

SPECIAL MEETING
Disaster Mitigation Plan Sub-Committee
January 18, 2010
12:00 PM
5777 Vinton Road, Williamsburg, MI

Business

1. NIMS (National Incident Management System) Training
2. Probable Disaster Discussion
3. Next Steps

Outline

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ACKNOWLEDGEMENTS

The Whitewater Township Disaster Mitigation Committee was comprised of the following Individuals who met from October 2009 through _____ 2010 to develop this Plan:

- Matt Lyons, Planning Commissioner
- Randy Stites, Battalion Chief
- Vaughn Harshfield, Citizen
- Wally Weir, Citizen
- Leslie Meyers, Planning/Zoning Administrator

Other individuals contributed to the development of this Plan:

- Larry Lake, Supervisor
- Carol Hockin, Clerk and Parks & Recreation Administrator
- Patty O'Donnell, Regional Planner NWMCOG
- John Sych, Grand Traverse County Planner
- Whitewater Township Historical Society
- Daniel C. Scott, Grand Traverse County Emergency Management Coordinator

EXECUTIVE SUMMARY

Disaster Mitigation is a sustained effort to permanently reduce or eliminate long-term risk to people and property from the effects of reasonably predictable hazards. Fires, floods, winter storms, high winds, severe storms and hazardous material spills are some of the hazards experienced by Northern Michigan. The purpose of this plan is to identify specific hazards that are common to Whitewater Township, Grand Traverse County and establish a framework to reduce the risks associated with these hazards. The Whitewater Township Disaster Mitigation Plan is organized into seven main sections accompanied by appendices of tables, maps, definitions and pertinent documentation.

Section One is an introduction, explaining the purpose and benefits of mitigation in general and the Plan in particular. It discusses the history and demographics of the Township.

Section Two describes the planning process used to develop the plan and establishes the goals for the Plan.

Section Three identifies potential hazards in the Township, reviews the recent disaster history of the Township and the risks associated with these hazards. The hazards addressed are airplane crashes/emergency landings, animal/human disease transmission, biological and chemical weapons, cyber terrorism, dam failure, drought, earthquakes, excessive heat, floods, gas explosion, hailstorms, hazardous materials, landslides, power outage, radiological, severe winter storms, terrorism, tornadoes, wildfire and windstorms.

Section Four discusses Risk Assessment. Risk Assessment uses the inventory of possible hazards and then assesses the risk that each hazard could potentially pose to the Township. What hazards can affect the Township? How bad can it get? How likely are they to occur? What will be affected by these hazards? How will these hazards affect people? The magnitude (percentage of the area affected) of the impact of the hazard can be classed as negligible; limited; critical; and catastrophic. The frequency of occurrence(s) is then classified as unlikely; possible; likely; and highly likely.

Section Five is an analysis of the vulnerability of the Township. It begins with an inventory of possible hazards and an assigning of the vulnerability that is posed by each possible hazard. This analysis uses HAZUS (A GIS-based, nationally standardized, loss estimation tool developed by Federal Emergency Management Agency (FEMA)).

Section Six of the plan gives an overview of current and future land use, identifies current Whitewater Township policies and guidance that support Hazard Mitigation, notes ongoing or planned Hazard Mitigation programs, projects and activities for the Township and makes recommendations for initiatives that can benefit the Township. This section identifies potential funding sources. Also included is a discussion on the Township's participation in the National Flood Insurance Program (NFIP).

Section Seven of the plan outlines how the plan will be initially adopted and how it will be reviewed and updated. The plan and its associated project list should be reviewed and updated

periodically to account for projects that are undertaken and completed, to consider the impact of future disasters and as new needs are identified, and to reflect changing local priorities. A review of the plan and project list should occur on an annual basis with a complete revision of the plan every five years. This section also covers Plan implementation and actions necessary to make this a viable planning document.

The Appendices include document tables, maps, funding sources, glossary of terms, library of websites and references, a list of acronyms/abbreviations and adoption process.

SECTION ONE - INTRODUCTION

Background

Each element of the Plan presents historical and background information as well as current information, data, and analysis. The Plan's policies are found in Section Two; they form the core of the Plan. Section Six contains program and action statements recommending specific steps for the Township and others to pursue in order to implement the policies.

