares, light bulbs, household chemicals, compressed gas cylinders, electrical devices, gasoline, matches, fireworks, plastic pipe and bottles / cans.

Chemical Agents. Chemical agents can be used by terrorists to cause significant numbers of injuries and deaths through a variety of means. These materials are classified by the military as nerve agents, blister agents (vesicants), blood agents, choking agents, and irritants (riot control). Although many of these agents cause common symptoms such as difficulty breathing or vomiting, each also attacks the body in a different manner:

- Nerve agents attack the central nervous system and are very toxic in both liquid and vapor states. Death can result within minutes.
- Blister agents (vesicants) primarily affect the eyes, airway and skin, although absorption of these materials can affect other body systems as well. Victims may indicate a prominent garlic odor.
- Blood agents (cyanides) can result in seizures, respiratory arrest, and cardiac arrest. These substances have the same effect as asphyxiation, but more sudden.
- Choking agents cause airway irritation, dyspnea (difficulty breathing), tightness in the chest and pulmonary edema after inhalation of vapors.
- Irritants are used for riot and crowd control as well as individual incapacitation and cause temporary pain, burning, discomfort on exposed skin and mucous membranes.

Explosive Devices. Explosives are the most commonly deployed terrorist WMD (involved in 70% of terrorist incidents) and may be used to disperse chemical, biological, incendiary, and nuclear / radiological agents as well as cause widespread physical destruction. The primary effects of explosives include blast pressure, fragmentation and thermal impacts. Common explosive devices include pipe bombs (generally small and providing limited destruction), satchel bombs (which consist of nails, glass, etc. packed along with explosives inside a bag or satchel), and vehicle bombs (large, powerful devices that are detonated remotely or by timer). Other types of homemade or improvised explosive devices may include grenades, land mines, and projectiles. A major concern when responding to a terrorist WMD attack involving explosives is to ensure that no unexploded or secondary devices are in the area. Terrorists often use multiple bombs to target responders when they arrive at the scene.

Protective Equipment Needs. In almost every WMD attack scenario, it is a safe assumption that assessment teams will need some level of personal protective equipment (PPE) in order to conduct assessment field operations. This PPE may range from nothing more than a dust mask and coveralls (Level D protection) up to a basic level of chemical protective clothing with mask and respirator (Level C protection). (Note: Level A and B PPE require specialized training and certification as well as fit testing in order to be properly used. Most assessment operations, however, can be conducted with a minimal level of PPE equivalent to Level C or D protection.) The type and level of PPE required is entirely dependent upon the situational circumstances and conditions at the time the assessment operation is being conducted. The Incident (Unified) Command will determine the type and level of protection required in order to safely conduct field assessments.

Assessment teams should have available sufficient PPE to outfit the number of personnel that will likely be required to conduct assessment activities in a post-WMD attack scenario. Although it is difficult to determine exact equipment needs because of the myriad scenarios that could occur, at a minimum teams should have basic chemical resistant protective suits (splash suits) or protective coveralls, dust masks, hard hats and rubber gloves and boots for each team member, along with sufficient quantities of duct tape or equivalent for sealing the suits. It is unlikely that these materials will be available from other response units at the time of the incident unless such

provisions have been made ahead of time. Therefore, it is incumbent on each assessment team to have sufficient inventories of PPE to outfit each team member to conduct one or more field assessments in a post-WMD attack environment.

Other Equipment Needs. In addition to the basic PPE required to conduct post-attack assessment operations, assessment teams should also have available sufficient quantities of the following items in their equipment cache:

- Plastic bags of various sizes (freezer, garbage, etc.) for securing personal items and clothing of team members, for removal of PPE during the decontamination process, and for protecting cameras and other devices while in the field
- Disposable cameras to photographically document damage, field operations, and potential criminal evidence
- Several large bottles of water for drinking and for small-scale decontamination
- Binoculars (small and inexpensive) to view damaged areas from a distance, if required
- Disposable clipboards, pens, pencils, notepads, etc. for recording information while in the field
- Wire flags or plastic flagging tape for marking potential criminal evidence or other significant items / locations

WMD Training. At a minimum, assessment team members should have attended the "Terrorism Awareness: First Responder" or equivalent course offered by the MSP/EMHSD, or received an expedient version of the same course prior to being deployed into the field. Team members should also have attended the MSP/EMHSD "Damage Assessment Workshop" or equivalent course and/or be very familiar with local and state damage assessment procedures. A highly trained assessment team is much more likely to conduct assessment operations in a safe, efficient, and effective manner – highly desirable when working in a post-WMD attack environment. Poorly trained individuals are much more likely to make mistakes in the field or unnecessarily prolong the assessment operation, possibly endangering themselves and others in the process.

Field Operations. The assessment operation should begin at the Incident (Unified) Command Post (ICP), staging area or other designated location where incident-specific information and instructions can be given by the Incident Commander (IC) or his/her designee and the team can properly suit up in PPE and ready its field survey equipment. In general, the smallest possible team should be used to conduct the field assessments – especially if hazardous conditions exist – and assessments should be conducted in the most expedient manner allowable given incident circumstances.

