

Download Free Michigan  
Hazard Mitigation Plan

# Michigan Hazard Mitigation Plan

In the devastation that follows a major disaster, there is a need for multiple sectors to unite

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and devote new resources to support the rebuilding of infrastructure, the provision of health and social services, the restoration of care delivery systems, and

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other critical recovery needs. In some cases, billions of dollars from public, private and charitable sources are invested to help communities recover.

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National rhetoric often characterizes these efforts as a "return to normal." But for many American communities, pre-disaster conditions are far from optimal. Large

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segments of the U.S. population suffer from preventable health problems, experience inequitable access to services, and rely on overburdened health

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systems. A return to pre-event conditions in such cases may be short-sighted given the high costs - both economic and social - of poor health. Instead, it is important to

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understand that the disaster recovery process offers a series of unique and valuable opportunities to improve on the status quo. Capitalizing on these opportunities can advance

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the long-term health,  
resilience, and  
sustainability of  
communities - thereby  
better preparing them for  
future challenges.

Healthy, Resilient, and



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Sustainable Communities  
After Disasters identifies  
and recommends recovery  
practices and novel  
programs most likely to  
impact overall community  
public health and

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contribute to resiliency for future incidents. This book makes the case that disaster recovery should be guided by a healthy community vision, where health considerations are

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integrated into all aspects of recovery planning before and after a disaster, and funding streams are leveraged in a coordinated manner and applied to health

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improvement priorities in order to meet human recovery needs and create healthy built and natural environments. The conceptual framework presented in Healthy,

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Resilient, and Sustainable  
Communities After  
Disasters lays the  
groundwork to achieve this  
goal and provides  
operational guidance for  
multiple sectors involved

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in community planning and  
disaster recovery.

Healthy, Resilient, and  
Sustainable Communities  
After Disasters calls for  
actions at multiple levels  
to facilitate recovery

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strategies that optimize community health. With a shared healthy community vision, strategic planning that prioritizes health, and coordinated implementation, disaster

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recovery can result in a communities that are healthier, more livable places for current and future generations to grow and thrive - communities that are better prepared



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for future adversities.  
It is the intent of the  
course to stimulate  
thinking, and ultimately  
action, in suggesting a  
multi-disciplinary action  
plan to achieve

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mitigation/plan  
integration. Finally, if  
the course is successful,  
participants will develop  
concept to practice action  
plans applicable to  
implementation in their

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community's comprehensive  
plan.

Natural Hazards Analysis  
Alcona, Saginaw, Genesee &  
Lapeer Counties, Michigan  
State of Michigan  
Applicant Handbook

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HAZUS User Groups Help  
Create Disaster Resistant  
Communities

A Reassessment of Natural  
Hazards in the United  
States  
Annual Report

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Emphasizes Resilient Policies, Rather Than Rigid Philosophy  
Economic and environmental consequences of natural and man-made disasters have grown exponentially during the past few decades. Whether from hurricanes, chemical spills, terrorist incidents, or other catastrophes, the negative

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impacts can often be felt on a global scale. Natural Hazards Ana  
Abstract : The 2018 Father's Day Flood rattled the Houghton County, MI community. Thousands of dollars in damage to public and private property were incurred due to slope failure, scour and stagnant water. Though the

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flood was billed as a once-in-a-lifetime event, hazard mitigation planning has become essential, as extreme weather events are expected to become more frequent with a changing climate. While Federal Emergency Management Agency funding will provide detailed flood hazard maps in the future,

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mapping is expected to be several years out. To aid the City of Houghton community with immediate flood hazard mitigation planning, a hydraulic-based flood depth map was created for the Huron Creek Watershed. Utilizing the HEC-GeoRAS extension within the ArcGIS software, channel cross



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sections were drawn from a pre-flood 2018 digital elevation model. The cross sections were then imported to HEC-RAS software, where flow structures were added and channel geometry edited to match surveyed elevations. A steady-state mixed flow analysis was performed for the 1% annual

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exceedance event (100-year flood). The water surface profile and flood depth map produced reveal that areas at high risk of flooding mainly lie downstream, at Lakeshore Drive. Areas of high velocity and potential scour risk were also identified at the Canal Road and Calverley Road culverts.

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Suggestions for mitigating the risk of flooding along Lakeshore Drive include increasing the culvert size, widening the upstream channel, removing the outlet weir, and making structural or nonstructural changes to adjacent property to reduce the impact of flooding. In addition, scour reduction

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may be achieved through the  
emplacement of inline weirs/vanes.