This Plan contains maps and presents information in a generalized format. More detailed information often is available from other maps or data sources, and are referenced on the maps or in the appendices. Users of this plan and its maps are encouraged to consult those sources when more detailed information is needed regarding the presence, absence or precise location of a given map feature.

The impact of expected yet unpredictable natural and human-caused events can be reduced through community planning. The goal of this plan is to provide a local disaster mitigation plan to be used to make the Township more disaster-resistant.

“Hazard Mitigation” is any sustained action that reduces or eliminates long-term risk to people and property from natural and human-caused hazards and their effects. Based on the results of previous efforts, the Federal Emergency Management Agency (FEMA) and state agencies have come to recognize that it is less expensive to prevent disasters than to repeatedly repair damage after a disaster has struck. This plan recognizes that communities have opportunities to identify mitigation strategies and measures during the other three phases of Emergency Management: Preparedness, Response and Recovery. Hazards cannot be eliminated, but it is possible to determine what the hazards are, where the hazards are most severe, and identify local actions that can be taken to avoid exposure to or otherwise reduce the severity of the hazard.

Additionally, the Federal Disaster Mitigation Act of 2000 (DMA 2000) establishes a national program for Pre-Disaster Mitigation, which includes mitigation planning and eligibility requirements for state and local governments. DMA 2000 is aimed at reducing loss of life and property, human suffering, economic disruption and disaster costs. High priority should be given to mitigation of hazards at the local level with increased emphasis on assessment and avoidance of identified risks, implementing loss reduction measures for existing exposures and ensuring critical services/facilities survive a disaster.

Hazard Mitigation Strategies and Measures attempt to avoid a hazard by stopping or limiting new exposures in known hazard areas, alter the hazard by eliminating or reducing the frequency of occurrence, avert the hazard by redirecting the impact by means of a structure or land treatment, or adapt to the hazard by modifying structures or standards. Examples include:

- Flood-proofing structures
- Purchasing of development rights in hazard prone areas
- Monitoring dam inspections
- Identifying and modifying high traffic accident locations and routes

- Ensuring adequate water supply
- Identifying and upgrading undersized culverts
- Proactive land use planning for floodplains, wetlands and erosion-prone areas
- Proper road maintenance and construction
- Ensuring that critical facilities are safely located away from hazard areas
- Buyout and relocation of structures that are in harm's way
- Establish and enforce appropriate building codes
- Public information and education about disaster mitigation

Purpose

The purpose of this Disaster Mitigation Plan is to assist Whitewater Township in identifying any hazards facing the community. It also identifies and outlines strategies to begin reducing risks from those identified hazards through avoidance and other protective measures. It provides guidance for change. Based on Township, County, State and Federal goals of reducing disasters, the plan sets long-term policies and identifies actions needed to further those goals and policies.

Whitewater Township Overview

The Township is located in the northwestern lower peninsula of Michigan and consists of 50 sections from two unique survey townships in Grand Traverse County (GTC). The Township is bordered by Elk Rapids, Antrim County to the north, Acme Township, GTC, to the west, Union Township, GTC, to the south and Clearwater and Kalkaska Townships, Kalkaska County to the east. The Township's area is nearly 50 square miles or 32,000 acres.

The topography is generally hilly, with moderate to steep slopes in the north and minimal changes in topography in the south. Whitewater Township's highest elevation is measured at 817' above sea level. The northern ½ of the Township contains most of the active agricultural base (mainly orchards) while the south ½ overlays the Pere Marquette State Forest.

Four watersheds make up the drainage regions for Whitewater Township: Elk River/Chain-Of-Lakes, Tobago, Acme Creek and Boardman. In addition to the watersheds, the following includes the main water bodies: Bissell Pond, Dollar Lake, Elk Lake, Island Lake, Sand Lakes, Skegemog Lake, Truax Lake, Battle Creek, Boardman River, Mill Creek and Tobago Creek.

Besides the Pere Marquette Forest, Whitewater Township is privileged to be home to The State of Michigan's Sand Lakes Quiet Area (2800 acres), Petobego State Game Area (139 acres), Petobego Natural Area (250 acres), Battle Creek Natural Area (255 acres), Whitewater Township Park (117 acres), Lossie Road Nature Trail (24 acres) and Hi-Pray Park (11.5 acres).

