

# HAZARD MITIGATION PLAN for Ypsilanti Township

November 2004



**HAZARD MITIGATION PLAN ADOPTION AND RESOLUTION  
FOR LOCAL UNITS OF GOVERNMENT**

Whereas Ypsilanti Township, 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,

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

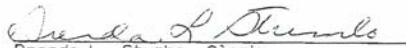
Whereas Ypsilanti Township worked with Washtenaw County to prepare the Plan by participating in the planning process and providing comments with respect to hazards, vulnerable areas and strategies,

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;

Now, therefore, be it resolved that:

1. The *Hazard Mitigation Plan for Ypsilanti Township* is hereby adopted as an official plan for Ypsilanti Township
2. The *Hazard Mitigation Plan for Ypsilanti Township* will be an annual agenda item for the Ypsilanti 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 any implementation problems.
  - e. Recommendations for new projects or revised action items. Such recommendations shall be subject to approval by the Township Board.
3. The *Hazard Mitigation Plan for Ypsilanti Township* 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.

I, Brenda L. Stumbo, Clerk of the Charter Township of Ypsilanti, County of Washtenaw, State of Michigan hereby certify the above resolution is a true and exact copy of Resolution No. 2004-57 approved by the Charter Township of Ypsilanti Board of Trustees assembled at a Regular Meeting held on November 16, 2004.

  
Brenda L. Stumbo, Clerk  
Charter Township of Ypsilanti

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

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## 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. Ypsilanti 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 Ypsilanti 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 Ypsilanti Township General Development Plan, and other plans, as applicable.

## 1.2 Plan Organization

This Plan was prepared by Washtenaw County on behalf of Ypsilanti 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).