Executive summary

Disasters by Design

Cities at Risk

Family and Community Emergency

Safety

Partnerships in Preparedness

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Michigan Emergency Management  
Plan

FEMA's Hazard Mitigation  
Grant Program is a  
powerful resource in the  
combined effort by  
Federal, State, and

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local government, as well as private industry and homeowners, to end the cycle of repetitive disaster damage. The Robert T. Stafford Disaster Relief and

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Emergency Assistance Act was passed on November 23, 1988, amending Public Law 93-288, the Disaster Relief Act of 1974. The Stafford Act included Section 404,

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which established the Hazard Mitigation Grant Program. In 1993, the Hazard Mitigation and Relocation Act amended Section 404 to increase the amount of HMGP funds



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available and the cost-share to 75 percent Federal. This amendment also encouraged the use of property acquisition and other non-structural flood mitigation

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measures. In an effort to streamline HMGP delivery, FEMA encourages States to develop their mitigation programs before disaster strikes. States are

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adopting a more active HMGP management role. Increased capabilities may include: Conducting comprehensive all-hazard mitigation planning prior to disaster

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events; Providing applicants technical assistance on sound mitigation techniques and hazard mitigation policy and procedures; Coordinating mitigation

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programs through interagency teams or councils. Conducting benefit-cost analyses; and Preparing National Environmental Policy Act reviews for FEMA

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approval. States that integrate the HMGP with their frequently updated State Administrative and Hazard Mitigation Plans will create cohesive and effective approaches to

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loss reduction. This type of coordinated approach minimizes the distinction between "predisaster" and "post-disaster" time periods, and instead produces an

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ongoing mitigation effort. Hazard mitigation is any sustained action taken to reduce or eliminate long-term risk to people and property from



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natural hazards and their effects. A key purpose of the HMGP is to ensure that the opportunity to take critical mitigation measures to protect life

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and property from future disasters is not lost during the recovery and reconstruction process following a disaster. Program grant funds available under Section

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404 of the Stafford Act provide States with the incentive and capability to implement mitigation measures that previously may have been infeasible. The purpose

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of this Desk Reference  
is to: Provide  
comprehensive  
information about FEMA's  
Hazard Mitigation Grant  
Program (HMGP); Increase  
awareness of the HMGP as

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an integral part of  
statewide hazard  
mitigation efforts; and  
Encourage deeper  
commitments and  
increased  
responsibilities on the

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part of all States and communities to reduce damage and losses from natural disasters. This Desk Reference is organized to simplify program information and

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assist the reader with practical guidance for successful participation in the program. Lists of program-related acronyms and definitions are included, along with

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appendices that amplify selected aspects of the HMGP. This Desk Reference is organized into 14 sections, each of which presents a major HMGP subject area.



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In each section, information is presented on the right side of the page. In several sections, job aids containing supplemental material are provided.

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The job aids for each section can be found at the end of the section. At the front of each section, there is a detailed table of contents to help you

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locate specific  
information.

Local Hazard Mitigation  
Planning WorkbookA  
Workbook to Assist Local  
Communities in  
Developing a Multi-

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hazard Mitigation  
PlanLocal Hazard  
Mitigation Planning  
WorkbookA Workbook to  
Assist Local Communities  
in Developing a Multi-  
hazard Mitigation

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PlanMichigan Emergency  
Management PlanA Study  
of the Capability of the  
State of Michigan to  
Mitigate Flood Hazard,  
Based Upon the National  
Academy of Public

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Administration

CriteriaMichigan

Emergency Management

PlanExecutive

summaryPublic Assistance

Grant ProgramState of

Michigan Applicant

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Handbook Hazard  
Mitigation Planning Guide  
for All-Hazard Emergency  
Operations Planning DIANE  
Publishing

In Response to the July  
9, 1993 Presidential

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Disaster Declaration for  
the State of Illinois  
Michigan Emergency  
Preparedness Plan  
Flood Hazard Mitigation  
Plan for September 1985  
Flood Disaster



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(FEMA-744-DR-MI)

Risk Reduction for Local  
Communities

2005 Michigan Emergency  
Management Plan (MEMP) &  
Support Documents  
Emergency Management

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Standards Workbook and  
Assessment Guide for  
Local Jurisdictions

