

MICHIGAN DAMAGE ASSESSMENT HANDBOOK

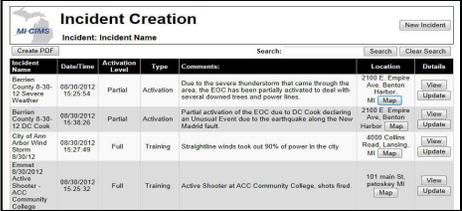


A GUIDANCE HANDBOOK FOR THE COLLECTION, COMPILATION, ANALYSIS, SYNTHESIS, AND REPORTING OF DAMAGE AND IMPACT INFORMATION SUBSEQUENT TO A DISASTER OR EMERGENCY.

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QUICK REFERENCE PAGE: INCIDENT CREATION AND DAMAGE ASSESSMENT REPORTING

MI CIMS Incident Creation Board



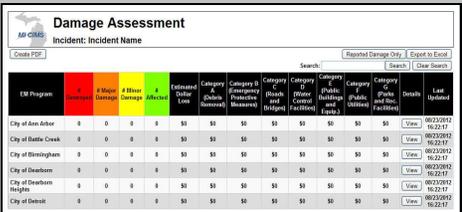
Created By

An incident may be created by local emergency management program jurisdictions (EMC, Assistant EMC, and EM staff positions), by MSP/EMHSD District Coordinators, by 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 Activities Log, Significant Events board, 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 gray (no status reported), green (normal), yellow (problem exists), 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.

TABLE OF CONTENTS

ACRONYM GUIDE

- DAMAGE ASSESSMENT ORGANIZATIONAL BASICS**..... 1
 - Basic Purposes of Damage Assessment 1
 - Creating an Effective Damage Assessment Organization 1
 - The Assessment Function within the EOC Structure 1
 - Figure 1: SEOC Incident Management System 2
 - On-Site Inspection Teams 2
 - Planning and Training..... 3
 - Role of the Planning Section 3
- INCIDENT REPORTING**..... 4
 - Damage Assessment under the MI CIMS 4
 - Creating an Incident in the MI CIMS..... 4
 - Figure 2: MI CIMS Incident Creation Board (Incident Creation Window)..... 4
 - Figure 3: MI CIMS Incident Creation Board (Input View) 5
 - Figure 4: MI CIMS Incident Creation Board (Viewing Incidents)..... 6
 - Back-Up Method for Creating an Incident 7
 - Declaring a Local “State of Emergency” 7
 - Back-Up Method for Declaring a Local “State of Emergency” 7
- INFORMATION COLLECTION, COMPILATION, ANALYSIS, SYNTHESIS, AND REPORTING** 7
 - Information Collection, Compilation, Analysis and Synthesis..... 7
 - Figure 5: Potential Sources of Assessment Information 8
 - Field Surveys 8
 - Agricultural Damage Assessment 9
 - Michigan Rapid Impact Assessment Team Assistance 9
 - Damage Assessment Report..... 10
 - Figure 6: MI CIMS EM Program Status Board (Input View and Summary View) 10
 - Figure 7: MI CIMS Damage Assessment Board (Input View and Summary View)..... 11
 - Back-Up Method for Damage Assessment Reporting 12
 - Mapping Damaged Areas..... 12
 - Disaster Photography 12
 - State Role in Damage Assessment..... 12
- SEEKING STATE AND FEDERAL DISASTER RELIEF ASSISTANCE**..... 12
 - Requesting State Assistance..... 12
 - Back-Up Method for Requesting State Assistance 13
 - District Coordinator Assessment of Need 13
 - Governor’s Declaration 13
 - Seeking Federal Assistance 14
 - Preliminary Damage Assessment 14
 - FEMA Expectations for State and Local Representatives on PDA Teams..... 14
 - State Representatives 14

Local Representatives	15
PDA Results	15
Figure 8: Emergency / Disaster Declaration Process	16
Presidential Emergency / Major Disaster Declaration	17
Declaration Request Denied.....	17
Emergency Declaration	17
Major Disaster Declaration	17
Post-Declaration Activities	17
State (“Section 19”) Disaster Relief Funding	19

ATTACHMENTS:

A. MI CIMS Basic Instructional Resources.....	21
B. Back-Up Incident Creation Board.....	22
C. Format for Declaring a Local “State of Emergency”.....	23
D. Format for Requesting a Governor’s Emergency or Disaster Declaration and State Assistance.....	24
E. Back-Up EM Program Status Board.....	25
F. Back-Up Damage Assessment Board.....	27
G. Damage Survey Worksheet and Mapping Instructions, and Degree of Damage Categories.....	29
H. Damage Survey Form for Businesses and Non-Profit Organizations.....	42
I. Disaster Debris Estimating Techniques	43
J. Guidelines for Disaster Photography.....	46
K. Hazardous Tree Survey Worksheet	51
L. Federal Disaster Assistance Programs.....	52
M. Application for Disaster Assistance and Local Resolution (Section 19, 1976 PA 390, as amended).....	62
N. Assessment Protocols for Weapons of Mass Destruction Attacks	63
O. Key Damage Assessment Logistical Considerations.....	70

Summary of Major Changes in this Guidance Document

Subject	Change	Location
Section 19 (of 1976 Public Act 390, as amended) grant amount changed and fund name changed	The Section 19 grant amount was increased, per Public Act 110 of 2013, from a maximum of \$30,000 to a maximum of \$100,000. Public Act 110 also renamed the old Disaster Contingency Fund to the Disaster and Emergency Contingency Fund.	Pages 16 and 19
Public Assistance Grant Program non-federal cost share	State participation in the non-federal cost share for the Public Assistance Grant Program is eliminated unless a special appropriation is approved by the Michigan Legislature.	Page 56

Note: Other minor 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 – Michigan
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 / JPIT	Joint Information Team (a.k.a. Joint Public Information Team)
LEIN	Law Enforcement Information Network

ACRONYM GUIDE (cont.)

MDARD	Michigan Department of Agriculture and Rural Development
MDCH.....	Michigan Department of Community Health
MDHS.....	Michigan Department of 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
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:

