

# HAZARD MITIGATION PLAN for Dexter Township

September 2004



## Dexter Township Resolution # 04-110

### A resolution to adopt a Township Hazard Mitigation Plan

At a regular meeting of the Township Board of the Township of Dexter, County of Washtenaw, State of Michigan, held on the 21<sup>st</sup> day of September, 2004, in the Township Hall in said Township at 7:00 P.M. Daylight Savings Time:

Members Present: Brushaber, Howard, Kelly, Knight, Rider

Members Absent: None

The following preamble and resolution were offered and supported:

**WHEREAS**, Dexter Township in the County of Washtenaw, Michigan has experienced disasters that have resulted in loss of life or injury, damaged commercial residential and public properties, displaced citizens and businesses, closed streets and bridges, and presented general public health and safety concerns; and,

**WHEREAS**, as of November of 2004 the Federal Emergency Management Agency (FEMA) requires that communities have an adopted Hazard Mitigation Plan as a requirement to receiving funding under certain FEMA programs; and,

**WHEREAS**, the *Hazard Mitigation Plan* ranks hazards for the community, and identifies goals, objectives and strategies to reduce overall damage and impact from the natural and technological hazards; and,

**WHEREAS**, Dexter Township has worked with Washtenaw County to prepare a *Hazard Mitigation Plan*, by participating in the planning process and providing comments with respect to hazards, vulnerable areas and strategies; and,

**WHEREAS**, residents, community officials, business owners, educational institutions, neighboring jurisdictions and the Michigan State Police Division of Emergency Management have had the opportunity to review the plan and their comments have been incorporated; and,

### **NOW THEREFORE BE IT RESOLVED:**

1. The *Hazard Mitigation Plan* is hereby adopted as an official plan of Dexter Township.
2. The *Hazard Mitigation Plan* will be an annual agenda item for the Dexter Township Board to review. The annual review shall include the following:
  - a. A review of the original plan.
  - b. A review of any disasters or emergencies that occurred during the previous calendar year.
  - c. A review of actions taken, including what was accomplished during the previous year.
  - d. A discussion of an implementation problems.
  - e. Recommendations for new projects or revised action items. Such recommendations shall be subject to the approval by Dexter Township.
3. The *Hazard Mitigation Plan* will be updated every five years as required by FEMA, with the assistance of Washtenaw County.

4. The Township Supervisor will be responsible for ensuring that the strategies in the Plan are implemented, with the understanding that implementation is based on the availability of funding and staff resources.

Resolution offered by Board Member Rider

Resolution supported by Board member Howard

Roll call vote:

Kelly – Yes; Rider – Yes; Howard – Yes; Brushaber – Yes; Knight – Yes.

The Supervisor declared the resolution adopted

DATE: 21<sup>st</sup> day of September 2004



Harley B. Rider, Clerk

# Dexter Township

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- Attachment 1: County Hazard Plan
- Attachment 2: Federal and State Funding Sources



# Dexter Township

## 1.0 INTRODUCTION

Hazard Mitigation is defined as any action taken before, during or after a disaster to permanently eliminate or reduce risks to human life and property from natural, technical or societal hazards. Dexter Township has experienced hazards at varying degrees, and can expect to encounter hazards in the future. The value of a Multi-Hazard Mitigation Plan (Plan) lies in reducing future emergencies to events; by implementing mitigation strategies set forth in this Plan, the expectation is for hazard occurrences to result in fewer deaths and injuries to people, and lessened damage or destruction to structures and the environment. Response and recovery costs should also be reduced.

The Federal Emergency Management Agency (FEMA) provides assistance to local units of government when faced with disasters through the Robert T. Stafford Disaster Relief and Emergency Assistance Act the Stafford Act. Recognizing that planning for hazards is an important component of hazard preparedness, response and recovery programs, the Stafford Act was amended in 2000 to require governments to have an adopted Hazard Mitigation Plan as condition of receiving financial assistance through the FEMA Hazard Mitigation Grant Program by November of 2004.

### 1.1 Purpose

There are three purposes of this Plan: 1) to identify and rank hazards in Dexter Township; 2) to analyze areas particularly vulnerable to hazards; and 3) to identify feasible mitigation strategies that can be acted upon after adoption of the Plan. The mitigation goals and strategies should also be incorporated into the Dexter Township General Development Plan, and other plans, as applicable.

## 1.2 Plan Organization

This Plan was prepared by Washtenaw County on behalf of Dexter Township. Individual plans were prepared for each local unit of government in recognition of their unique circumstances and potential differences in priorities, goals and mitigation strategies. General information, such as community profile data and hazard descriptions, is contained in the County plan (Attachment 1).