Depending upon the incident circumstances, field assessment operations will be conducted from one of three incident management "zones." The "hot zone" includes the immediate incident scene and is the location where the most hazardous substances are likely to be located. Because of the specialized knowledge, training, and equipment required to operate in this environment, it is unlikely that assessment activities would be allowed within this hazardous area unless the assessment team is trained and equipped to a very high protection level (Level A or B). The "warm zone" is the area immediately adjacent to the "hot zone" and is used as a buffer between the hazardous area and the areas not directly affected (the "cold zone"). The warm zone is the location where safe entry and exit is made from the hot zone, and where decontamination operations occur (see "Decontamination Process" section below). If assessment operations are conducted from the warm zone then assessment team members will have to wear PPE and be decontaminated at the conclusion of the operation. Assessment operations conducted from the cold zone will not require special precautions for personnel or equipment.

For hot or warm zone operations, disposable cameras, binoculars and other hand-held equipment should be placed in protective clear plastic bags (freezer bag or equivalent) and properly sealed for use in the field. This will protect the equipment from contamination but still allow it to be used. (Any equipment not protected in this manner will have to be decontaminated using soap and water – which would ruin many items.) Disposable clipboards, pens / pencils, notepads, etc. that cannot be sealed in plastic must be used unprotected but then will normally be discarded at the end of the assessment operation as part of the decontamination process.

Field survey information can be recorded on the Damage Survey Worksheets, damage maps, and MI CIMS EM Program Status board and Damage Assessment board as described earlier in this document. Photographs of damaged / impacted areas should be taken in accordance with the guidelines prescribed in Attachment J.

Evidence Preservation. Assessment team members should take special care when conducting field assessments, making sure that the incident scene is not disturbed any more than is absolutely necessary. It is possible that the assessment team may discover additional criminal evidence that may aid in the identification and capture of the terrorists responsible for the attack. It is also possible that secondary / undetonated explosive devices may be uncovered as team members traverse the incident scene. Remember, even the most ordinary looking item may turn out to be evidence or an explosive device. In all cases, any item thought to be potential criminal evidence or an explosive device should be left alone but flagged / marked and photographed as is for appropriate follow up action by authorized law enforcement officials. DO NOT ATTEMPT TO TOUCH OR MOVE THE ITEM – EVEN FOR MARKING AND PHOTOGRAPHIC PURPOSES! When in doubt, leave it alone, mark / photograph it, and immediately notify appropriate law enforcement officials through the Incident Command Post or other designated location.

Decontamination Process. Once the field assessment operation has been completed, it may be necessary to go through a decontamination process if hazardous substances were present at the locations where field assessments were conducted. This will help minimize the effects of the substances and prevent their spread from the hazard area. A designated decontamination area will normally be established in proximity to the incident scene to allow for the decontamination of all persons and items that went into the hazard area. The decontamination area is generally located in the area known as the warm zone which is between the hot zone (the contaminated incident scene) and the cold zone (the secure area where no special precautions are required). Assessment operations conducted in the hot or warm zone will require decontamination of persons and equipment; those conducted in the cold zone will not.

The decontamination process is dictated by the agent(s) employed in the attack and the hazardous substances present at the incident scene. Generally, decontamination is accomplished by thoroughly washing down the team member and any unprotected equipment with water, having the team member remove all PPE (with the assistance of another properly outfitted team member) and place it in a plastic bag for proper sealing and disposal. Cameras, binoculars, etc. that were properly sealed in plastic bags can simply be removed and the protective bag discarded along with the PPE. Any paperwork, clipboards, pens / pencils, etc. used to record field observations will have to be discarded as well. The paperwork can be placed in a clean, clear plastic bag, properly sealed, and then photocopied to maintain a permanent record. Once photocopied, the original paperwork and the plastic bag must then be properly discarded. Any vehicles or other large equipment that were involved in the assessment operation must also be decontaminated by properly washing with water.

Post-Operation Debrief. Once the incident response has been completed – including assessment operations – a debriefing session should be held shortly thereafter to allow all involved participants to compare notes regarding what transpired, to receive any information that might

be required regarding potential medical or health issues, and to bring closure to the event. Approximately a few days to one week after the post-operation debrief, a follow up response critique should be held to evaluate what went wrong and right with the incident response, to more closely examine the “lessons learned,” and to formulate any after-action adjustments that might be required in the areas of training, plans / procedures, equipment, or intra- / inter-agency coordination.

Attachment O: Key Damage Assessment Logistical Considerations

The following logistical considerations are based on many years of experience and "lessons learned" in damage assessment planning, training, and exercising activities, as well as actual disaster response and recovery operations. They are intended to aid a community in building / improving its damage assessment capabilities.

Community Baseline Information. An essential pre-incident planning activity for every Michigan community is the development of key baseline information, to include:

- A *demographic profile* that provides basic socio-economic data on the community and its residents, including business activities and patterns. This information will provide a basis for assessing the impacts of the incident on various segments of the community, and will also aid federal, state, and local officials in preparing requests for supplemental relief assistance in a timely manner.