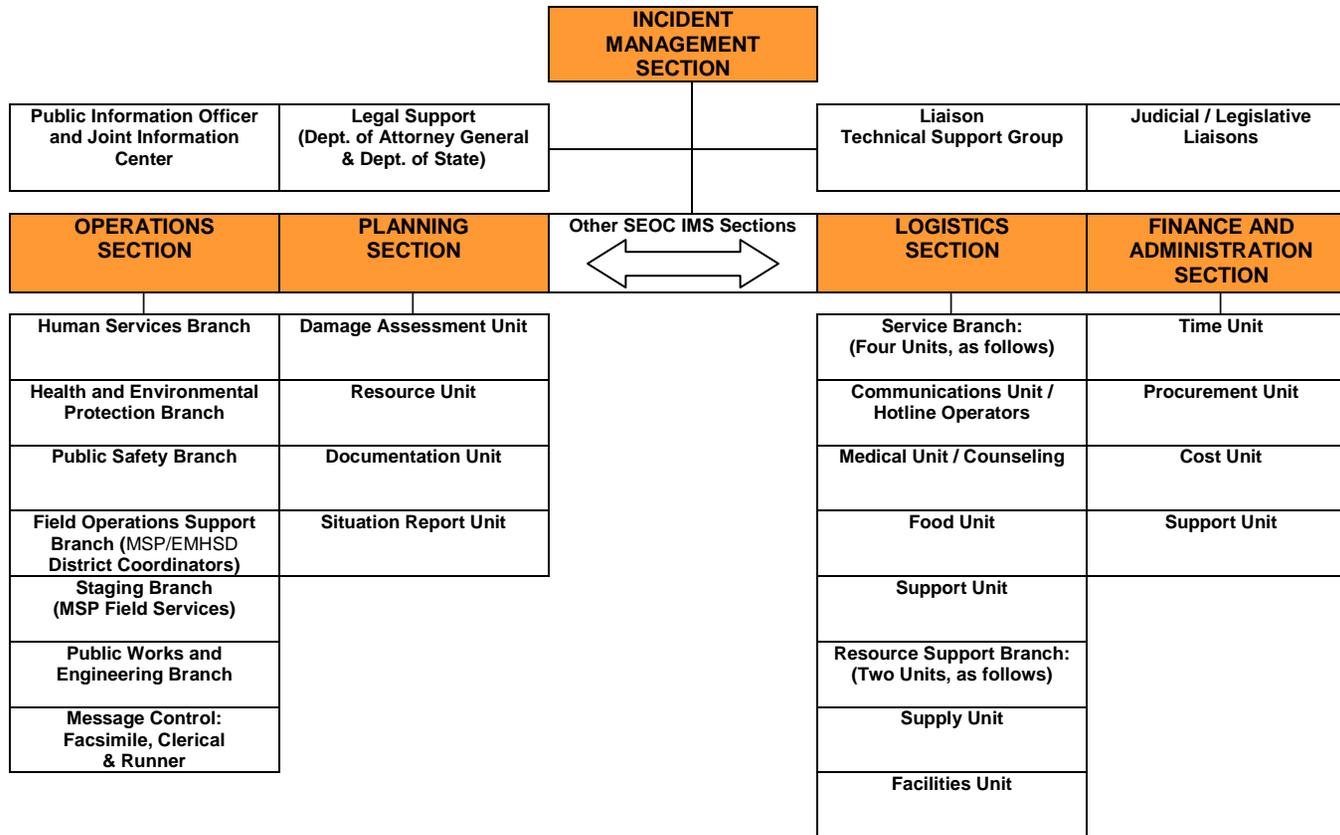
- To obtain timely, accurate, and comprehensive information on the incident
- To facilitate timely and effective decision making
- To enable the public to be quickly and accurately informed
- To aid in the prioritization of limited resources
- To provide a basis for justifying the need for assistance, 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. Under the National Incident Management System (NIMS), this organization typically falls under the Planning Section. The Planning Section Chief is ultimately responsible for coordinating all planning and assessment activities for the incident and may appoint support staff as required to assist with the data collection, compilation, analysis, synthesis, mapping / plotting, and reporting functions. Typically, these support staff are organized into various Units within the Planning Section, which may include a Damage Assessment Unit, a Resource Unit, a Documentation Unit, and a Situation Report Unit. The chart below illustrates the structure used in the State Emergency Operations Center (SEOC). Under the NIMS, local and tribal structures should be similar:

Figure 1: SEOC Incident Management System



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 (i.e., homes and businesses), 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.

Role of the Planning Section. The Planning Section plays a vital role in the management of information related to the incident. The Planning Section must actively collect, compile, analyze, synthesize, and display incident-related information on maps and status boards in the EOC 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, should 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 should be plotted on maps and prioritized so that those areas with the most damage can be targeted first for assistance. Status boards should 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 should be used to display important messages that everyone needs to see.

Such information is vital in assisting key SEOC personnel in making important decisions regarding response and recovery operations. The Incident Commander in the EOC will activate the Planning Section to collect and compile assessment data if it appears that incident circumstances will require such action. In certain situations, the Planning Section may also be activated to perform pre-incident assessments (e.g., to plot rising flood levels). The Planning Section should operate out of the EOC along with the Incident Management, Operations, Logistics, and Finance / Administration Sections. Typically, that is where key decision makers are gathered and communications links are established with response personnel at the incident scene. If the 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, the Planning Section 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. The Planning Section 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. The Planning Section may be requested to provide regular updated reports with verified damage information to the jurisdiction's Public Information Officer (for release to the media), 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. In 2013, the State of Michigan began to use web-based proprietary software called “WebEOC” for statewide critical incident management, including integration with its Geographic Information System (GIS) applications in the SEOC. 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 2: MI CIMS Incident Creation Board
(Incident Creation Window)**

The screenshot shows the 'Incident Creation' window in the MI CIMS system. At the top left is the MI CIMS logo, which includes a map of Michigan. The main heading is 'Incident Creation'. Below this, there is a text input field labeled 'Incident: Incident Name'. To the right of this field is a 'New Incident' button. Below the input field is a 'Create PDF' button. To the right of the 'Create PDF' button is a search area with a 'Search:' label, a text input field, and two buttons: 'Search' and 'Clear Search'. At the bottom of the window is a table with the following columns: 'Incident Name', 'Date/Time', 'Activation Level', 'Type', 'Comments:', 'Location', and 'Details'.

Incident Name	Date/Time	Activation Level	Type	Comments:	Location	Details
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Figure 3: MI CIMS Incident Creation Board (cont.)
(Input View)

Report As



Incident Creation

Incident: MI CIMS Training
Data on this board displays in all incidents.

Details

Incident Name: (YYYY-MM-DD-Location-Incident Type)

Date/Time:

Activation Level:

Activation Type:

Activation Summary:

Agency:

Location:

Point of Contact:

Contact Number:

WebEOC URL: <https://micims.state.mi.us>

Comments:

Send Notification:

Recipients: TRAINING
SEOC
City of Ann Arbor
City of Battle Creek

**Figure 4: MI CIMS Incident Creation Board (cont.)
(Viewing Incidents)**



Incident Creation

Incident: MI CIMS Training

Data on this board displays in all incidents.

Search:

Incident Name	Date/Time	Activation Level	Type	Activation Summary	Location	Details
TRN 2013-03-03 DC Cook practice	05/03/2013 09:14:41	Full	Training	This is a test in preparation for the first drill.	1 cook place, Bridgman, MI <input type="button" value="Map"/>	<input type="button" value="View"/> <input type="button" value="Update"/>
2013-05-02-Alpena-911 Denial of Service	05/02/2013 12:20:18	Monitoring	Activation	Multiple calls to all administrative lines from foreign accented male.	720 W Chisholm St, Alpena Mi <input type="button" value="Map"/>	<input type="button" value="View"/> <input type="button" value="Update"/>
TRN-2013-05-11-NTS/ARES-Functional-Drill	05/11/2013 00:00:00	Full	Exercise	Exercise transmission of various ICS forms from the counties to the State EOC. This drill will utilize the normal NTS circuits as well as direct circuits from the counties.		<input type="button" value="View"/> <input type="button" value="Update"/>
TRN-2013-05-01-R7 Hospital MCA Comm Drill	05/01/2013 08:19:23	Full	Exercise	Region 7 Health Care Coalition WebEOC drill. Please create an activity log under this incident and then update it at least once. You only need to participate in this drill, and submitting a report on the Emergency Management drill you may also get a notification on is optional. Call Mike Tilley for any assistance (231) 675-9548. region7mjt@gmail.com	Gaylord (Drill run from HS Conf, GR)	<input type="button" value="View"/> <input type="button" value="Update"/>
April 29 2013 Baraga County Flooding and Roads out.	04/30/2013 12:27:16	Full	Activation	Have some flooding, have two roads closed due to culverts washed out.	Baraga County	<input type="button" value="View"/> <input type="button" value="Update"/>

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 e-mail 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 Lansing. If using e-mail, 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"). If using the MI CIMS, the declaration must be attached to the EM Program Status board to ensure it will be received by the MSP/EMHSD. The declaration must be immediately forwarded to the MSP/EMHSD via the MI CIMS or a back-up method prescribed below.