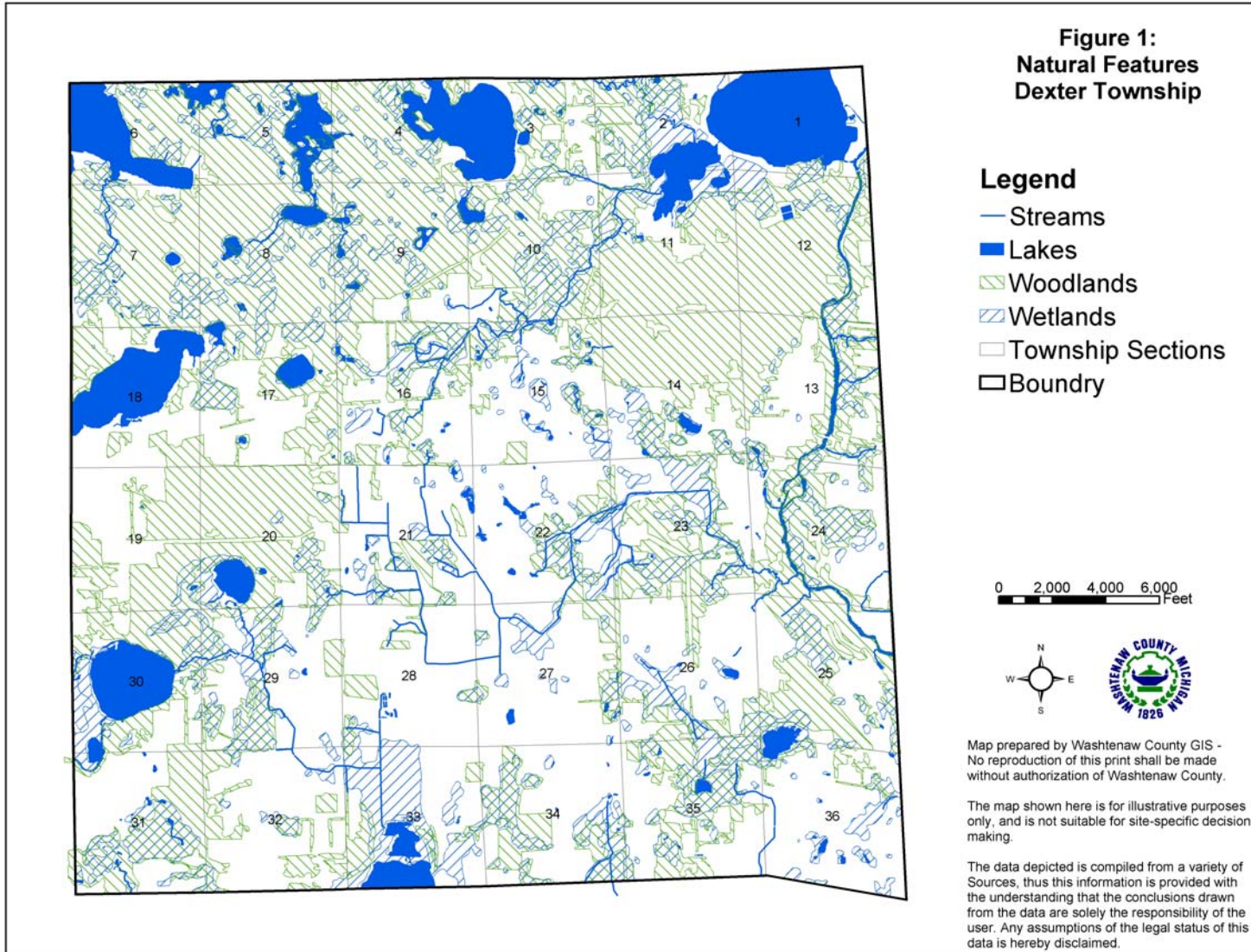
## 1.3 Public Participation

Representatives from Dexter Township worked with the Washtenaw County Emergency Management Division and Department of Planning and Environment to draft the hazard mitigation plan. An opportunity for the citizens of Township to comment on the draft plan was provided in June of 2004, when five regional planning workshops were held at various locations around the county in conjunction with the Comprehensive Plan for Washtenaw County. Another workshop was held on June 9, 2004 for commission, board and council members from every community. The draft plan was introduced and copies were available for review at every workshop. Regional workshops were advertised in the local newspapers.

The Township Board of Trustees also provided an opportunity for public comment prior to adopting the plan on September 21, 2004.

Continued public participation is encouraged through Washtenaw County through website postings, emails, and general contact with local governments. Any comments received by the County on the plan concerning Dexter Township will be shared with the Township.

# Dexter Township



# Dexter Township

## 2.0 Community Profile

### 2.1 Historic Overview

Dexter Township was first settled in 1827. In the early eighteen hundreds, the Township encompassed what is now Dexter, Webster, Scio, Lima, Freedom, Bridgewater, Manchester, Sharon, Sylvan, and Lyndon Townships, and portions of Livingston and Jackson Counties. The area attracted settlers for its agricultural value, and continues to be considered a rural township in Washtenaw County.

### 2.2 Natural Features

Dexter Township offers a beautiful landscape, laden with large lakes. Some of the larger lakes are Portage, Silver, Half-Moon, North and West. These lakes are a part of the Huron River Watershed and feed directly into it. Not surprisingly, the lakes are surrounded by residential development and are used for recreational purposes. The Huron River runs through Dexter Township. Honey Creek, a major tributary is also located in the area. Floodplains can be found along the Huron River.

Several groundwater recharge areas are located within the Township. One large groundwater recharge area is located in the northwest, four smaller ones are scattered about the community. Similarly, wetlands and woodlands areas are located throughout the Township and comprise more than 35% of the land area. A concentration of steep slopes are found in the northwest quarter. Most of the steep slopes are also classified as erodible soils.

### 2.3 Land Use Patterns

Dexter Township consists of approximately 21,220 acres. Residential lands are characterized by either large-lot subdivisions or denser residential development around lakes. Agricultural land is located in the south and central portions of

the Township. Commercial nodes are scattered throughout the Township, most are in close proximity to the area's many lakes, serving the residents and seasonal resort users.

### 2.4 Transportation Network

The transportation network consists of major and minor collectors and local streets and roads. There are no major highways, highway interchanges, rail lines or airports located within the Township.

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## 3.0 Hazards

Dexter Township is susceptible to a variety of natural, technological, and societal hazards. The purpose of this section is to:

- Rank the hazards for Dexter Township
- Analyze the risks for each hazard, and
- Identify vulnerable areas for the Township, and appropriate goals and mitigation strategies for certain hazards.

## 3.1 Hazard Ranking

The ranking of hazards for Dexter Township is presented as Table 1. The ranking of hazards was determined on a county-wide basis, and adjusted based on input from Local Units of Government. The ranking order was developed by the Washtenaw County Emergency Management Division using a program provided by the Michigan State Police Emergency Management Division. The model takes into account worst-case scenario data for frequency of occurrence, likelihood of occurrence, significance of impact/threat, potential size of geographic area impacted and total population impacted.