Population

Census data and projections show a moderate increase in population of approximately 10% every five years.

Projections							
1990	2000	2005	2010	2015	2020	2025	2030
1825	2467	2783	3039	3391	3744	4133	4562

The Township's population, while continuing to grow at a moderate rate, is expected to be above average for the state as a whole, which is decreasing. The seasonal population of the Township must also be considered as 20% of the housing stock is seasonal. Most of that stock has been upgraded or built for four-season use. While the economic recession has slowed traditional housing starts, the Township has not seen a leveling off in the demand for seasonal housing. The demand for remodeled and new seasonal housing has remained constant.

Estimating the population of seasonal residents is difficult as many properties are owned and/or maintained by extended families. The best estimate that can be provided with the assistance of Grand Traverse County Planning is _____.

Priorities

Economy

We must strive to keep our existing economy healthy and provide a favorable climate for new enterprise. Continuing the viability of our agricultural base, job development and career opportunities does not occur in a vacuum; they rely on quality educational services, adequate infrastructure, decent and affordable housing, affordable health care, and a desirable living environment.

Agriculture and Forestry

Strategies to help agricultural and forest industries remain viable need to be developed and supported. Agricultural lands are both a valuable, nonrenewable resource and a frequent target for development. Fragmentation of forest parcels and changes in land use and owners' backgrounds and attitudes threaten the commercial use of the forest as a timber resource and the welfare of wildlife populations, as well as its recreational and aesthetic values. Defining, identifying, and protecting those productive agricultural and forestlands is essential for the future.

Natural Resource Protection

Protecting surface and ground water quality while providing for appropriate growth and development remains a priority for the Township. While surface water quality has improved in recent years, acid precipitation, non-point source pollution and groundwater contamination continue to threaten water quality. Increased local, regional, and national efforts are needed to overcome these threats to water quality.

Land Use

New development should be guided so that it is compatible with existing community character and other land use concerns.

Waste Management

Solid Waste Disposal - Techniques of integrated waste management—recycling, composting and source reduction — must be improved to responsibly manage our trash. Long-term waste disposal solutions will also need to be developed to serve the Township.

Wastewater Disposal - Improperly treated and stored sludge and septage can be a serious environmental hazard; they must be composted or otherwise treated to reduce volume and remove toxins, and the resultant material should be put to maximum beneficial use.

Hazardous Waste - The use of toxic and other hazardous agents in industry and in homes must be further reduced. Paint products, cleaners and other wastes that are toxic, corrosive or explosive must be separated from other trash and properly recycled or disposed of in order to protect the Township's environment and public health.

Transportation

Planning – In order to promote ease in travel, for both our residents and emergency services existing problems related substandard private roads must be resolved. New policies and ordinances must address improved standards for private road construction.

Maintenance – The highest priority continues to be maintenance of the existing road network. The Township should encourage a new private road network to complement the public system that doesn't continue to bleed the ever shrinking budget of the Grand Traverse County Road Commission's budget.

SECTION TWO - SUMMARY OF PLANNING PROCESS

Planning Process

During the conduct of this study, we followed these steps in the Hazards Inventory/Risk Analysis approach developed by the Federal Emergency Management Agency (FEMA):

1. Determine past hazards
2. Determine possible future hazards
3. Determine likely hazards
4. Determine community vulnerability (human and economic) for each hazard. Each identified hazard was analyzed with respect to the following criteria:
 - a. Probability of occurrence
 - b. Effect of the potential disaster on people and property
 - c. Predictability of the hazard
 - d. Frequency of occurrence
 - e. Speed of onset of the potential disaster
 - f. Duration of the disaster
 - g. Scope and intensity of the potential disaster
 - h. Controllability of the incident
 - i. Protective Action Options
5. Determine any in-place or planned hazard reduction or mitigation efforts.
6. Make recommendations.
7. Protective action options

Public Involvement

During the plan development process, representatives from the Township and the Region were interviewed. In most cases the interviewees included Board Members, the County Emergency Management Coordinator, law enforcement, emergency medical services, and road personnel.

State Hazard Mitigation Goals

Whitewater Township Disaster Mitigation Goals