- Readily available *property and facility information*, to include 1) identification and geo-location of critical community facilities and infrastructure (both public and private) as well as major businesses and key private non-profit organizations; 2) identification of secondary / vacation homes and cabins (these are not eligible for federal home repair / restoration grants); 3) estimates of the amount of insurance coverage (flood and homeowners) for all areas of the community; 4) photographs of each public and private structure (to provide a "before" picture); 5) estimates of the number of public and private structures in each area of the community; and 6) community maps (preferably from a GIS) that provide a clear picture of this and other relevant community information.

It is important to note that much of this key baseline information may already exist in documents such as the community master (comprehensive) plan or hazard mitigation plan, in regional plans / planning documents and/or economic development studies, or in community tax equalization / assessment offices. It may also be available in various U.S. Census studies and data sets, but would likely have to be synthesized for the community. It is advisable to first contact community departments and agencies (e.g., planning, GIS, building, equalization) and the regional planning office to see if any of the needed information already exists before undertaking a significant baseline information collection effort.

Preparations for Hazardous Environments. It is important that every Michigan community have at least a basic capability to conduct damage / impact assessment operations in a post-WMD attack environment. In addition, damage assessment teams are often called upon to conduct operations in potentially harsh environments after certain disasters such as floods, severe storms, tornadoes, and ice storms. In doing so, they may encounter hazardous conditions such as contamination, potentially dangerous debris, dust and hazardous particulates, excessive noise, flood waters, hazardous chemicals and other hazardous materials, and severe weather conditions such as snow, ice, wind, and extreme temperatures.

Per OSHA requirements, anyone who enters a potentially hazardous site is required to have completed Hazwoper training. Nothing can impede or even stop an assessment operation quicker than the lack of basic protective equipment. Team members must be dressed for the conditions they are likely to encounter in the field. They should carry / wear (as appropriate) items such as rain gear, waders, hard-soled boots, hard hats and gloves. Depending on field conditions, it may also be appropriate for team members to wear some sort of eye protection to protect from tree branches and other "eye-level" hazards, as well as hazardous dust or liquids. If the team will be working in a post-WMD

attack environment, appropriate personal protective equipment (PPE) should be worn for the types of hazards that are likely to be encountered. (Refer to Attachment N, "Assessment Protocols for Weapons of Mass Destruction Attacks," for additional information.)
Each community must make its own determination as to how it will outfit and equip its damage assessment teams. Regardless of who provides what, the most important consideration is that those decisions be made PRIOR to an incident occurring, during the damage assessment planning process. Attempting to procure and distribute the needed protective equipment after the incident occurs is not only inefficient, but could unnecessarily slow down the assessment process and potentially put assessment team members at risk if they attempt to conduct field operations without the proper equipment and attire.

Field Equipment Kits. The same arguments that hold true for personal protective equipment also hold true for basic field assessment equipment. Again, procuring and distributing the equipment ahead of time is more desirable than waiting until after the incident occurs and then attempting to address this issue. Following is a list of basic field equipment that damage assessment teams will likely need while conducting field surveys:

- Map(s) of the jurisdiction (8 ½ X 11 in size), of sufficient scale and clarity to allow for the accurate recording of information
- Laptop computer or other personal electronic device equipped to collect and store information (**if** the community intends to collect information electronically in the field)
- Basic manual recording tools (markers, pens, pencils, rulers, clipboards, etc.)
- Global Positioning System (GPS) units, set up for the disaster area (**if** geospatial data will be collected)
- Calculator
- Tape measure or small measuring wheel (as necessary and appropriate for the survey work being done)
- Damage Survey Worksheets
- Basic communication tools (cellular phone, radio, pager, etc.)
- Copy of MSP/EMHSD Publication 901 – "Michigan Damage Assessment Handbook"
- Necessary telephone lists / directories
- Badge, ID card, or other appropriate form of personal identification
- Nylon jacket or vest for field identification and protection from the elements, as necessary and appropriate
- Camera, video camera, or personal electronic device with these features (including any adaptors, chargers, or other accessories as required)
- Hard hat, if conducting assessments in potentially hazardous areas
- Bug spray / sun screen (warm weather only)
- Flashlight (as necessary and appropriate for dark areas and/or night time field surveys)
- Small first aid kit
- A method of "tagging" sites that have been surveyed (e.g., plastic flagging tape, temporary pavement paint, etc.), as necessary and appropriate
- Carrying bag or plastic box for the above items

Each assessment team will need these items in order to conduct surveys, so the community must assemble one equipment kit for each team it intends to dispatch. To determine how many kits might be needed, the community can look at its "worst case" disaster scenario (based on the local hazard analysis / risk assessment) and determine the number of field teams that would realistically be needed to assess that situation in an accurate and timely manner. Because most of the items contained in the field kit are relatively inexpensive and have a long shelf life, the largest number of kits that might be needed should be assembled before an incident occurs. At a minimum, every community should always have at least two kits ready to go.

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