## 3.2 Hazard Assessment

The purpose of the hazard assessment is to map out where hazards exist and gain information about their frequency of occurrence, and potential for harm using worst-case scenario estimates. Different levels of risk analysis are performed, depending on the significance of the hazard for the community:

- Cursory: A short statement explaining why the hazard is not a threat, prepared for hazards that have little impact or are unlikely to occur.

**Table 1: Hazard Ranking**

Hazard	Ranking
Convective Weather (Severe Winds, Tornadoes, Lightning, Hail)	1
Fire Hazards: Wildfires	2
Fire Hazards: Structural Fires	3
Severe Winter Weather Hazards (Snow Storms and Ice/Sleet Storms)	4
Flood Hazards: Riverine/Urban Flooding	5
Hazardous Materials Incidents: Transportation	6
Hazardous Materials Incidents: Fixed Site	7
Petroleum and Natural Gas Pipeline Accidents	8
Public Health Emergencies	9
Flood Hazards: Dam Failures	10
Transportation Accidents: Air, Land and Water	11
Civil Disturbances	12
Sabotage & Terrorism	13
Infrastructure Failures	14
Earthquakes	15
Extreme Temperatures	16
Drought	17
Nuclear Attack	18
Oil and Gas Well Accidents	19

# Dexter Township

- Standard: An explanation of concerns with limited quantitative research, prepared for hazards likely to occur and impact our communities.
- Advanced (Vulnerability): A vulnerability determination using probabilities, prepared for hazards that have the highest frequency of occurrence and/or the most potential to cause death, injury or damage to personal property.

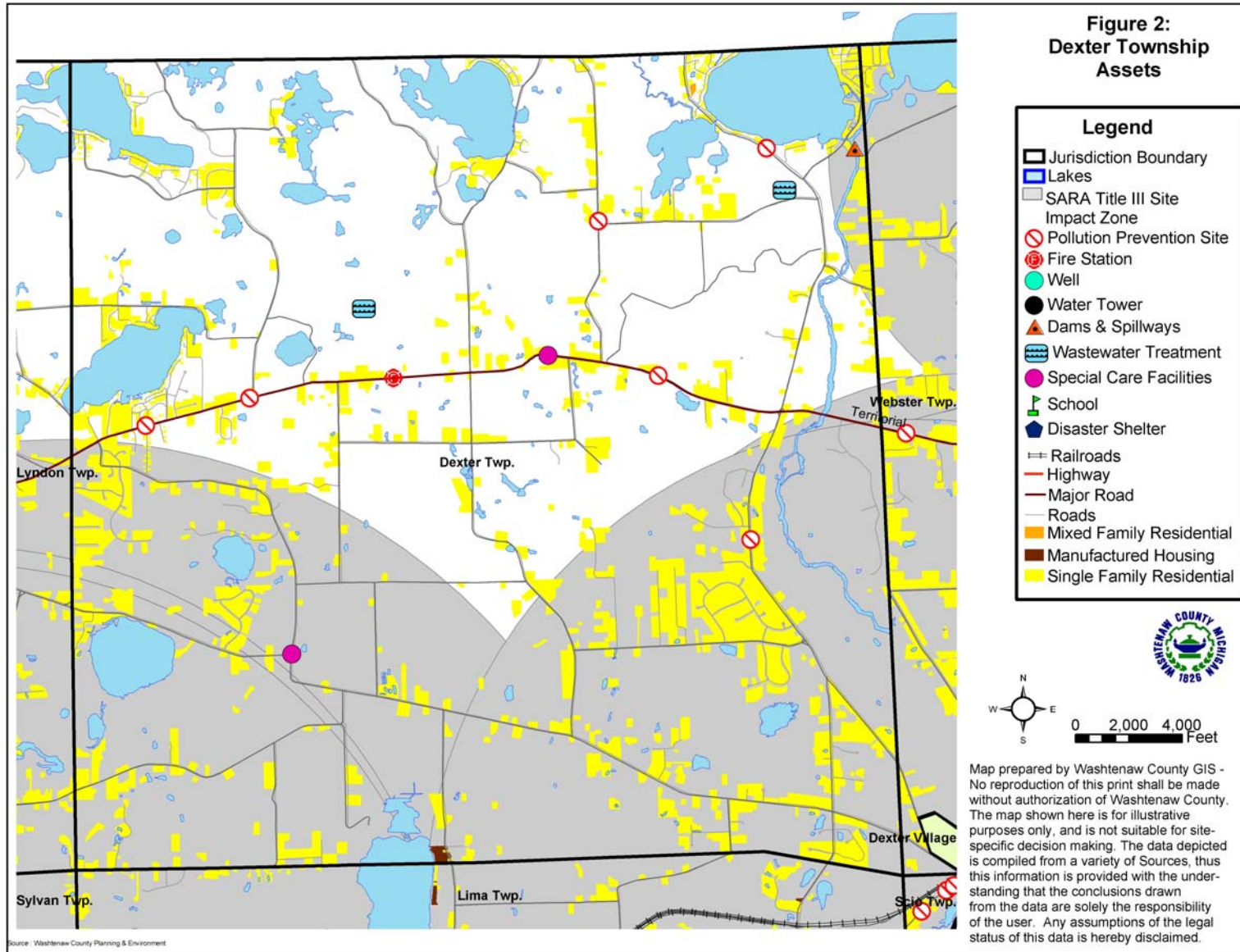
Vulnerability assessments were prepared for convective weather, hazardous materials transportation incidents, hazardous materials fixed site incidents, infrastructure failures and severe winter weather hazards. The goal is to quantitatively measure the threat experienced by Washtenaw County communities. By placing a monetary value on a hazard, a cost-benefit comparison can be made: the benefit of implementing a mitigation strategy compared to the cost of the hazard event.