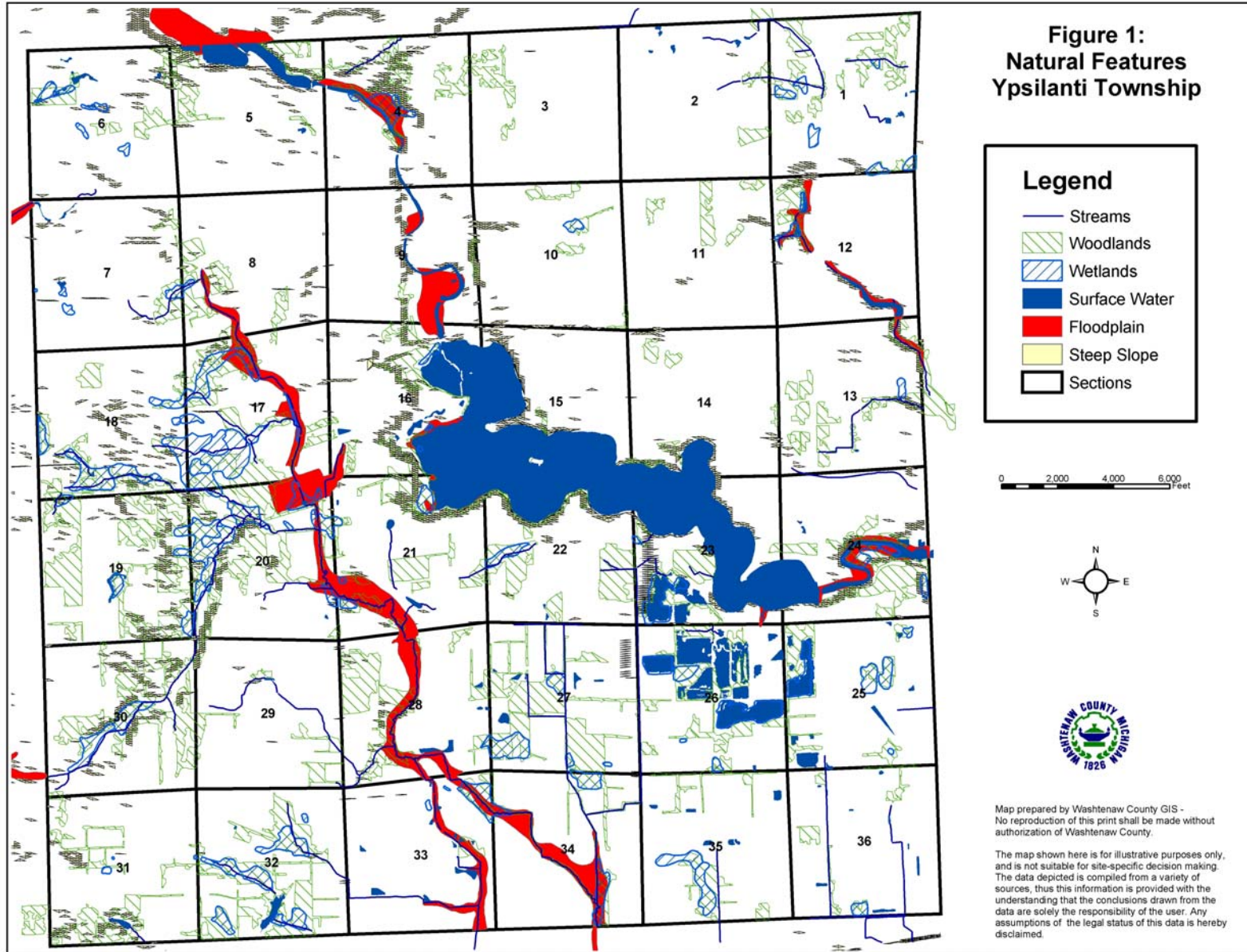
## 1.3 Public Participation

Representatives from Ypsilanti 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 November 16, 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 Ypsilanti Township area will be shared with the Township.

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## 2.0 Community Profile

### 2.1 Historic Overview

Situated along the Great Sauk trail now US 12, the Township was founded in 1825. As was typical with many Michigan communities, the Township shared its name with the City of Ypsilanti, a Greek general who was a leader in the Greek rebellion. The area had previously been used as French and Indian trading post but slowly developed into dairy farms and orchards.

The population in the 1800's and 1900's consisted of rural farm families and remained as such until World War II when the demographics of the Township changed. In order to satisfy the need for airplanes during World War II the Ford Motor Company converted a plant into the Willow Run Bomber Plant and built Willow Run Airport on the eastern edge of the Township. To provide housing for the labor force, the United States Government acquired farms and constructed trailer parks and housing development for the 20,000 workers and their families. Willow Village was developed in the vicinity. Since that time the growth in the Township has been attributed to both the need for a growing work force and the expansion of nearby cities.

### 2.2 Natural Features

Ford Lake is located in the center of the Ypsilanti Township and builds together with the Huron River and the Paint Creek major water features. The floodplains in the area are associated with the Paint Creek, Huron River and Willow Run Creek. Natural Features are shown on Figure 1.

A large groundwater recharge area exists on the west side of the Township Sections 18, 19, 30 and 31. Other smaller areas for groundwater recharge are scattered throughout the community. The topography of the area is relatively flat. Most

soils have severe septic limitations; areas of slight or moderate limitations are located in the southwest, southeast and north-west. A few steeply-sloped areas also exist in the township.



### 2.3 Land Use Patterns

The Township consists of approximately 20,343 acres; as of 1999, the Township was at 45% build-out. Most of the intensive urban development is located along the east and west periphery of the City of Ypsilanti's boundaries. Commercial development can be found along the west side of the Township, and serves as a regional commercial center. Industrial uses are generally found on the eastern side of the Township. The largest industry is the Ford Plant.

Single family residential is the predominant land use, and consumes approximately 27% of Township lands. Residential development in the north is at a higher density than that in the south, which has seen conversion of agricultural lands to single-family subdivision developments. However, higher density residential development is going in throughout the southern portion of the Township as well. Additionally, there are two manufactured housing developments, located in the southeast portion of the Township, which comprise 73 acres of the Township's land. More residential development is expected in the future.