The declaration of a local "state of emergency" is important for several reasons. First, it activates the response and recovery aspects of the local EOP 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 e-mail, 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 Lansing. If using e-mail, 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 5: 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 possible 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 current FEMA Preliminary Damage Assessment (PDA) guidelines – 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 Planning Section 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 Planning Section 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.

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 headquarters in East Lansing for verification, summarization, concurrence, and distribution.

The SEOC Planning Section obtains this data through the MDARD Emergency Manager, 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.

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.

Damage Assessment Report. The local EOC Planning Section, 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)
(Note: Use zoom feature to view images in greater detail)

EM Program Status													Incident: Incident Name	
EM Program	Region	EOC Activation	Local Declaration	Flooding	Emergency Services	Hazmat	Debris	Transportation	Utilities	Public Health	Schools	Evacuations	Details	
City of Ann Arbor		Full	Yes	Normal	Normal	Normal	Problem	Normal	Normal	Normal	Open	No	View Update	
County of Alcona		Partial	Yes	Problem	Normal	Normal	Normal	Normal	Normal	Normal	Open	No	View Update	
County of Allegan		Partial	Yes	Normal	Failure	Problem	Failure	Failure	Problem	Normal	Open	Yes	View Update	
County of Bay		No	No	Normal	Failure	Problem	Normal	Normal	Normal	Normal	Open	No	View Update	
County of Berrien		Full	Yes	Problem	Normal	Normal	Failure	Problem	Failure	Normal	Closed	Yes	View Update	
County of Clinton	3	No	No	Problem	Normal	Problem	Normal	Normal	Failure	Normal	Closed	No	View Update	
County of Gogebic	6	No	No	Normal	Normal	Normal	Normal	Failure	Failure	Normal	Open	No	View Update	
County of Ingham	1	Partial	Yes	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Closed	No	View Update	
County of Manistee	7	No	No	Failure	Failure	Normal	Normal	Normal	Problem	Problem	Open	No	View Update	
County of Washtenaw	2-S	Full	Yes	Problem	Failure	Normal	Problem	Normal	Failure	Normal	Closed	Yes	View Update	

Figure 7: MI CIMS Damage Assessment Board (Input View and Summary View)
 (Note: Use zoom feature to view images in greater detail)

Damage Assessment

Incident: Incident Name

Details

EM Program: City of Ann Arbor

Prepared By:

Phone Number:

Fax Number:

Email Address:

Part I: Private Property (Cumulative Damages)

Property Type	# Destroyed	# Major Damage	# Minor Damage	# Affected	Estimated Dollar Loss	Estimated Insurance (%)
Permanent Homes	0	0	0	0	0	0
Single Family Homes	0	0	0	0	0	0
Multi-Family Homes	0	0	0	0	0	0
Mobile Homes	0	0	0	0	0	0
Businesses	0	0	0	0	0	0
Business / Industry	0	0	0	0	0	0
Non-Profit Orgs	0	0	0	0	0	0

Part II: Public Property (Includes eligible non-profit facilities) (Cumulative Damages)

Type of Property	# of Sites	Estimated Dollar Loss	Insured (%)
Category A (Debris Removal)	0	0	0
Category B (Emergency Protective Measures)	0	0	0
Category C (Roads and Bridges)	0	0	0
Category D (Water Control Facilities)	0	0	0
Category E (Public Buildings and Equipment)	0	0	0
Category F (Public Utilities)	0	0	0
Category G (Parks and Recreation Facilities)	0	0	0

Part III - Budget

Annual Budget

Annual Budget - Current Balance

Preceding Annual Budget

Date Fiscal Year Begins -

Public Works Budget (if applicable)

Public Works - Current Balance

Road Budget (if applicable)

Road Budget - Current Balance

Part IV: Community Impacts

Unresolved or Emerging Public Health/Safety/Welfare Threats

Impacts on Essential Public Services and Facilities

List (by location) of Roads and Bridges Closed as a Result of the Disaster

Impacts on Specific Groups within the Community (e.g. elderly, young children, non-English speaking, homeless)

Socio-economic Impacts on the Community (e.g., economy, environmental, historical, political, psychological)

Cities, Townships, Villages Affected (Counties Only)

Other Impacts (Specify)

Attachments

Description	Attachment
<input type="text"/>	<input type="text"/> <input type="button" value="Browse..."/>
<input type="text"/>	<input type="text"/> <input type="button" value="Browse..."/>

Comments

Damage Assessment

Incident: Incident Name

Search:

EM Program	# Destroyed	# Major Damage	# Minor Damage	# Affected	Estimated Dollar Loss	Category A (Debris Removal)	Category B (Emergency Protective Measures)	Category C (Roads and Bridges)	Category D (Water Control Facilities)	Category E (Public Buildings and Equip.)	Category F (Public Utilities)	Category G (Parks and Rec. Facilities)	Details	Last Updated
City of Ann Arbor	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	<input type="button" value="View"/>	08/23/2012 16:22:17
City of Battle Creek	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	<input type="button" value="View"/>	08/23/2012 16:22:17
City of Birmingham	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	<input type="button" value="View"/>	08/23/2012 16:22:17
City of Dearborn	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	<input type="button" value="View"/>	08/23/2012 16:22:17
City of Dearborn Heights	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	<input type="button" value="View"/>	08/23/2012 16:22:17
City of Detroit	0	0	0	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	<input type="button" value="View"/>	08/23/2012 16:22:17

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 (i.e., Microsoft Word or Excel document) and transmitted as an e-mail 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 Lansing. If using e-mail, 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. If not, then separate public damage and private damage maps 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 Planning 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 e-mail, 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 Lansing. If using e-mail, 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 or to relieve hardship.

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 federal 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 Preliminary Damage Assessment (PDA) is normally conducted within a few days of the request to determine if the situation warrants federal assistance. 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.

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).

Background Note: Historically, FEMA did not get involved in response and recovery activities until formally requested by the Governor of the affected state. However, in the aftermath of the Hurricane Katrina response in 2005 it became apparent that a delay in federal assistance can often lead to a cascading of negative consequences beyond the initial incident. Currently, FEMA has adopted a more "forward leaning" approach whereby it may provide assistance immediately following a catastrophic incident, instead of waiting for the Governor's formal request. This also means that FEMA may be willing to conduct a PDA earlier than it would have in the past – perhaps even before all local damage assessment reports have been received or compiled – for incidents where there is a strong likelihood from early reports that a federal (Presidential) declaration under the Stafford Act may be warranted. This does NOT mean that FEMA is willing to conduct a PDA for each and every incident that occurs. 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.

