
I. Introduction

Across the United States, natural, technological, and man-made disasters have led to increasing levels of death, injury, property damage, and interruption of business and government services. The impact on families and individuals can be immense and damages to businesses can result in regional economic consequences. The time, money and effort to respond to and recover from these disasters divert public resources and attention from other important programs and problems. The elected and appointed officials of the county also know that with careful selection, mitigation actions in the form of projects and programs can become long-term, cost effective means for reducing the impact of natural, technological, and man-made hazards.

This All-Hazard Mitigation Plan for St. Clair County, Michigan (the Plan) was prepared with input from county residents, responsible local officials, and with the support of the Michigan State Police - Emergency Management Division (MSP/EMD) and the Federal Emergency Management Agency (FEMA). The process to develop the Plan included nearly a year of coordination with representatives from numerous jurisdictions and other organizations in the county. The Plan will guide the county toward greater disaster resistance in harmony with the character and needs of the community.

Plan Description/Purpose of Plan

This Hazard Mitigation Plan is specifically written to satisfy the requirements of the Disaster Mitigation Act of 2000 (DMA 2000), which is the latest legislation to improve the hazard planning process (Public Law 106-390). By adopting the plan, St. Clair County will remain eligible for various federally funded hazard mitigation grant opportunities for five years. DMA 2000 reinforces the importance of mitigation planning and emphasizes planning for disasters before they occur and establishes a pre-disaster hazard mitigation program and new requirements for the national post-disaster Hazard Mitigation Grant Program (HMGP). It identifies new requirements that allow HMGP funds to be utilized for planning activities and amplifies the amount of HMGP funding available to states that have developed a comprehensive mitigation plan prior to a disaster. States and communities are required to have an approved mitigation plan in position prior to receiving post-disaster HMGP funds. Local and tribal mitigation plans must demonstrate that their proposed mitigation measures are based on a sound planning process that accounts for the risk to and the capabilities of the overall community.

Definitions:

DHS (Department of Homeland Security)

DMA 2000 (Disaster Mitigation Act)

FEMA (Federal Emergency Management Agency)

HMGP (Hazard Mitigation Grant Program)

MSP-EMD (Michigan State Police, Emergency Management Division)

SCCHD (St. Clair County Health Department)

SCCMPC (St. Clair County Metropolitan Planning Commission)

SCCOEM (St. Clair County Office of Emergency Management)

SCCRC (St. Clair County Road Commission)

The Plan is a comprehensive study of the hazards that have impacted St. Clair County in the past, as well as those that have the potential to occur in the future.

This Plan is intended to serve many purposes, including:

- **Increasing public awareness** to help residents of St. Clair County better understand the natural and man-made hazards that threaten public health, safety, and welfare; economic vitality; and the operational capability of important institutions;
- **Enhancing decision making capacity** by providing information that managers and leaders of local government, business and industry, community associations, and other key institutions and organizations need to take action to address vulnerabilities to future disasters;
- **Developing a detailed community profile** that can be utilized as a reference when considering the potential impacts that a hazard can have on a range of community assets;
- **Providing inter-jurisdictional coordination of mitigation-related programming** to ensure that proposals for mitigation initiatives are reviewed and coordinated among the participating jurisdictions within the county; and
- **Promoting compliance with state and federal programming** to ensure that St. Clair County and its communities can take full advantage of state and federal grant programs that encourage or mandate efficient hazard mitigation planning.

The Plan is a comprehensive study of the hazards that have impacted St. Clair County in the past, as well as those that have the potential to occur in the future. Some of these hazards are a greater threat to some communities than others, and some hazards could harm one sector of society more than others.

The Plan consists of a narrative description with the following chapters: 2) Community Profile; 3) Hazard Profiles; 4) Risk and Vulnerability Assessment; 5) Capacity to Address Hazards; 6) Public Involvement; 7) Goals and Objectives; 8) Inventory of Mitigation Actions; 9) Implementation; 10) Action Plan; 11) Funding Hazard Mitigation; 12) Plan Integration; and 13) Plan Monitoring and Maintenance.