### 2.4 Transportation Network

Interstate I-94, M-14 and Michigan Avenue, Washtenaw Avenue, and Ecorse Road are the primary transportation routes in the Township. These principal arterial roads make most areas

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easily accessible. The Conrail Railroad traverses east west through the City of Ypsilanti and the northern portion of the Township. The Willow Run airport is located in Wayne County, however, a portion of the airport lies within Ypsilanti Township, east of the US 12 and I-94 split.

Public Transportation is offered by the Ann Arbor Transportation Authority, which provides bus service to numerous areas throughout the community. The community also owns a 24-passenger handicap accessible bus, used primarily for recreation programs in the community.

## 3.0 Hazards

Ypsilanti Township is susceptible to a variety of natural, technological, and societal hazards. The purpose of this section is to rank the hazards for Ypsilanti 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 Ypsilanti 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.

**Table 1: Hazard Ranking**

Hazard	Ranking
Convective Weather (Severe Winds, Tornadoes, Lightning, Hail)	1
Hazardous Materials Incidents: Transportation	2
Infrastructure Failures	3
Severe Winter Weather Hazards (Snow Storms and Ice/Sleet Storms)	4
Hazardous Materials Incidents: Fixed Site	5
Transportation Accidents: Air and Land	6
Extreme Temperatures	7
Flood Hazards: Riverine/Urban Flooding	8
Nuclear Attack	9
Petroleum and Natural Gas Pipeline Accidents	10
Fire Hazards: Wildfires	11
Fire Hazards: Structural Fires	12
Flood Hazards: Dam Failures	13
Public Health Emergencies	14
Sabotage & Terrorism	15
Drought	16
Earthquakes	17
Nuclear Power Plant Accidents	18
Civil Disturbances	19
Oil and Gas Well Accidents	20
Fire Hazards: Scrap Tires Fires	21

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## 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.
- **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.