FEMA Expectations for State and Local Representatives on PDA Teams. The July 2012 edition of the *FEMA PDA for Individual Assistance (IA) Operations Manual (9327.2-PR)* describes FEMA expectations regarding the roles and responsibilities of state and local representatives on PDA teams. These include:

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

- Host the PDA teams and make team assignments
- Provide an overview of state conditions
- Identify and locate damaged areas and structures / facilities to be surveyed
- Assist in providing for and coordinating logistical needs (e.g., transportation, facilities, equipment, etc.)
- Identify and confirm local contacts
- Provide state maps

- Reassign state members to different teams or locations, as required
- 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
- 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:

- 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)
- Ensure all local damaged areas and structures / facilities are surveyed during the PDA
- Determine the routes the team will take to assess the damaged / affected areas in the most timely and efficient manner possible
- Assist the state 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 an overview of local conditions
- 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.)
- Concur with state and tribal (as applicable) team members regarding the degree of damage and impacts caused by the disaster, and the team findings
- 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 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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 Planning 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<p style="text-align: center;">Issues Declaration:</p> <ul style="list-style-type: none"> Federal disaster assistance programs are activated. <p style="text-align: center;">OR</p> <p style="text-align: center;">Denies Declaration:</p> <ul style="list-style-type: none"> 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 in the declared area 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 victims to register for available assistance programs. This information is widely publicized within the declared area. In some situations, federal and state 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 (at FEMA discretion) in the declared area to advise disaster victims 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 victims. 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 public facilities under the PAGP 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.

- In some situations, a federal / state Hazard Mitigation Team may be dispatched by the FEMA Regional Administrator to the declared area 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; and 3) develop recommendations for implementing hazard mitigation measures. (Note: These hazard mitigation surveys may be conducted prior to the declaration as part of the PDA process, at the discretion of FEMA and the MSP/EMHSD.)

A number of federal and state departments / agencies may be represented on the team, depending on the situation. Local government representatives are key members of the team. 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. The team findings serve as the basis for the development of the Hazard Mitigation “Action Plan” for the disaster, which is coordinated by the MSP/EMHSD. Relevant aspects of the Hazard Mitigation Action Plan must then be 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 Action Plan 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 Action Plan, 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 (PDMP), the Flood Mitigation Assistance Program (FMAP), 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 for Section 19 funding (R 30.51-30.61).

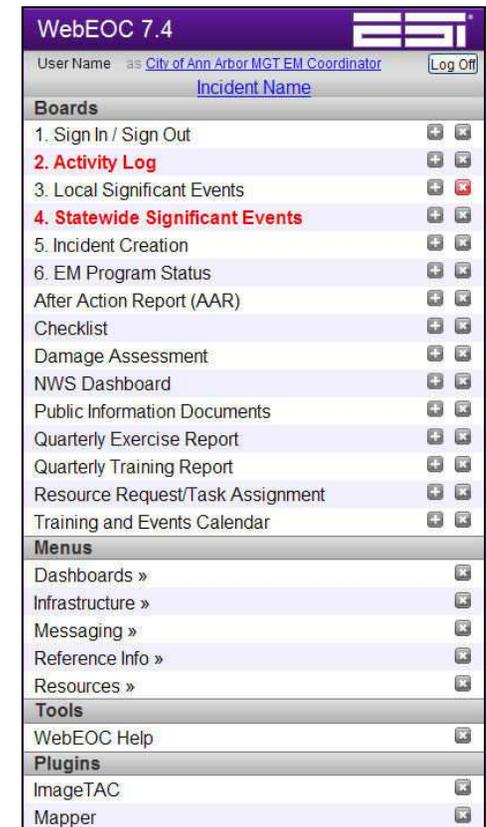
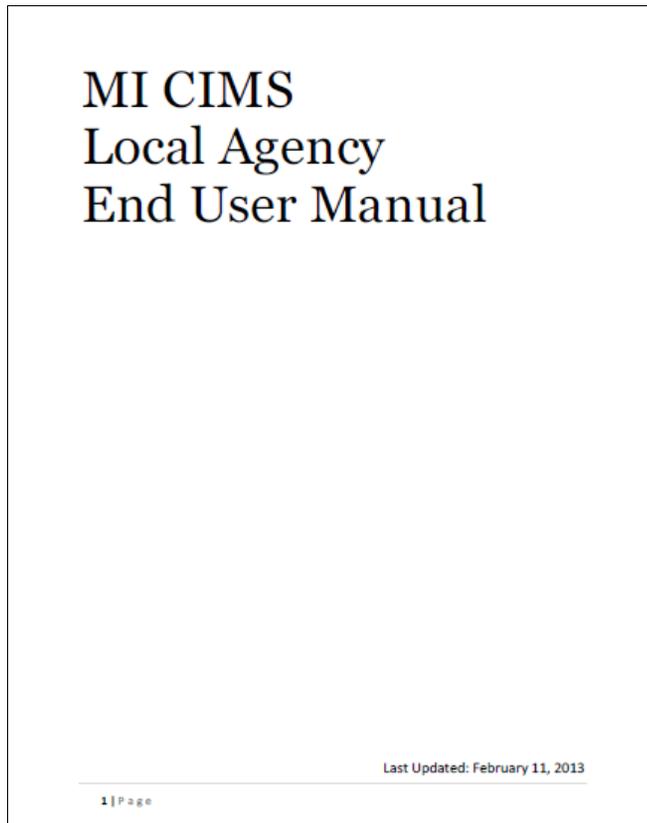
Assistance grants under this program are limited to \$100,000 or 10% of the total annual operating budget of the county or municipality for the preceding fiscal year, whichever is less. It must be stressed that Section 19 funds are only available in the absence of federal PA funding, and only if approved 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 MSP/EMHSD-19 (“Application for Disaster Assistance”). The resolution and completed MSP/EMHSD-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 MSP/EMHSD-19 form.)

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ATTACHMENTS:

Attachment A: MI CIMS Basic Instructional Resources (WebEOC Version 7.4)

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 and is also available for viewing and downloading from the MSP/EMHSD web site. When launching the MI CIMS, a start-up screen will appear that looks similar to the screen below, in the middle. 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. Once logged in, a control panel (image, below right) provides all of the tools required to effectively manage information within the system.



Note: If you have trouble logging into the MI CIMS, contact the MSP/EMHSD MI CIMS Administrator via e-mail at MIWebEOC@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	
New Incident? Y/N	Line 2	
Date / Time:	Line 3	
Activation Level: (activation; training; exercise)	Line 4	
Type: (monitoring; partial; full)	Line 5	
Location:	Line 6	
Comments:	Line 7	
Point of Contact: Name / Title Telephone #(s) E-mail Address	Line 8	

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

To: Commanding Officer – 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, that the response and recovery elements of our emergency operations plan have been activated, and that local resources are being utilized to the fullest possible extent.

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

Submittal Instructions

1. This declaration must be promptly forwarded **(via the MI CIMS as an attachment to the EM Program Status board, or by e-mail, 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 (e-mail address: emdseoc@michigan.gov; facsimile #: 517/333-4987; LEIN code: ELES), and the appropriate MSP/EMHSD District Coordinator.
2. If the MI CIMS is inoperable or not accessible / available and using e-mail, 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). A copy will also be available within the MI CIMS, as a back-up.