Table 2 presents the results of the vulnerability assessment. The value of the vulnerability assessment is to provide a cost by which the mitigation strategies may be compared. A discussion of the determination is provided in the hazard section of the County Plan (Section 3.2). The methodology for each is presented in Appendix A of the County Plan.

**Table 2. Vulnerability Assessment Summary**

Rank	Hazard	Estimated Annual Cost
#1	<b>Convective Weather</b>	
	Tornado	\$5,078,755
	Severe Winds and Lightning	\$90,242,418
	Hail Storm	\$3,738,153
#2	<b>Hazardous Material Transportation Incidents</b>	\$6,838,963
#3	<b>Hazardous Material Fixed Site Incidents</b>	\$2,913,038
#4	<b>Severe Winter Weather</b>	\$36,191,763
#5	<b>Infrastructure Failure</b>	\$6,139,214

# Dexter Township



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## 4.0 Hazard Goals and Strategies

The following sections present goals and strategies by hazard. Figure 2 presents the assets and hazards identified for Dexter Township, and may be referred to in the following sections. The goals, objectives and strategies are not an inclusive list; rather the goals, objectives and strategies are those that the Township is focusing on at this time.

The repetition of strategies reflects the need for their implementation, not the duplication of services. For example, distribution of educational materials should not be performed several times, throughout the year per hazard, rather one mailing regarding family preparedness kits would address all hazards for which this strategy is listed.

### 4.1 Non-Hazard Specific Goals, Objectives and Strategies

Goal: Integrate mitigation strategies into the Township General Development Plan

#### Mitigation Strategy: Plans

- Establish a committee charged with amending the General Development Plan to include hazard mitigation goals and strategies, as applicable.

#### **Convective Weather**

Goal: Reduce the Township's vulnerability to convective weather storm hazards, minimize loss of life and injury, and damage to public property

#### Mitigation Strategy: Warning Sirens

- Secure funding for installation of warning sirens. There is one warning siren in the Township (Figure 3). The siren is located in the northwest portion of the Township, covering populations by Portage Lake. New sirens should be located to cover the Township's

schools, disaster shelter, Township Hall and special care facilities.

#### Mitigation Strategy: Emergency Generator

- Secure funding to install an emergency generator. An emergency generator should be installed at the Township Hall at a minimum to allow the Township to function in the event of a disaster.

#### Mitigation Strategy: Public Education

- Distribute Emergency Preparedness brochure or other materials to inform residents about actions to take during an event, or actions to minimize damage caused by an event (see Family Preparedness Kit information box). Materials may be mailed with township correspondence, such as tax bills or newsletters to reduce duplication.

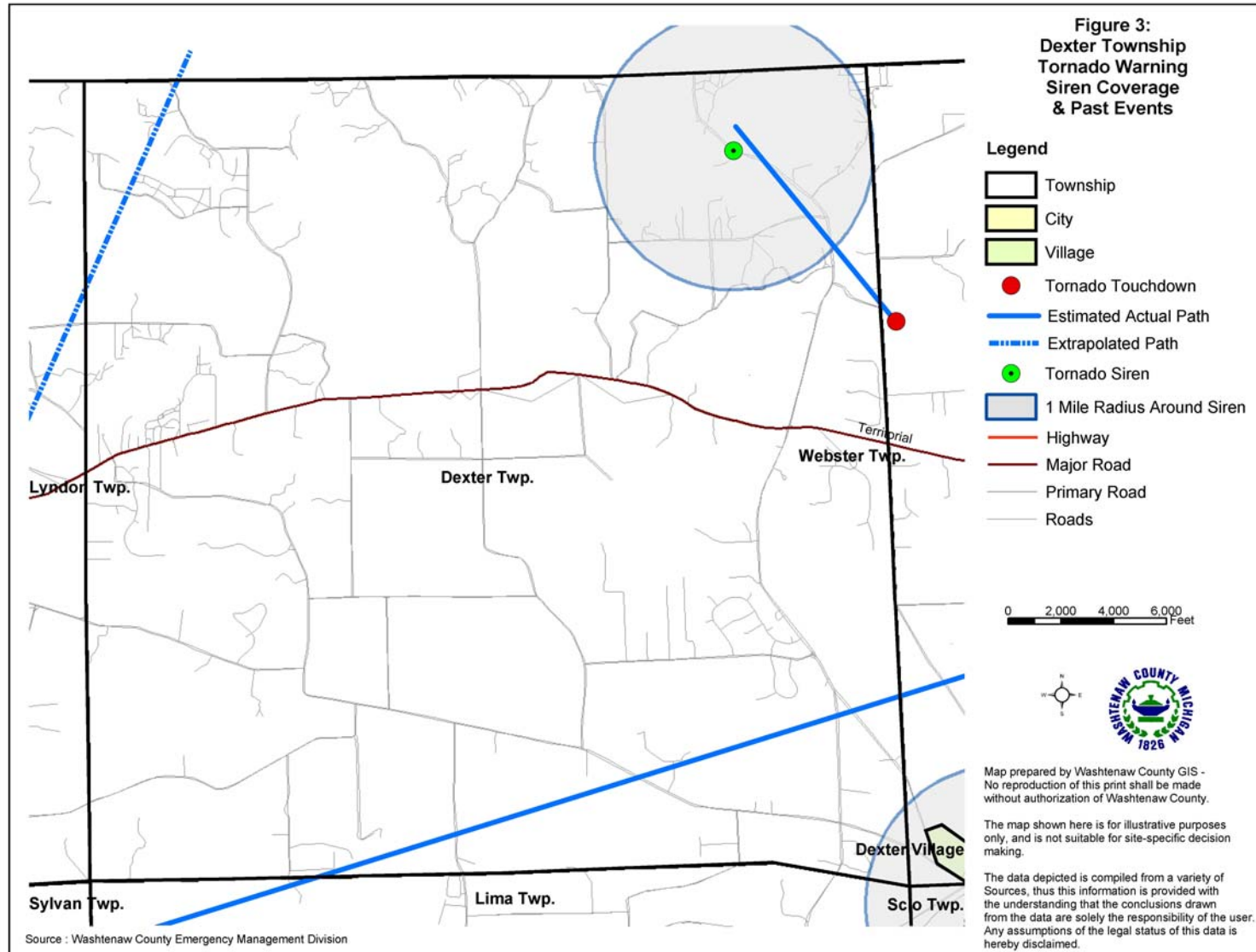
#### Mitigation Strategy: Maintenance

- Distribute annual reminders to ground utility providers, encouraging them to keep power lines clear of trees and tree limbs.