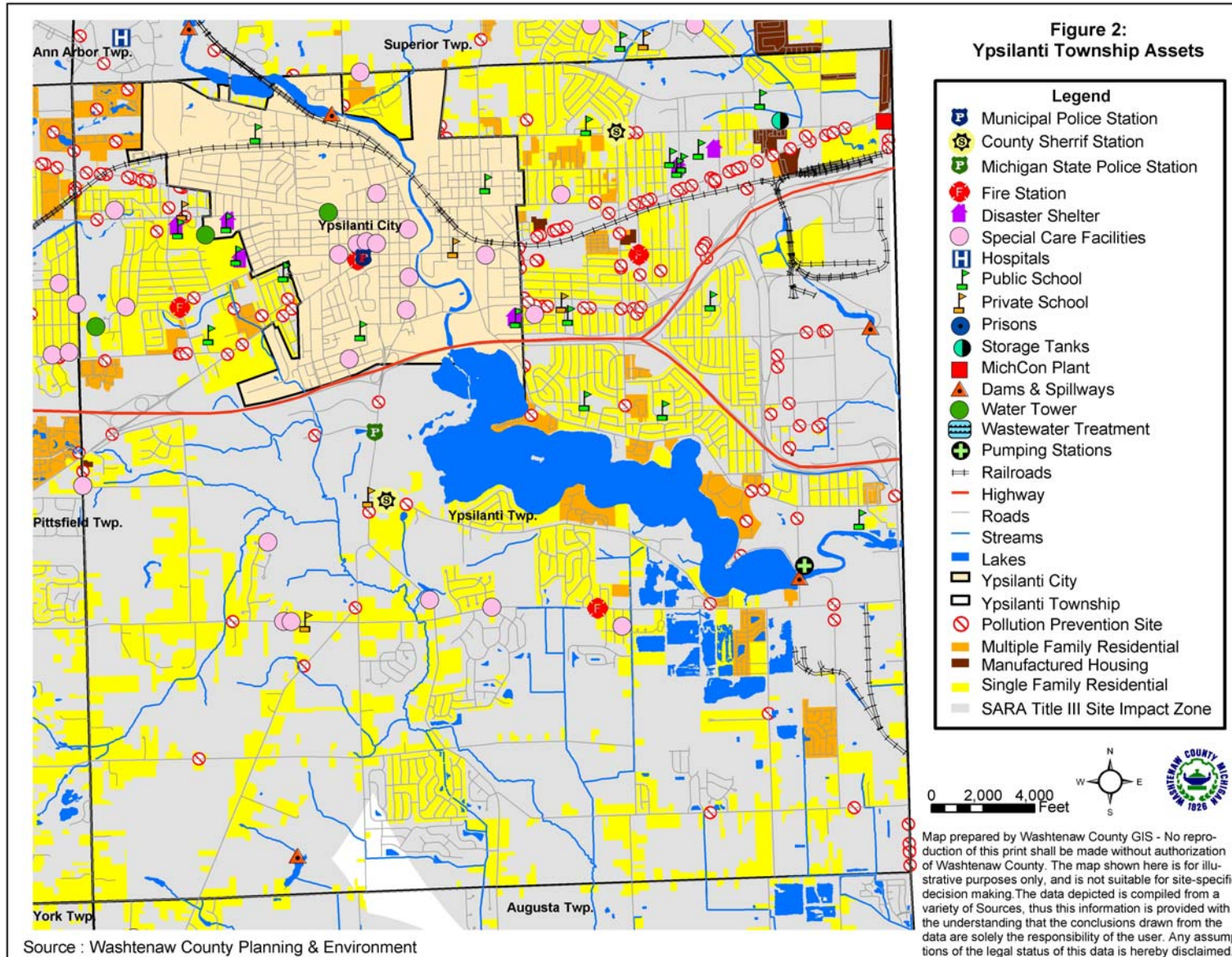
Vulnerability assessments were prepared for convective weather, hazardous materials transportation incidents, hazardous materials fixed site incidents, infrastructure failures and severe winter weather hazards. The goal is to quantitatively measure the threat experienced by Washtenaw County communities. 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

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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 the City of Ypsilanti, and may be referred to in the following sections. The goals and strategies are not an inclusive list; rather the goals and strategies are those that the City 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 and Strategies

Goal: Integrate mitigation strategies into the Township Master Plan.

#### Mitigation Strategy: Consistency with Township Plan Documents

- Amend the Master Plan to include hazard mitigation goals and strategies as applicable.

### 4.2 Hazard Specific Goals and Strategies

#### **Convective Weather**

##### Vulnerable areas

Areas particularly vulnerable to convective weather events in Ypsilanti Township include the ten manufactured home communities (Figure 2). Most of the units are situated on and tied to a concrete slab. Although the most recent community met the former 36-inch tie-down footing requirement, new changes in the code now require a 42-inch footing. Numerous apartment communities located throughout the Township (signified on Figure 2 as orange Land Use). A tornado touch-

down in a highly concentrated population center would result in a substantial loss.

Goal: Reduce the Township's vulnerability to convective weather storm hazards, minimize loss of life and injury, and damage to public property, and provide a safe environment to residents in the event of a convective weather hazard event.

#### Mitigation Strategy: Warning Sirens

- Secure funding for installation of warning sirens. Currently only portion of the Township is covered by a warning siren Figure 3. The siren is located in the City of Ypsilanti reaches approximately 25% of the Township population, or 12,329 people. New sirens should be located such that residents living in the southern part of the township are reached. This would require nine omni direction sirens.