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

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: [\(insert name/title of chief executive\)](#)

Submittal Instructions

1. This request must be promptly forwarded (**via the MI CIMS as an attachment to the EM Program Status board, or by e-mail, 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 (e-mail address: emdseoc@michigan.gov; facsimile #: 517/333-4987; LEIN code: ELES), 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 e-mail, 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). A copy will also be available within the MI CIMS, as a back-up.

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)		
E-mail 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)
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)

Attachment E: Back-Up EM Program Status Board (cont.)

	<h1 style="margin: 0;">EM Program Status Board</h1> <h2 style="margin: 0;">Back-Up Submittal Form (Page 2)</h2>
-----------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------

EM Program: _____

Current Situation		
Type (EEI)	Status <small>(Schools: Open or Closed; all others indicate Normal, Problem, or Failure)</small>	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 #:	(Line 5)
Prepared By (name / title):	(Line 3)	E-mail Address:	(Line 6)

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

Part II: Public Property (includes eligible non-profit facilities) (Cumulative Damages)			
Type of Property	# of Sites	Estimated Dollar Loss	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)	(Line 14a)	(Line 14b) \$	(Line 14c)
Category D (Water Control Facilities)	(Line 15a)	(Line 15b) \$	(Line 15c)
Category E (Public Buildings and Equipment)	(Line 16a)	(Line 16b) \$	(Line 16c)
Category F (Public Utilities)	(Line 17a)	(Line 17b) \$	(Line 17c)
Category G (Parks and Recreation Facilities)	(Line 18a)	(Line 18b) \$	(Line 18c)

(Form continued on next page)

Attachment F: Back-Up Damage Assessment Board (cont.)



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

EM Program: _____

Part III: Budget	
Annual Budget	(Line 19) \$
Annual Budget – Current Balance	(Line 20) \$
Preceding Annual Budget	(Line 21) \$
Date Fiscal Year Begins	(Line 22)
Public Works Budget (if applicable)	(Line 23) \$
Public Works – Current Balance	(Line 24) \$
Road Budget (if applicable)	(Line 25) \$
Road Budget – Current Balance	(Line 26) \$
Part IV: Community Impacts	
Unresolved or Emerging Public Health/Safety/Welfare Threats	(Line 27)
Impacts on Essential Public Services and Facilities	(Line 28)
List (by location) of Roads and Bridges Closed as a Result of the Disaster	(Line 29)
Impacts on Specific Groups within the Community (e.g., elderly, young children, non-English speaking, homeless)	(Line 30)
Socio-economic Impacts on the Community (e.g., economy, environmental, historical, political, psychological)	(Line 31)
Cities, Townships, Villages Affected (Counties Only)	(Line 32)
Other Impacts (Specify)	(Line 33)
Attachments	
Description	Attachment (Name/File Name)
(Line 34a)	(Line 34b)
(Line 35a)	(Line 35b)
Comments	
(Line 36)	

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), and public facilities (public 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. **NOTE: SEPARATE WORKSHEETS SHOULD BE USED FOR PUBLIC AND PRIVATE DAMAGE.**

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 32-36. 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. For public facilities, this system works in the same manner. Damaged public facilities are classified on the Damage Survey Worksheet using the same classification system. In addition, a damage cost estimate also should be entered in the "Description of Damage" column on the right side of the worksheet. This damage estimate will only be a "ballpark" number, since there normally isn't time to develop the highly-detailed labor and material estimates necessary for a more accurate cost figure. 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, in addition to the damage classification (e.g., major damage, or "2").

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 by these teams 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 Planning Section (in the local EOC) per local procedure. The Planning Section then compiles this information in the appropriate fields on the MI CIMS Damage Assessment board, attaches one or more damage maps and any applicable 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 ONE IS CONDUCTED.**

Back-up Submittal Instructions. If the MI CIMS is not operable or available / accessible and the back-up submittal methods (e-mail, 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 e-mail, 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 (e-mail 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 (with one exception – see note in description box under “AFFECTED”) and should be used for classifying private and public damage in Michigan.

Important Background Notes: 1) In this classification system, damage is expressed as a percentage of structure replacement value. 2) Although the examples provided are for damage to homes and businesses (private damage), the same guidelines can be applied to public facilities and structures.

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. These guidelines – included on the following page verbatim from pages 25-26 of the July 2012 *FEMA PDA for IA Operations Manual* (see cover shot on the following page) – have been appropriately incorporated into the four degree of damage categories.

FEMA wrote: “When assessing the damage to a home, consideration must be given when the home has a basement. For a home with a basement, several variables would need to be identified in order to estimate the degree of damage to the home. Some variables would include: water depth in relation to utilities, structural damage to walls, and foundation and support structures. It is also important to note the uses of the basement, when possible, because FEMA only provides assistance for rooms required for occupation of the dwelling (i.e., occupied bedrooms, bathrooms required for occupied bedrooms, a sole kitchen or living room, or when no other room in another part of the dwelling meets the need). Recreational and other common areas of the basement are not considered required rooms. Additional factors to consider which could affect the safety of the occupants of the home are: severely damaged structural components; and severe damage to or complete failure of major mechanical or electrical utilities.”

On page 37 of the Manual, FEMA defines a basement as: “Any area of a building where the floor is below ground level on all sides. Split level homes, below ground level condominiums, and sunken living areas are excluded from the definition of a basement.”

**Preliminary Damage Assessment
for Individual Assistance
Operations Manual**

(9327.2-PR)

Federal Emergency Management Agency

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: lost shingles or other minor roof problems; minimal damage to siding; broken windows which can be secured; debris or flood waters blocking otherwise undamaged roadway or bridge; etc. For flooding, the structure can be considered AFFECTED if there is less than 3 inches of water in an occupied or required room. (If water damaged the furnace and/or water heater, consideration can be given to classifying the damage as MINOR DAMAGE.) Structures with minor access problems due to flooding can also be considered AFFECTED.

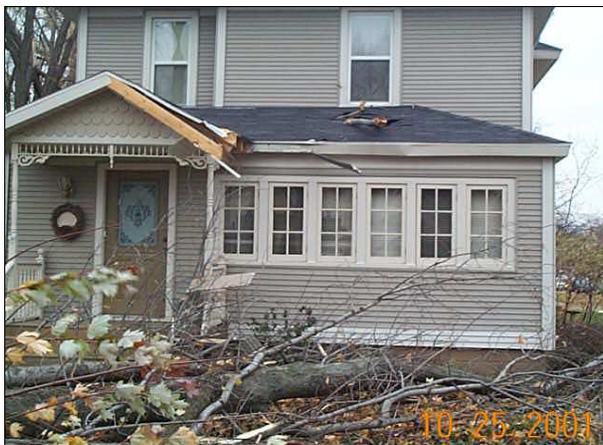
Non-flood disasters for manufactured (mobile) homes: The home's frame is not bent, twisted, or otherwise compromised, and no structural components of the home have been damaged (i.e., windows, doors, wall coverings, roof, bottom board insulation, ductwork, and/or utility hook-up).

Flood disasters for manufactured (mobile) homes: Water is under the structure but did not touch the living unit or otherwise cause damage.