The Community Profile provides geographic, economic, social, and land use information that is relevant to St. Clair County and how it is affected by and responds to hazard events. The Hazard Analysis and Vulnerability section shows the overall ranking of hazards affecting St. Clair County and also explains the methodology the county utilized to rank them. Moreover, this section describes in detail the hazards that have the potential to occur in St. Clair County. The Mitigation Goals and Objectives section establishes the county's overall direction for hazard mitigation planning and actions. The Inventory of Mitigation Measures explains general structural and managerial actions that should be pursued

to lessen the impacts of hazards.

Records of the National Weather Service, Federal Emergency Management Agency, Michigan Department of State Police - Emergency Management Division, newspapers, and numerous other federal, state, county, local agencies, and private organizations were used as sources for the data presented in this Plan.

The Planning Process

This Plan is the product of a rational thought process that reviews alternatives, then selects and designs those that will work best for the situation. This process is an attempt to avoid the need to make quick decisions based on inadequate information. The Plan provides carefully considered directions to the county government and to the participating municipalities by studying the overall damage potential of hazards and ensuring that public funds are well spent.

Participants in the Planning Process

The Hazard Mitigation Plan Steering Committee led the development of the Plan. In addition, the municipalities within St. Clair County were invited to participate in the planning process. In the development of this Hazard Mitigation Plan, the St. Clair County Metropolitan Planning Commission (SCCMPC) prepared the plan, with guidance from other units of St. Clair County government. Specifically, representatives from the county's Office of Emergency Management (SCCOEM), the St. Clair County Road Commission (SCCRC), and the St. Clair County Health Department (SCCHD) provided input and review of this Plan. The St. Clair County Metropolitan Planning Commission guided the land use aspects of the Plan. St. Clair County citizens also provided input and guidance in the creation of the Plan. More information about public participation can be found in the Public Involvement chapter.

Hazard Mitigation Plan Steering Committee

The Hazard Mitigation Plan Steering Committee met bi-monthly during the planning process. Committee members reviewed various hazards and their effects on people and property, considered a variety of ways to reduce and prevent damage, and recommended the most appropriate and feasible measures for implementation. The Hazard Mitigation Plan Steering Committee is comprised of representatives from St. Clair County and interested public agencies and citizens. Members of the steering committee are:

This All-Hazard Mitigation Plan for St. Clair County, Michigan was prepared with input from county residents, responsible local officials, and with the support of the Michigan State Police - Emergency Management Division (MSP/EMD) and the Federal Emergency Management Agency (FEMA).



St. Clair County citizens interact with county planners and look over the Hazard Mitigation display boards on April 15th at Earth Fair 2005.

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- **Jeff Friedland**, Emergency Management Coordinator, St. Clair County Office of Emergency Management.
 - **Marianne Hill**, Assistant Emergency Management Coordinator, St. Clair County Office of Emergency Management.
 - **William Kauffman**, Executive Director, St. Clair County Metropolitan Planning Commission
 - **Douglas Plachcinski**, Senior Planner, St. Clair County Metropolitan Planning Commission.
 - **David Struck**, Senior Planner, St. Clair County Metropolitan Planning Commission.
 - **Kirk Weston**, Deputy Managing Director, St. Clair County Road Commission.
 - **Kristen Jurs**, Stormwater Coordinator, St. Clair County Health Department
 - **Diane Forsys**, Public Health Emergency Preparedness Coordinator, St. Clair County Health Department.
 - **Charles Wood**, Project Manager, St. Clair County Drain Commission.
 - **John Randolph**, Township Supervisor, East China Township.
 - **William Deater**, Township Supervisor, Grant Township.
 - **John Jones**, Township Supervisor, Ira Township.
 - **John Osborn**, City Manager, City of Yale.
 - **Tom Konik**, Fire Chief, City of Marysville.
 - **Chuck Johnson**, Fire Chief, City of Algonac.
 - **John Misaros**, St. Clair County Local Emergency Planning Committee.

Coordination

Existing plans and programs were reviewed during the planning process. It should be underscored that this Plan does not replace other planning efforts such as the St. Clair County Master Plan, the Long-Range Transportation Plan, stormwater management planning, or the Local Emergency Planning Committee (which focuses on hazardous materials). This Plan complements those efforts and builds on their recommendations.