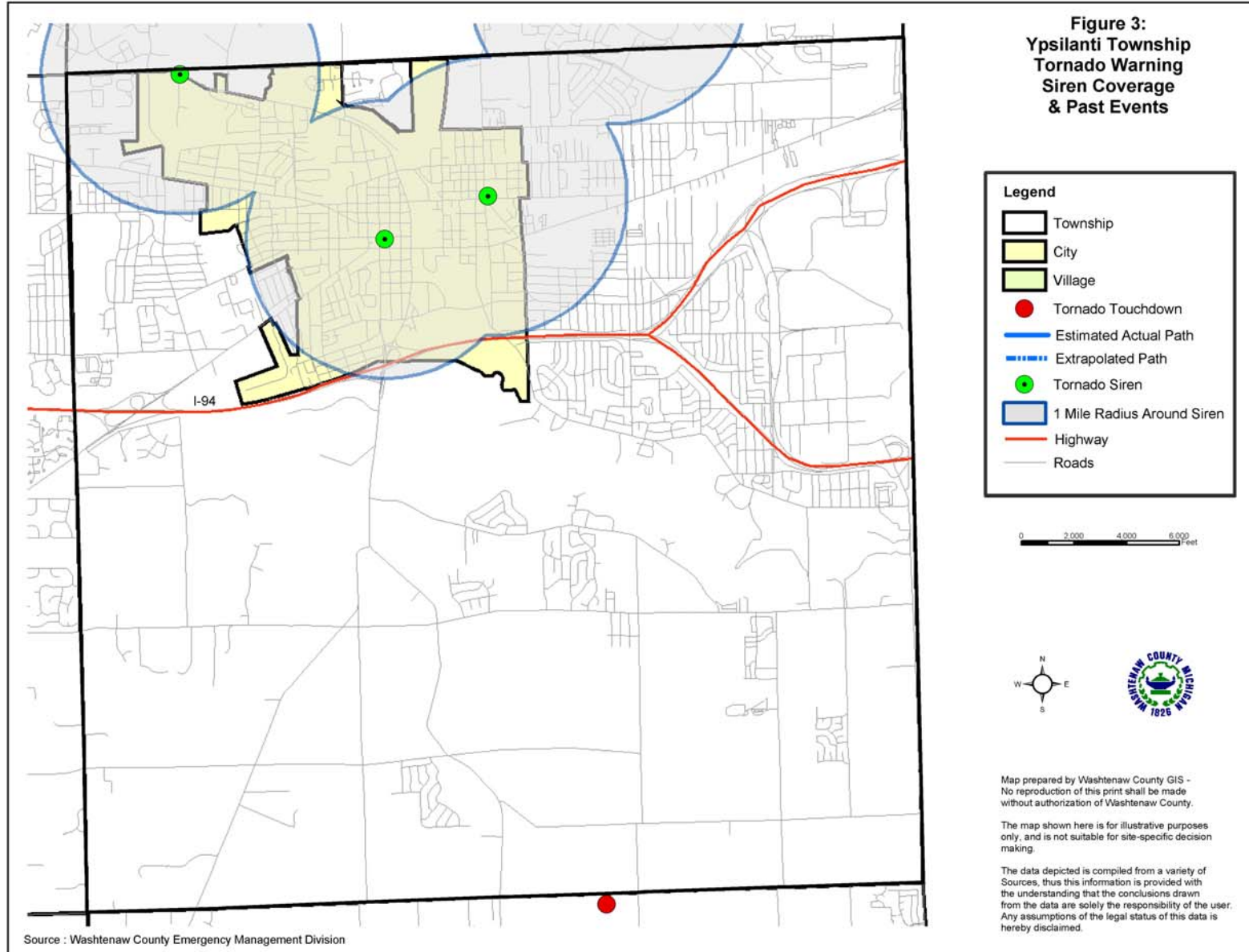
#### Mitigation Strategy: Emergency Generators

- Secure funding to install emergency generators. Emergency generators should be installed at the Township's Civic Center Building in order to become an official disaster and warming shelter for Township residents. The special care facilities located along Textile Road are in the need of emergency generators since these activities host many people with special needs. Coverage is needed on the southern portion of the Township; schools located in the south may be an option for shelters there. The Red Cross must be obtained to officially designate a building an Emergency Shelter.
- Continue maintenance of current generators that serve as back-up power at critical facilities.