#### Mitigation Strategy: Training

- Continue to work with Washtenaw County Division of Emergency Management on weather spotter training and coverage. *Training is free of charge to anyone 18 years of age or older who is interested in being trained in severe weather identification, protection, and reporting procedures.*

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## Severe Winter Weather

Above ground power supply, coupled with mature trees can be a disaster when heavy snows or freezing rain occurs. The weight of the frozen precipitation causes tree limbs to fall on power lines, causing power outages, which is a significant problem. Loss of power in the winter generally means loss of heat for citizens. Falling tree limbs also damage property, block emergency routes and roadways, endanger lives and are very costly to clean up and remove.

Goal: Reduce the damage and impacts caused by severe winter weather hazards continue to reduce the impact of such an event on the community.

### Mitigation Strategy: Generator

- Secure funding to install an emergency generator. See strategy under Convective Weather for further discussion.

### Mitigation Strategy: Maintenance

- Distribute annual reminders to ground utility providers, encouraging them to keep power lines clear of trees and tree limbs.

### Mitigation Strategy: Public Education

- Distribute Emergency Preparedness brochure or other materials to residents. See strategy under Convective Weather for further discussion.

## Hazardous Materials Transportation Incidents

There is a major railroad that diagonally traverses the Township, making the community vulnerable to hazardous materials transportation accidents. There are also a number of manufacturing facilities located in the Township, further increasing the potential for this type of hazard event.

Goal: Reduce the risk of damage, loss of life, and other costs resulting from hazardous material transportation incidents

### Mitigation Strategy: Training

- Continue to support training and equipment for the Washtenaw County Hazardous Materials (HazMat) Team and local HazMat teams.

### Mitigation Strategy: Ordinances

- Adopt the Hazardous Spills Expense Recovery Ordinance, a vehicle whereby a local unit of government may recover costs of response and recovery to a release of hazardous materials.
- Adopt a Fire Protection Ordinance as a preventative measure. The ordinance provides a legal vehicle for Fire Officials to inspect and enforce nationally recognized codes.

### Mitigation Strategy: Road Regulations

- Work with the Washtenaw County Road Commission and the State of Michigan to provide safer roadways, resulting in the decrease of accident frequency and severity.
- Ensure that enforcement officers are following and enforcing Michigan Department of Transportation MDOT regulations for Hazardous Material transportation, as well as being diligent in enforcement of weight and travel restrictions will reduce the hazardous materials transportation accidents in Webster Township.
- Continue diligent enforcement of weight and travel restrictions.

## Hazardous Materials Fixed Site Incidents

There is at least one facility in Dexter Township that store, use or manufactures or transports hazardous materials. This site has the potential to have a hazardous materials incident, impacting people and causing harm to the environment.

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Goal: Reduce the risks of hazardous material fixed site incidents in the Township by increasing the ability to respond and minimizing the impacts to the citizens, environment and economy.

## Mitigation Strategy: Warning Sirens

- Secure funding for installation of warning sirens. There is one warning siren in the Township, which reaches residents in the Portage Lake area (Figure 3). Additional sirens should be located to cover all of the remaining Township population.

## Mitigation Strategy: Training and Support

- Facilitate the exchange of information between the County Hazardous Material Response Team and fixed-site operators.
- Support and work with the Washtenaw County Pollution Prevention Program.
- Continue to participate with the Washtenaw County Emergency Action Guidelines.

## Mitigation Strategy: Ordinances

- Adopt the Hazardous Spills Expense Recovery Ordinance, a vehicle whereby a local unit of government may recover costs of response and recovery to a release of hazardous materials.
- Adopt a Fire Protection Ordinance as a preventative measure. The ordinance provides a legal vehicle for Fire Officials to inspect and enforce nationally recognized codes.

## **Petroleum and Natural Pipeline Gas Accidents**

There are pipelines traversing the Township. Incidences have the ability to impact large numbers of residents.

### **Family Preparedness Kits**

1. Have Emergency Supplies at the ready:
  - A three-day supply of water one gallon/person/day and food that won't spoil
  - One change of clothing, footwear, and blanket/sleeping bag per person
  - First aid kit including family prescription medications
  - Tools: flashlight, battery-powered radio and extra batteries
  - Extra car keys, credit cards, cash or travelers checks
  - Sanitation supplies
  - Special items for infant, elderly or disabled family members
  - Extra pair of glasses
  - Locate the fuse box water service main and natural gas main and learn how to turn on and off.
2. Create a disaster plan where to meet, contact numbers, who will take care of the family pet, take first aid, learn how to use a fire extinguisher, etc.
3. Practice the Plan and maintain supplies!

If having electric power is extremely important to you, consider having a qualified electrician install an emergency generator before a disaster strikes!

For more information, see FEMA's website at <http://www.fema.gov/pdf/library/yfdp.pdf>

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Goal: Reduce the potential harm from petroleum and natural gas pipeline accidents.

Mitigation Strategy: Training

- Continue to train, equip and maintain a Hazardous Material Response Team through the Dexter Area Fire Department.

Mitigation Strategy: Public Education

- Disseminate information regarding indicators of a leak, and safety measures in the event of a pipeline accident. Materials may be included with other public education mailings.