Plan Components

The community profile section of the Plan is based on the 2000 St. Clair County Master Plan and adapted for hazard mitigation purposes. Information contained within the community profile was compiled from a variety of sources including Census data, the state of Michigan, numer-

ous county departments, and other planning documents including the St. Clair County Data Book and the 2030 Long Range Transportation Plan.

The Hazard Analysis and Vulnerability Assessment is based on materials provided by the Michigan State Police – Emergency Management Division, as well as information provided by each municipality, local, state, and federal agencies, schools, businesses, and non-profit organizations. The Hazard Mitigation Plan Steering Committee discussed each hazard and ranked them based on weighted factors.

Public involvement was critical to the development of this Plan. The Public Involvement chapter details how citizens and community officials were able to participate throughout the planning process. A variety of avenues were available for stakeholders to offer input and voice concerns regarding disasters in St. Clair County. This chapter also shows the results of the surveys that were used to garner public input.

Mitigation goals and objectives were discussed during a meeting of the Hazard Mitigation Plan Steering Committee. The committee agreed on a preliminary set of goals and objectives, which were revised and enhanced after the public open houses.

In compiling an inventory of mitigation actions, the Hazard Mitigation Plan Steering Committee considered everything that could affect the impact of the hazards and reviewed a wide range of alternatives. Mitigation measures were explored and discussed over many committee meetings and were altered based on public input.

The Implementation chapter outlines community-specific responsibilities in carrying out the mitigation strategies called for in this Plan. County and local jurisdictions will be able to implement recommended action items through appropriate existing programs and procedures. Upon adoption of the Plan, each jurisdiction can use the Plan as a source of information on the hazards that could potentially impact their communities.

In looking at the county's capacity to address hazards, it is important to understand the structure of the county government and its various functions. The Capacity to Address Hazards chapter also examines emergency communications and notification systems within the county.

The Plan Integration and Existing Planning Mechanisms chapter demonstrates the nexus between all-hazard planning and other planning mechanisms such as the comprehensive plan, the capital improvements program, the zoning ordinance, the subdivision ordinance, the building code, the landscape and maintenance code, and outreach opportunities.

The Plan Monitoring and Maintenance chapter describes the process that will make certain that the St. Clair County Hazard Mitigation Plan remains an active and relevant document.

Plan Components:

- Community Profile
- Hazard Profiles
- Risk & Vulnerability Assessment
- County Capacity to Address Hazards
- Public Involvement Plan
- Mitigation Goals & Objectives
- Inventory of Mitigation Actions
- Implementation of All-Hazard Mitigation
- Hazard Mitigation Action Plan
- Integrating All-Hazard Planning into Existing Policy
- Plan Monitoring & Maintenance

"mit-i-gate" - To make less severe or harsh.

A Hazard is a source of potential danger or cause of harm to people or property.

Mitigation is action taken to reduce long-term risk, damage, and loss of life and property from a hazard event.

Planning is the act or process of making or carrying out plans.

Near the conclusion of the Plan is a brief directory of potential funding sources for hazard mitigation activities. Many of these sources are federal grant programs that are available to both urban and rural communities.

Concepts in Hazard Mitigation Planning

The overarching target of any hazard mitigation effort is to reduce risk. Risk represents the possibility of suffering harm or loss. When it comes to hazard planning, risk can be defined as the potential for damages, losses and casualties arising from the impact of hazards. There are four main aspects of hazard mitigation planning: hazards, exposure, risk, and mitigation.

- **Hazards** are natural, technological, or man-made events that potentially may cause damages, losses or casualties. Hazards are generally set apart by their frequency and severity and by the geographic area that can potentially be impacted.
- **Exposure** pertains to the extent and vulnerability of the built environment, such as utility lines or buildings, susceptible to one or more hazard events.
- **Risk** is the potential for damages, losses and casualties arising from the impact of hazards. It is the overall threat to the built environment.
- **Mitigation** is an effort intended to reduce the risk posed by hazards. Mitigation projects may be construction projects that physically reduce risk or they may be planning projects that "soften" the negative impacts of hazard events.

All of these aspects are interrelated. The extent of risk is wholly dependent on the frequency and severity of specific hazards combined with the value and vulnerability of the built environment and the location of the county's population.