#### Mitigation Strategy: Public Education

- Distribute Emergency Preparedness information to residents, informing them on actions to take during an

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event, or actions to minimize damage caused by an event. (See Family Preparedness Kit information box).

## Mitigation Strategy: Maintenance

- Distribute annual reminders to ground utility providers, encouraging them to keep power lines clear of trees and tree limbs. This would reduce the chance of electrical power failure for Townships residents and businesses.

## Mitigation Strategy: Plans

- Prepare a “storm debris clean-up plan” to expedite post-hazard clean-up processes. Work with the Washtenaw County Road Commission to eliminate large tree limbs overhanging roadways, particularly main emergency routes.

## Mitigation Strategy: Training

- Encourage residents to attend the Washtenaw County Division of Emergency Management Division Skywarn Spotter training program. 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.

## Mitigation Strategy: Manufactured Home Communities

- Encourage construction of safety shelters in existing communities throughout the Township.
- Encourage community owners to provide safety shelters.
- Amend ordinances regarding mobile home communities to require more stringent tie-down requirements. As existing manufactured homes are replaced, require that they adhere to the latest code requirements.

## **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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## **Hazardous Materials Transportation Incidents**

There are major highways and state-road thoroughfares located in Ypsilanti Township that make this community particularly 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. The most vulnerable areas in the Township are major highways and interchanges including I-94, Ecorse Road, and Michigan Avenue. In particular, I-94 is the major east-west corridor for all of southeast Michigan, and untold amounts of hazardous material travel this road daily. Willow Run Airport also transports hazardous materials. Dense human populations surround all of these locations.

Another potentially vulnerable area is where I-94 crosses the Huron River. At a point, the Huron feeds into Ford Lake. An incident at this location could cause significant environmental harm, in addition to human exposure.

Goal: Reduce the risk of damage, loss of life, and other costs resulting from hazardous material transportation incidents by enforcing regulations, providing appropriate training to responders, and ensuring citizens are prepared and aware of actions to take in the event of this hazard.

### Mitigation Strategy: Warning Sirens

- Secure funding for installation of warning sirens. See strategy under Convective Weather for further discussion.

### Mitigation Strategy: Emergency Generators

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

### 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 Ypsilanti Township. Also continue diligent enforcement of weight and travel restrictions.

### Mitigation Strategy: Training

- Continue to train, equip and maintain a Hazardous Material Response Team through the Ypsilanti Township Fire Department.
- Continue to expand emergency response plans to Hazardous Materials Accidents along roadways, railways and at the airport would ensure a quality response in case of an emergency.

### Mitigation Strategy: Public Education

- Distribute Emergency Preparedness information to residents. See strategy under Convective Weather for further discussion.

## **Hazardous Materials Fixed Site Incidents**

There are dozens of facilities throughout the community that store hazardous materials and therefore have the potential for impacting people and causing environmental impact. Some of the more vulnerable areas are:

- Commercial businesses along Ecorse Road
- Commercial businesses along Textile Road
- Residential areas bordering commercial businesses in the City of Ypsilanti

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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. See strategy under Convective Weather for further discussion.

## Mitigation Strategy: Emergency Generators

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

## Mitigation Strategy: Training and Support

- Continue to train, equip and maintain a Hazardous Material Response Team through the Ypsilanti Township Fire Department. The team currently receives information regarding materials stored or manufactured at fixed sites through LAPC.
- Continue to provide training programs for hazardous materials, storage and handling and transportation.
- Support and cooperate with the Washtenaw County Pollution Prevention Program.
- Continue to participate in the Washtenaw County Emergency Preparedness Plan.

## Mitigation Strategy: Enforcement

- Continue to enforce industrial, fire and safety regulations.

## Mitigation Strategy: Plans

- Continually monitor and update in-house evacuation plans. Encourage YCUA to conduct a Vulnerability Study that would include impacts on facilities due to hazardous materials incidents.