Note Regarding Inaccessible Structures: FEMA uses a fifth damage classification – “INACCESSIBLE” – which Michigan does not use. Rather, Michigan includes structures which are not significantly damaged, but are otherwise inaccessible by reasonable means due to incident-related loss of access, under the AFFECTED damage classification. Such structures are still habitable / usable, but access to them is temporarily unavailable due to road or bridge damage, significant flooding, landslide, severe erosion, or other condition which makes safe and reasonable access not possible.



EXAMPLES OF AFFECTED STRUCTURES (0):



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

1 – MINOR DAMAGE: Generally has less than 50% damage to structure, is not currently habitable / useable, but can be made habitable within 30 days. Examples of minor damage: a) damaged windows or doors which cannot be secured; b) damage to functional components (i.e., furnace, water heater, HVAC, etc.) of the structure; c) 3-18 inches of water in an occupied or required room; and d) damage, or disaster-related contamination, to private well or septic system.

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 structural or significant (generally 50% or more) damage, is not habitable / useable, and requires extensive repairs (likely taking more than 30 days) before it can be made habitable again. Damage involves substantial failures of the structural features affecting strength and safety (e.g., foundation, walls, roof, floors, etc.) but which are repairable. For flood disasters, 18 inches or more of water on the first floor or water that covers electrical outlets can be considered MAJOR DAMAGE. In addition, homes with a basement may be considered for MAJOR DAMAGE if the water level has compromised the structural integrity of the home.

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

Flood damage to manufactured (mobile) homes: Water has impacted the floor system (to include belly board insulation, ductwork, and subflooring) or a water line of up to 12 inches within the living area.

EXAMPLES OF STRUCTURES WITH MAJOR DAMAGE (2):



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: a) permanently uninhabitable; b) complete failure of two or more major components (e.g., collapse of basement walls / foundation, walls, roof, etc.); c) only the foundation remains; d) condemned structure that will require demolition or removal by county or local government because of disaster-related health and safety concerns; and e) an otherwise unaffected structure that will require removal or demolition by county or local government because of a confirmed imminent danger (e.g., impending landslides, mudslides, sinkholes, etc.).

Non-flood damage to manufactured (mobile) homes: The home's frame must be bent, twisted, or otherwise compromised. The home must be missing the roof or has sustained significant damage to the roof covering, sheathing, and framing.

Flood damage to manufactured (mobile) homes: Any of the following conditions constitute a classification of DESTROYED: a) a water line higher than 12 inches within the living area; b) the home's frame is bent, twisted, or otherwise compromised; and c) the home's interior is so compromised by contamination that clean-up is not feasible.

EXAMPLES OF DESTROYED STRUCTURES (3):



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

Damage Classification: Rapid Evaluation Matrix

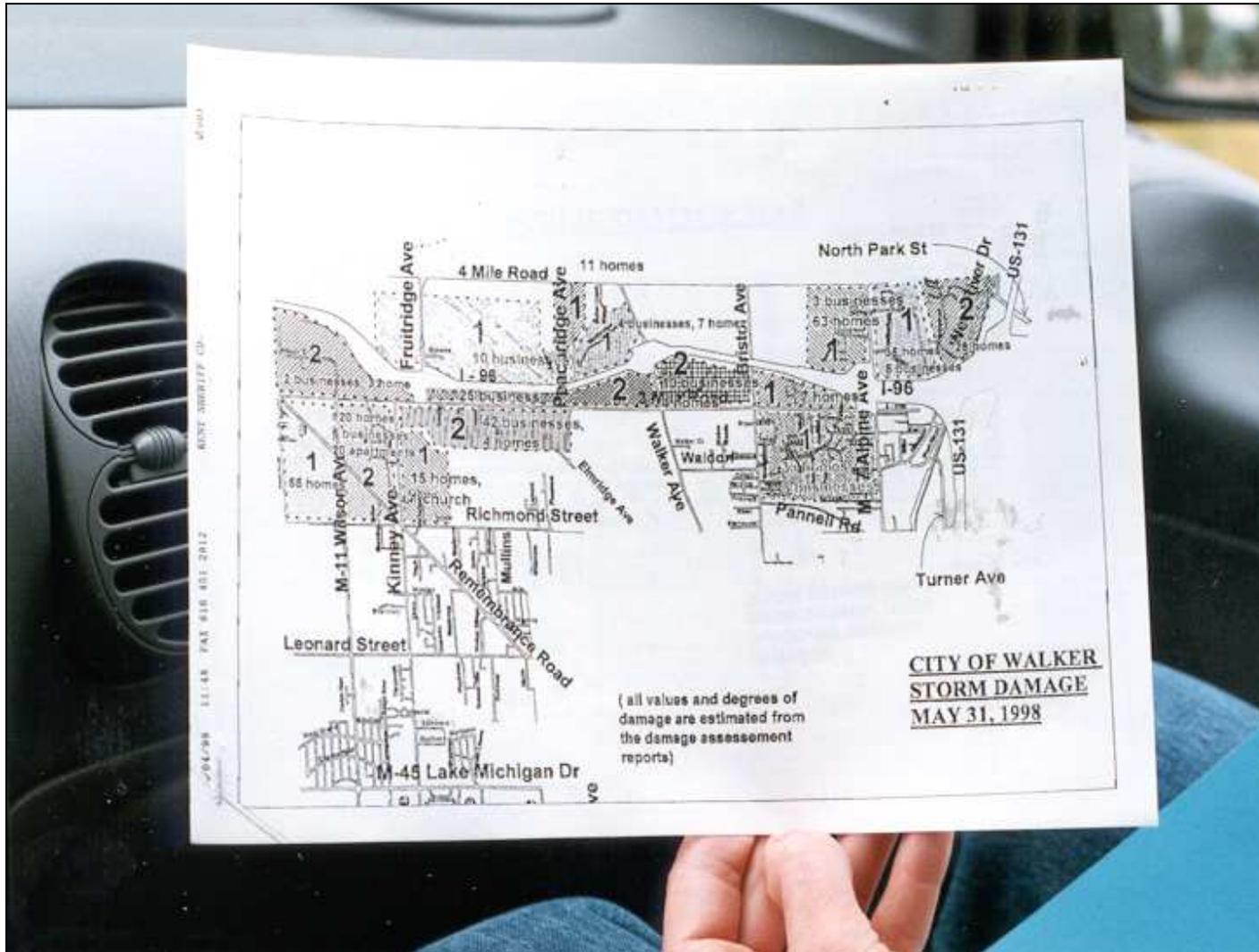
Damage Classification	Currently Habitable / Useable?	Approximate % of Damage	Flood Depth: Traditional At-Site Built Structure	Flood Depth: Manufactured (Mobile) Home	Flood Duration: 1 Day or Less, <u>Consider</u> This Classification	Flood Duration: >1 Day, <u>Consider</u> This Classification
0 – AFFECTED	Yes; without repairs	Minimal damage; mostly cosmetic	Less than 3 inches of water in occupied or required room	Minor access problems; no damage affecting habitability	0 – AFFECTED	0 – AFFECTED
1 – MINOR DAMAGE	No; repairs likely to take less than 30 days	< 50% damaged; damaged windows and doors	Three (3) to 18 inches of water in occupied or required room	Water line is below the floor system; skirting or HVAC may be impacted	1 – MINOR DAMAGE	2 – MAJOR DAMAGE
2 – MAJOR DAMAGE	No; repairs likely to take more than 30 days	≥ 50% damaged; involves structural features affecting strength / safety	Eighteen (18) inches or more of water on the first floor or water that covers electrical outlets	Water impacts the floor system (to include belly board insulation, ductwork, subflooring); water line of up to 12 inches within the living area	2 – MAJOR DAMAGE	3 – DESTROYED
3 – DESTROYED	No; permanently uninhabitable	100%; repair costs exceed structure's value	Damage from flood makes structure permanently uninhabitable	Water line higher than 12 inches within the living area; structure frame is bent, twisted, or otherwise compromised; interior compromised by contamination that clean-up is not feasible	3 – DESTROYED	3 – DESTROYED