Mitigation Strategy: Enforcement

- Support and enforce buffer distances from pipelines to minimize the population impacted in the event of a Petroleum and Natural Gas Pipeline Accident.

## Dam Failures

There is one dam located in the Township. A dam failure would precipitate a flood hazard. Dexter Township participates in the FEMA Floodplain Insurance Rate Map program (FIRM), so that Township residents are eligible to receive funding assistance. Additionally, Dexter Township zoning code prevents building in floodplains.

Goal: Reduce the potential for a dam failure

Mitigation Strategy: Warning Sirens

Install a public warning system that would alert downstream residents and businesses in the event of a dam failure, giving them time to evacuate.

Mitigation Strategy: Dam Repair, Maintenance

- Secure funding to implement changes recommended in bi-annual inspection reports. The State of Michigan inspects

the dams every two years, which include recommendations with regard to dam repairs, operation or maintenance. *Costs contingent upon recommendations.*

Mitigation Strategy: Code Enforcement

- Ensure on-going monitoring and enforcement of building codes.

## Infrastructure Failure

Critical infrastructure exists within Dexter Township. In the event of an infrastructure failure, the Township will need to assist its residents appropriately.

Goal: Decrease the Township's vulnerability to infrastructure failures and continue to strengthen the Township's ability to assist its citizens during an event.

Mitigation Strategy: Emergency Generators

- Secure funding to install emergency generators. See strategy under Convective Weather for further discussion.

Mitigation Strategy: Maintenance

- Distribute annual reminders to ground utility providers, encouraging them to keep power lines clear of trees and tree limbs.

Mitigation Strategy: Public Education

Distribute Emergency Preparedness brochure or other materials to residents. See strategy under Convective Weather for further discussion.

## 5.0 Implementation, Funding and Monitoring

The purpose of this plan is to identify mitigation strategies that will be implemented before, during or after a disaster to permanently eliminate or reduce risks to human life and property from natural, technical or societal hazards. The

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following sections present implementation actions, funding sources, and the method for monitoring the plan.

## 5.1 Implementation

The following schedule is given for hazard mitigation strategies described in Section 4.0. Completion dates have not been included as such dates are subject to uncertain factors, and will only begin after the mitigation strategy has been approved. While all strategies are important, priority is has been given to those that may be funded by a FEMA hazard mitigation grant program (see Section 5.2). Action on strategies will depend upon staff, resource and funding availability.

### High Priority Strategies

#### Warning Sirens

*Responsible Agencies:* Dexter Township and Washtenaw County Emergency Management Division

*Estimated Cost:* \$18,000 for siren and first year of maintenance fees \$500 annually thereafter (does not include replacement parts).

#### Emergency Generators at Township Hall

*Responsible Agency:* Dexter Township

*Estimated Cost:* \$20,000 per generator.

#### Dam Repairs, Maintenance

*Responsible Agency:* Dexter Township

*Estimated Cost:* To be determined, repairs based on dam inspection results.

### Other Important Strategies

#### Training for First Responders, Hazardous Materials Team

*Responsible Agency:* Dexter Township

*Estimated Cost:* Staff time.

#### Public Education (brochures, pamphlets)

*Responsible Agency:* Dexter Township

*Estimated Cost:* \$2,000 annually.

#### Adopt Spill Cost Recovery Ordinance and Fire Protection Ordinances

*Responsible Agency:* Dexter Township

*Estimated Cost:* Staff time.

#### Amend Master Plan to include hazard mitigation goals and strategies as applicable

*Responsible Agency:* Dexter Township

*Estimated Cost:* Staff time.

#### Mitigation Reminders to utility providers to maintain tree clearance from power lines

*Responsible Agency:* Dexter Township

*Estimated Cost:* Staff time.

#### Road Regulations, safer roads, continued enforcement of weight and speed restrictions

*Responsible Agency:* Dexter Township

*Estimated Cost:* Staff time.

## 5.2 Sources of Financial Assistance

Implementation of the mitigation strategies is often dependent on funding assistance from Federal and State sources. FEMA provides funding for structural projects through hazard mitigation grant programs. These include the Hazard Mitigation Grant Program, Pre-Disaster Mitigation Assistance Program, and the Flood Mitigation Assistance Program.

FEMA emphasizes the implementation of structural mitigation strategies. The strategies that are a priority for FEMA and are a priority for Dexter Township include: warning sirens and

emergency generators. Financial support for other mitigation strategies proposed in this plan may be sought through alternative funding sources. For example, funds for public outreach, equipment and training may be obtained through the FEMA Emergency Management Performance Grant. Projects may be implemented with the assistance of non-profit organizations, or funds secured from Community Foundations. There are many State and Federal programs that are available to Local Units of Government, as provided in Attachment 2.

### **5.3 Monitoring of the Plan**

The plan will be monitored on a regular basis, and is the responsibility of Dexter Township Manager. The plan will be an annual agenda item for the Township Board. At a minimum, during its review, the Board will discuss the monitoring of the plan, the number of projects pursued, or reasons for lack of pursuit for approved projects. Prior to the meeting, the Washtenaw County Emergency Management Division can be contacted for updates or recommended amendments to the plan.

To assist with the annual evaluation and review of the plan, the Township may consider forming a local hazard mitigation committee. The committee could also be charged with identifying methods of obtaining public input.

Although review of the plan will occur annually, and a formal revision may not be needed each year, an update of the plan will be prepared every five years, based on annual reviews, amendments, monitoring, evaluation and accumulation of official feedback and public input. The revised plan will again be adopted by Dexter Township Board of Trustees.