*Disasters by Design provides an  
alternative and sustainable way  
to view, study, and manage  
hazards in the United States*

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*that would result in disaster-resilient communities, higher environmental quality, inter- and intragenerational equity, economic sustainability, and improved quality of life. This volume provides an overview of*

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*what is known about natural hazards, disasters, recovery, and mitigation, how research findings have been translated into policies and programs; and a sustainable hazard mitigation research agenda. Also provided*

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*is an examination of past disaster losses and hazards management over the past 20 years, including factorsâ€"demographic, climate, socialâ€"that influence loss. This volume summarizes*

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*and sets the stage for the more detailed books in the series.*

*Meant to aid State & local emergency managers in their efforts to develop & maintain a viable all-hazard emergency operations plan. This guide*

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*clarifies the preparedness, response, & short-term recovery planning elements that warrant inclusion in emergency operations plans. It offers the best judgment & recommendations on how to*

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*deal with the entire planning process -- from forming a planning team to writing the plan. Specific topics of discussion include: preliminary considerations, the planning process, emergency operations*



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*plan format, basic plan content,  
functional annex content,  
hazard-unique planning, &  
linking Federal & State  
operations.*

*Hazardous Materials Incidents  
Incorporating Natural Hazard*

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*Assessment and Mitigation Into  
Project Preparation  
Reducing the Impact of  
Disasters  
Michigan Hazard Analysis  
Wiley Pathways Emergency  
Planning*

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*A Compendium of Exemplary  
Practices in Emergency  
Management*

***Marked by its risk-based  
response philosophy,  
Hazardous Materials  
Incidents is an***

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***invaluable procedural  
manual and all-inclusive  
information resource for  
emergency services  
professionals faced with  
the challenge of  
responding swiftly and***

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***effectively to hazardous materials and terrorism incidents. Easy-to-read and perfect for use in HazMat awareness, operations, and technician-level***

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***training courses, this "Operations Plus" book begins by acquainting readers with current laws and regulations, including those governing emergency***

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***planning and workplace safety. Subsequent chapters provide in-depth information about personal protective equipment and its limitations; protective***

## Download Free Michigan Hazard Mitigation Plan

***actions ranging from site management and rescue through evacuation and decontamination; product control including the use of carbon monoxide***



## Download Free Michigan Hazard Mitigation Plan

***detectors; responses to terrorism and terrorist groups; law enforcement activities such as SWAT operations and evidence collection; and more! A key resource for every***

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***fire, police, EMS, and industrial responder, Hazardous Materials Incidents is one of the few books available today that is modeled on current ways of thinking***

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***about HazMat and  
terrorism responses and  
operations.***

***How do cities prepare  
for and recover from  
natural disasters? In  
this book the authors***

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*provide a broad overview of the issues related to the impacts of disasters on cities around the world, from assessing risks to accounting for damages. The comparative*

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***approach across different types of disasters in a range of urban locations is useful in identifying opportunities for policy transfer. While there is***

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***no 'one size fits all' solution to hazard mitigation, valuable lessons can be learned from the experiences of others. The chapters emphasize different***

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***modes for assessing  
hazard risk, as well as  
strategies for  
increasing the  
resiliency of vulnerable  
populations.***

***Integration of Emergency***

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***Management Into the  
Community Planning  
Process - Plan of  
Instruction for the  
Course  
Strategies,  
Opportunities, and***



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***Planning for Recovery  
F.A.C.E.S. of Michigan  
Interagency Hazard  
Mitigation Team Report  
Hazard  
Mitigation/comprehensive  
Plan Interface***

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### ***Local Hazard Mitigation Planning Workbook***

In order for a community to be truly prepared to respond to any type of emergency, it must develop effective emergency planning.

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Emergency Planning guides readers through the steps of developing these plans, offering a number of strategies that will help ensure success. It delves into the patterns of human

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disaster behavior, social psychology, and communication as well as the basics of generic protective actions, planning concepts, implementation, and action.  
Best Practices for Risk

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Reduction and Management  
Planning for and Recovering  
from Natural Disasters  
Department of Homeland  
Security Appropriations For  
2008, Part 5, February 15,  
2007, 110-1 Hearings, \*

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Flood Mitigation Assistance  
Program Applicant Handbook  
Public Assistance Grant  
Program  
Healthy, Resilient, and  
Sustainable Communities  
After Disasters