Notes: > = greater than; < = less than; ≤ = less than or equal to; ≥ = greater than or equal to. Follow the chart from left to right, beginning with the left hand column. For non-flood disasters, use the first three columns to evaluate. For flood disasters, use all of the columns to evaluate. Damage is expressed as a percentage of structure replacement value. Information sources: FEMA Publication 9327.2-PR, "Preliminary Damage Assessment for Individual Assistance Operations Manual," July 2012, and previous editions of FEMA PDA guidance.

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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

(Showing how public damage is recorded)

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

Address or General Location	Degree of Damage				Type of Structure	Flood Level in Feet: B=basement F=first floor		Description of Damage <small>(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.)</small>	Latitude / Longitude <small>(if possible)</small>	
	0	1	2	3		B	F			
Intersection of M-49 and CR-223		X			P, Road	---	---	Shoulder washout; minor pavement collapse; \$5,000; N	N42°57'19" / W085°07'45"	
M-62 bridge at Oak River			X		P, Bridge	---	---	Partial washout of bridge deck; not usable; \$52,000; N	N42°57'24" / W085°08'02"	
M-49 culvert at Perkins Drain			X		P, Culvert	---	---	Complete washout; culvert gone, roadbed collapsed; \$80,000; N	N42°57'19" / W085°07'58"	
M-49 at mile marker 21	X				P, Road	---	---	15 downed trees on road; no damage; \$3,000 to remove / dispose of	N42°57'19" / W085°08'58"	
M-49 bridge at Red Run Drain			X		P, Bridge	---	---	Bridge completely washed out; total replacement; \$250,000; N	N42°57'16" / W085°08'14"	
Oak Township Public Works Garage (221 Oak Rd.)			X		P, Building	---	---	Building completely gone; total replacement; \$900,000; U	N42°57'14" / W085°08'14"	
Oak Township Water Treatment Facility (600 Oak Rd.)		X			P, Building	---	---	Roof partially blown off; walls intact; \$50,000; U	N42°57'13" / W085°08'18"	
*Note: Short duration flooding – less than 8 hours										
TOTALS:	1	2	1	3						

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	Currently Habitable / Useable?	Approximate % of Damage	Flood Depth:	
			Traditional At-Site Built Structure	Manufactured (Mobile) Home
0 – AFFECTED	Yes; without repairs	Minimal damage; mostly cosmetic	Less than 3 inches of water in occupied or required room	Minor access problems; no damage affecting habitability
1 – MINOR DAMAGE	No; repairs likely to take less than 30 days	< 50% damaged; damaged windows and doors	Three (3) to 18 inches of water in occupied or required room	Water line is below the floor system; skirting or HVAC may be impacted
2 – MAJOR DAMAGE	No; repairs likely to take more than 30 days	≥ 50% damaged; involves structural features affecting strength / safety	Eighteen (18) inches or more of water on the first floor or water that covers electrical outlets	Water impacts the floor system (to include belly board insulation, ductwork, subflooring); water line of up to 12 inches within the living area
3 – DESTROYED	No; permanently uninhabitable	100%; repair costs exceed structure's value	Damage from flood makes structure permanently uninhabitable	Water line higher than 12 inches within the living area; structure frame is bent, twisted, or otherwise compromised; interior compromised by contamination that clean-up is not feasible

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)

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 a GIS in the SEOC. 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:		E-mail 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:

Special 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, e-mail 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, good ballpark 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 Debris Management Guide, FEMA 325; MSP/EMHSD Publication 109a – “Local Disaster Debris Management Planning Handbook”)

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: $L' \times W' \times H' / 27 = (\#)$ Cubic Yards $\times .33$ (compaction factor) = **(#) Cubic Yards**

(For example: the formula for a building that is 100' long x 50' wide x 10' high is.... $100 \times 50 \times 10 / 27 = 1,852$ CY $\times .33 =$ **611 CY**)

Debris pile: $L' \times W' \times H' / 27 = (\#)$ **Cubic Yards**

(For example: the formula for a debris pile that is 50' long x 75' wide x 4' high is.... $50 \times 75 \times 4 / 27 =$ **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.

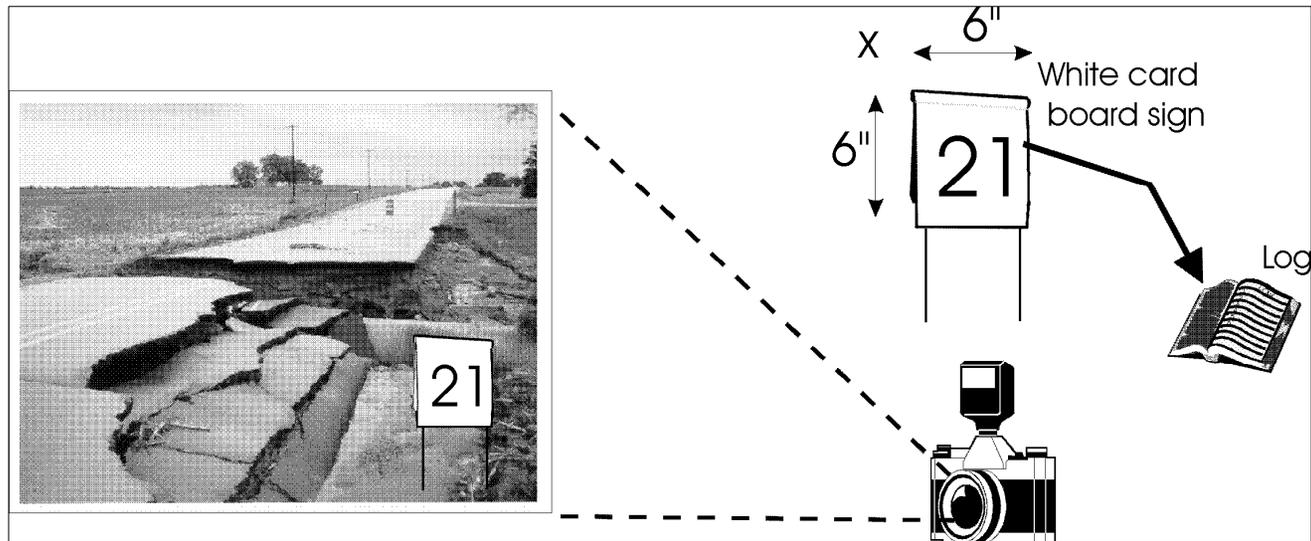
Step 1: Site Identification. Proper identification of the site being shot is the first step in the process. Even the best image is worthless if the person reviewing the photograph or video cannot determine where the image was taken. In most instances, the person that actually took the photo or shot the 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 camcorder 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 camcorder 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.