**Attachment 1  
County Hazard Plan**



**Attachment 2  
Alternative Funding Sources**

# Dexter Township

Funding Source	Civil Disturbance	Drought	Earthquake	Extreme Temperature	Scrap Tire Facilities	Structural Fire	Wildfire	Dam Failure	Flooding: Riverine	Flooding: Urban	Hazardous Materials Incidents - Fixed Site	Hazardous Materials Incidents - Transportation	Infrastructure Failure	Nuclear Attack	Nuclear Power Plant Incidents	Oil/Nat Gas Well Incidents	Petrol/Nat Gas Pipeline Incidents	Public Health Emergencies	Sabotage/Terrorism	Hail	Lightning	Severe Winds	Severe Winter Weather	Transportation Accidents	Tornado	Financial Assistance	Technical Assistance
<b>FEDERAL SOURCES</b>																											
Emergency Community Water Assistance Grants		√							√		√		√					√	√							√	
Emergency Conservation Program		√							√													√			√		
Emergency Flood and Shelter National Board Program	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Emergency Management Institute-Resident Ed Program	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Emergency Management Institute-Training Assistance	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Emergency Management Performance Grants	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Emergency Management-State and Local Assistance	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Emergency Operations Flood Response and Post-Flood Response								√	√	√																√	
Emergency Rehabilitation of Flood Control Works								√	√																	√	
Engineering Grants	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Farmland Protection Program									√																	√	
Fire Suppression Assistance							√																			√	
Fisheries Disaster Relief		√					√	√	√	√	√	√							√							√	
Flood Insurance								√	√	√																	√
Flood Mitigation Assistance									√	√																√	
Flood Plain Management Services								√	√	√																√	√
Food Control Projects								√	√																	√	
Forestry Incentives Program																						√			√	√	
Forestry Research									√	√												√			√	√	
Grants for Public Works and Economic Development								√	√	√			√													√	

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Funding Source	Civil Disturbance	Drought	Earthquake	Extreme Temperature	Scrap Tire Facilities	Structural Fire	Wildfire	Dam Failure	Flooding: Riverine	Flooding: Urban	Hazardous Materials Incidents - Fixed Site	Hazardous Materials Incidents - Transportation	Infrastructure Failure	Nuclear Attack	Nuclear Power Plant Incidents	Oil/Nat Gas Well Incidents	Petrol/Nat Gas Pipeline Incidents	Public Health Emergencies	Sabotage/Terrorism	Hail	Lightning	Severe Winds	Severe Winter Weather	Transportation Accidents	Tornado	Financial Assistance	Technical Assistance
<b>FEDERAL SOURCES</b>																											
Grants-in-Aid for Railroad Safety-State Participation												√												√			√
Habitat Conservation																											√
Hazard Mitigation Grant Program	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
HazMat Training Program for Implementation of SARA											√	√															√
Health Program for Toxic Substances and Disease Registry											√							√									√
Highway Planning and Construction													√														√
Historic Preservation Funds Grants-In Aid						√			√	√										√	√	√	√		√		√
HOME Investment Partnerships Program									√	√										√	√	√					√
Hydrologic Research		√						√	√	√																	√
Individual and Family Grant Program		√	√	√			√	√	√	√																	√
Planning Grants (HazMat Emergency Preparedness Grant)											√	√															√
Motor Carrier Safety												√															√
National Dam Safety Program							√																				√
National Pollutant Discharge Elimination System Related State Program Grants																√	√	√									√
National Urban Search and Rescue Response System			√										√						√					√			√
North American Wetlands Conservation Fund								√	√																		√
Nursing Homes						√																					√
Planning (Land and Water Conservation Fund Grants)									√																		√
Physical Disaster Loans	√		√		√	√			√	√			√						√	√	√	√	√		√	√	√
Pipeline Safety																√	√										√

# Dexter Township

Funding Source	Civil Disturbance	Drought	Earthquake	Extreme Temperature	Scrap Tire Facilities	Structural Fire	Wildfire	Dam Failure	Flooding: Riverine	Flooding: Urban	Hazardous Materials Incidents - Fixed Site	Hazardous Materials Incidents - Transportation	Infrastructure Failure	Nuclear Attack	Nuclear Power Plant Incidents	Oil/Nat Gas Well Incidents	Petrol/Nat Gas Pipeline Incidents	Public Health Emergencies	Sabotage/Terrorism	Hail	Lightning	Severe Winds	Severe Winter Weather	Transportation Accidents	Tornado	Financial Assistance	Technical Assistance
<b>FEDERAL SOURCES</b>																											
Project Impact: Building Disaster-Resistant Communities	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Protection Clearing and Straightening Channels									√																	√	
Protection of Essential Highways, Highway Bridge Approaches, and Public Works								√	√																	√	
Public Assistance Grant Program	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Public Health and Social Services Emergency Fund (Post-Declaration Only)																		√								√	
Public Telecommunications Facilities Planning and Construction																								√	√		
Railroad Safety												√												√		√	
Resource Conservation and Development		√	√	√			√	√	√																		√
Rivers, Trails, and Conservation Assistance									√																		√
Rural Business Opportunity Grants									√																	√	
Rural Development Grants									√				√													√	
Rural Electrification Loans													√									√	√	√	√	√	
Rural Housing and Economic Development	√	√	√	√	√	√	√	√	√	√	√	√						√	√	√	√	√	√	√	√	√	√
Rural Housing Site Loans and Self-Help Housing and Development Loans									√																	√	
Snagging and Clearing for Flood Control								√	√																	√	
Soil and Water Conservation		√	√	√			√	√	√																		√
State and Community Highway Safety																								√			√
State Domestic Preparedness Equipment, Support Program																			√								√
Superfund State Site-Specific Cooperative Agreements											√							√								√	
Superfund Technical Assistance Grants for Citizen Groups at Priority Sites											√															√	√
Surveys, Studies, Investigations and Special Purpose Grants											√	√			√	√	√	√								√	

# Dexter Township

Funding Source	Civil Disturbance	Drought	Earthquake	Extreme Temperature	Scrap Tire Facilities	Structural Fire	Wildfire	Dam Failure	Flooding: Riverine	Flooding: Urban	Hazardous Materials Incidents - Fixed Site	Hazardous Materials Incidents - Transportation	Infrastructure Failure	Nuclear Attack	Nuclear Power Plant Incidents	Oil/Nat Gas Well Incidents	Petrol/Nat Gas Pipeline Incidents	Public Health Emergencies	Sabotage/Terrorism	Hail	Lightning	Severe Winds	Severe Winter Weather	Transportation Accidents	Tornado	Financial Assistance	Technical Assistance
<b>FEDERAL SOURCES</b>																											
Technology Development for Environmental Management												√			√												√
Very Low Income Housing Repair Loans/Grants				√		√	√		√											√	√	√			√		√
Very Low to Moderate Income Housing Loans				√		√	√		√											√	√	√			√		√
Water and Waste Disposal System for Rural Communities									√		√		√					√	√								√
Water/Waste Disposal Loans/Grants									√		√		√					√									√
Watershed Protection and Flood Prevention								√	√	√								√									√
Watershed Surveys and Planning		√							√																		√
Weatherization Assistance for Low-Income Persons				√																							√
Wetlands Protection-Development Grants									√	√																	√
Wetlands Reserve Program									√	√																	√
Wildlife Habitat Incentive Program									√																		√

# Dexter Township

Funding Source	Civil Disturbance	Drought	Earthquake	Extreme Temperature	Scrap Tire Facilities	Structural Fire	Wildfire	Dam Failure	Flooding: Riverine	Flooding: Urban	Hazardous Materials Incidents - Fixed Site	Hazardous Materials Incidents - Transportation	Infrastructure Failure	Nuclear Attack	Nuclear Power Plant Incidents	Oil/Nat Gas Well Incidents	Petrol/Nat Gas Pipeline Incidents	Public Health Emergencies	Sabotage/Terrorism	Hail	Lightning	Severe Winds	Severe Winter Weather	Transportation Accidents	Tornado	Financial Assistance	Technical Assistance
<b>STATE OF MICHIGAN</b>																											
<b>Department of Agriculture</b>																											
Energy Conservation Program									√													√				√	√
Groundwater Stewardship Program											√							√								√	√
Intercounty Drain Program (available to Drain Commissioner only)								√	√	√																	√
<b>Economic Development Corporation</b>																											
Community Development Block Grant									√	√			√													√	
Urban Land Assembly									√																	√	
<b>Environmental Quality</b>																											
Abandoned Well Mgmt. Program																		√								√	
Alternate Water Supply Replacement Program									√	√	√		√					√								√	
Brownfield Redevelopment Grants											√							√								√	√
Drinking Water Revolving Loan Fund													√					√	√							√	
Municipal Landfill Cost-Share Grant Program																		√								√	
Non-community Water Supply Program Grant																		√								√	
Scrap Tire Collection Site Cleanup Grants					√																					√	
State Revolving Loan Fund									√	√			√					√								√	
Wellhead Protection Program									√	√								√								√	
Wetland Program Development									√	√																√	

# Dexter Township

Funding Source	Civil Disturbance	Drought	Earthquake	Extreme Temperature	Scrap Tire Facilities	Structural Fire	Wildfire	Dam Failure	Flooding: Riverine	Flooding: Urban	Hazardous Materials Incidents - Fixed Site	Hazardous Materials Incidents - Transportation	Infrastructure Failure	Nuclear Attack	Nuclear Power Plant Incidents	Oil/Nat Gas Well Incidents	Petrol/Nat Gas Pipeline Incidents	Public Health Emergencies	Sabotage/Terrorism	Hail	Lightning	Severe Winds	Severe Winter Weather	Transportation Accidents	Tornado	Financial Assistance	Technical Assistance	
<b>STATE OF MICHIGAN</b>																												
<b>Housing Development Authority</b>																												
Community Development Block Grants/Housing Resource Fund						√			√	√										√		√			√	√		
Home/Property Improvement Loans						√			√	√										√		√			√	√		
<b>Department of Natural Resources</b>																												
Habitat Improvement Fund Project Grants									√																		√	
Land and Water Conservation Fund									√																		√	
Natural Resources Trust Fund						√			√																		√	
Recreational Trails Program Grants									√																		√	
Urban and Community Forestry Program																						√	√			√	√	
Volunteer Fire Assistance					√	√	√																				√	
<b>State Police</b>																												
Emergency Management Performance Grants	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
Flood Mitigation Assistance									√	√																	√	√
Hazard Mitigation Grant Program	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√		
Individual and Family Grant Program									√	√			√														√	

# Dexter Township

Funding Source	Civil Disturbance	Drought	Earthquake	Extreme Temperature	Scrap Tire Facilities	Structural Fire	Wildfire	Dam Failure	Flooding: Riverine	Flooding: Urban	Hazardous Materials Incidents - Fixed Site	Hazardous Materials Incidents - Transportation	Infrastructure Failure	Nuclear Attack	Nuclear Power Plant Incidents	Oil/Nat Gas Well Incidents	Petro/Nat Gas Pipeline Incidents	Public Health Emergencies	Sabotage/Terrorism	Hail	Lightning	Severe Winds	Severe Winter Weather	Transportation Accidents	Tornado	Financial Assistance	Technical Assistance
<b>STATE OF MICHIGAN</b>																											
<b>State Police (continued)</b>																											
Interagency HazMat Public Sector Training and Planning Grants (HazMat Emergency Preparedness Grant)											√	√		√	√	√	√									√	
Project Impact	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Public Assistance Grant Program	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
<b>Department of Transportation</b>																											
Rail Loan Assistance Program												√	√													√	
Trans. Econ. Development Fund								√	√	√																√	
<b>Department of Treasury</b>																											
Municipal Bond Authority-Local Government Loan Program				√		√			√	√			√						√	√	√	√	√	√		√	
Municipal Bond Authority-State Aid Note Program				√		√			√	√			√						√	√	√	√	√	√		√	