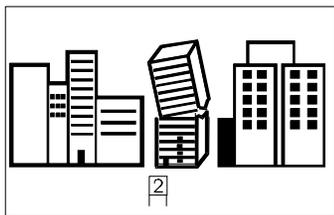
A simple but effective “manual” method that can be used is for the photographer to assign a number to each site, and record that number and site location in a notebook. For example: **Site 1:** Smith Street Bridge, over the Green River; **Site 2:** Maple Drain culvert under River Road; **Site 3:** Oak 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.)



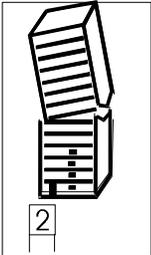
Each disaster site should be photographed from a minimum of three different positions to ensure proper image documentation.

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:

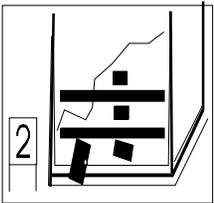


Attachment J: Guidelines for Disaster Photography (cont.)

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. The types of incidents for which aerial photographs (taken from a helicopter and/or fixed-wing aircraft) may be most beneficial in determining the scope and magnitude of damage includes but is 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; 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.

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:

- 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
- State departments / agencies (i.e., MSP, MDOT, MDMVA) via request through the MSP/EMHSD
- 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.

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 <u>not</u> 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	\$1,500,000	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	\$1,500,000	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 <u>maximum</u> amount a business and any affiliates may borrow for any one disaster is limited to \$1,500,000 for <u>both</u> physical damage and economic injury <u>combined</u> .

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.) **OR...**

- (2) A minimum of three businesses have sustained uninsured losses equal to 40% or more of their estimated fair market replacement value and, as a direct result of the damages, 25% of the work force in the community would be unemployed for at least 90 days.

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.

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

- Lodging expenses reimbursement (for a hotel or motel)
- Rental assistance (cash payments for a temporary rental unit or a manufactured home)
- Home repair cash grant
- Home replacement cash grant
- Permanent housing construction (in rare circumstances)

Other Needs Assistance (ONA)

- Medical, dental and funeral costs
- Transportation costs
- Other disaster-related needs

The IHP is administered by FEMA with liaison in Michigan provided by the MSP/EMHSD and the Michigan Department of Human Services (MDHS). Housing Assistance is funded at 100% federal share. Other Needs Assistance (ONA) is funded on a 75% federal / 25% state cost share arrangement.

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 Unemployment Insurance Agency (MUIA or UIA), 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 Community Health (MDCH).

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.

Legal Counseling. 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.

NRCS Emergency Conservation Grants. The Natural Resources Conservation Service (NRCS) / U.S. Department of Agriculture (USDA) has a program to provide cost-sharing grants to farmers and ranchers to perform emergency conservation measures to rehabilitate severely damaged farmland following a natural disaster. County committees establish levels of cost-sharing for each practice. The NRCS share may be 64%, 40%, or 20% of the cost of restoring the loss. Application is made at the appropriate NRCS Office.

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:

FHS 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 victims; and 3) place a temporary moratorium on foreclosures for properties 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 Indian 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 Grant Program (PAGP) 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 the PAGP 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 under the PAGP, and the means by which funds will be provided for eligible public assistance projects.

Eligible applicants for the PAGP 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 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 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, community centers, libraries, homeless shelters, senior citizen centers, shelter workshops, 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

- Category A: Debris removal from public roads and rights-of-way, as well as from private property when determined to be in the public interest. Note: Effective October 1, 2012, the PAGP now funds debris removal on Federal Aid System (FAS) highways, in addition to funding repair and restoration activities on non-FAS highway infrastructure (see Category C below).
- Category B: Emergency protective measures performed to eliminate or reduce immediate threats to the public or to property, including search and rescue, warning of hazards, and demolition of unsafe structures.

Permanent Work. Work to restore an eligible damaged facility to its pre-disaster design. 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 under the PAGP. Permanent repair of FAS roads is funded by the Federal Highway Administration (FHWA) Emergency Relief Program. However, the PAGP 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, including public mass transportation systems.
- Category F: Public utilities (e.g., water treatment and delivery systems, power generation facilities and distribution lines, sewage collection and treatment facilities).
- Category G: Public parks, recreational facilities, and facilities such as playgrounds, swimming pools, cemeteries, and improved / maintained beaches.

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



FEMA currently has five hazard mitigation grant programs: 1) the Hazard Mitigation Grant Program (HMGP); 2) the Pre-Disaster Mitigation Program (PDMP); 3) the Flood Mitigation Assistance Program (FMAP); 4) the Repetitive Flood Claims Program (RFCP); and 5) the Severe Repetitive Loss Program (SRLP). Collectively, these programs are called Hazard Mitigation Assistance (HMA). The PDMP, FMAP, RFCP and SRLP 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.

Important 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 permanently 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, a project's 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 Declaration

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 operates on a real-time basis, during which the State submits a request for assistance to the FEMA Regional Administrator while the fire is burning uncontrolled and 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

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, 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. Department of Defense emergency assistance is normally limited in duration to a maximum of 10 days.

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 PAGP.

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 Community Health (MDCH).

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)

EVD-19 (6-94)
**MICHIGAN STATE POLICE
 EMERGENCY MANAGEMENT DIVISION**
APPLICATION FOR DISASTER ASSISTANCE
 (Under Section 19, Act 390 PA 1976 as amended)

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 Rule 4, this application shall be accompanied by a resolution of the governing body (see reverse side).
 4. Applicant completes unshaded parts of this form.

1. POLITICAL SUBDIVISION	2. APPLICANT'S AGENT	INTERNAL USE ONLY
Name	Name	Date Received
Address	Title	Date Reviewed
Population	Address	Incident No.
		Telephone ()

3. ELIGIBLE DISASTER EXPENDITURES AND COSTS (See Rule 6 of the Administrative Rules)

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	Other (name each)
Overtime for emergency medical services	
Overtime for other employees	
Salaries of added employees	
Contracts with other jurisdictions	
Fuel for equipment used	
Shelter supplies for disaster	TOTAL

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.

4. DISASTER BURDEN (See Rule 3(d) of the Administrative Rules)

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:

5. PREVIOUS OPERATING BUDGET (See Rule 8 of the Administrative Rules)

Applicants total operating budget for preceding fiscal year	Ten (10) percent of the amount at left
-------------------------------------------------------------	----------------------------------------

6. SIGNATURE OF APPLICANT'S AGENT

Signature	Date
-----------	------

7. 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)						
Substation of Claims Standard				District Coordinator's Signature		Date
Damage Assessment Standard						

DIRECTORS' RECOMMENDATION

Grant approval recommended <input type="checkbox"/>	Grant amount recommended	Grant disapproval recommended <input type="checkbox"/>
Reasons for disapproval		
Signature		Date

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, Act 390, Public Acts of 1976, 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, Act 390, Public Acts of 1976, 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 3 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 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

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.

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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. In the post 9/11 world, 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.

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 into the field. 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 then 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," it is probably better to err on the side of caution and assemble the largest number of kits that might be needed. That is much easier than trying to scramble at the last minute and assemble kits when time is at a premium. At a minimum, every community should have at least two kits ready to go at all times.

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