## Mitigation Strategy: Public Education

- Distribute Emergency Preparedness information to residents. See strategy under Convective Weather for further discussion.

## **Infrastructure Failure**

Critical infrastructure exists within Ypsilanti Township. An incident at the Ypsilanti Communities Utilities Authority YCUA water treatment could affect tens of thousands of residents, and cause serious environmental impact. Failures of any freshwater pumping stations located throughout the community could also be debilitating.

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.
- Continue maintenance of existing generators.

## Mitigation Strategy: Plans and Studies

- Prepare a vulnerability study for YCUA and implement the recommendations put forth from the study.
- Continue to work with YCUA on maintenance plans.
- Prepare a vulnerability study for the Hydro Station Area and implement the recommendations put forth from the study.
- Prepare an Alternative-Route plan for emergency services in the event that either Bridge Road or I-94 becomes impassible.

## Mitigation Strategy: Maintenance

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

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tree limbs. This would reduce the chance of electrical power failure for Townships residents and businesses.

## Mitigation Strategy: Public Education

- Distribute Emergency Preparedness information to residents. See strategy under Convective Weather for further discussion.

## **Severe Winter Weather Hazard**

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: Maintenance

- Distribute annual reminders to ground utility providers, encouraging them to keep power lines clear of trees and tree limbs. This would reduce the chance of electrical power failure for Townships residents and businesses.

## Mitigation Strategy: Public Education

- Distribute Emergency Preparedness information to residents. See strategy under Convective Weather for further discussion.

## Mitigation Strategy: Shelter Locations

- Work with Red Cross and schools to establish shelter/warming locations for residents in the event of heat loss. Coverage is especially needed on the south side of the Township. Warming shelters should have emergency generators.

## Mitigation Strategy: Emergency Generators

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

## **Transportation Accidents: Air, Land and Water**

The most vulnerable areas with regard to transportation accidents are Interstate 94 (I-94), the Willow Run Airport and the Norfolk Southern Railway system. These locations are near highly populated areas, and therefore the potential of be host to a serious accident.

Goal: Increase the Township's ability to respond to transportation accidents, reducing the impact of such incidents on the community.

## Mitigation Strategy: Transportation Planning

- Continue to participate in traffic studies with WATS, the Washtenaw County Road Commission and the Michigan Department of Transportation to provide a safer roadway system, and decrease the amount of traffic accidents, and be diligent in the enforcement of weight and travel restrictions.

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## Mitigation Strategy: Training

- Continually train and equip emergency responders to handle transportation accidents, aircraft accidents and mass casualty accidents involving all modes of transportation.
- Encourage residents to take boaters safety classes, which are provided at no cost to the Township.

## **Extreme Temperatures**

The Townships most vulnerable areas are dispersed throughout the community: elderly residents, estimated at 5000 people, and those living below the poverty level, also estimated at 5000 people.

Goal: Reduce the damage and impacts caused by severe winter weather hazards and reduce the impact of the event on citizens.

## Mitigation Strategy: Shelters, Generators

- Establish shelter/warming locations for residents in the event of heat loss. See strategy under Severe Winter Weather for further discussion.

## Mitigation Strategy: Public Education

- Distribute Emergency Preparedness information to residents. See strategy under Convective Weather for further discussion.
- Support or coordinate philanthropist activities to provide blankets, coats, gloves, etc. for at-risk people, minimizing the amount of people suffering.

## Mitigation Strategy: Code Enforcement

- Enforce building maintenance code to insure landlords maintain good heating equipment will reduce the risk for the residents.

## **Flood Hazards: Riverine/Urban Flooding**

The Huron River and Ford Lake traverse much of Ypsilanti Township, causing at least one third of the community to be vulnerable to potential flooding. Currently no seasonal or re-occurring problems have been reported with regard flooding.

Goal: Reduce the Township's vulnerability to riverine flooding.

## Mitigation Strategy: Code Enforcement

- Continue enforcement of code requirements for sump pumps, watershed set-backs and other related rules and regulations.
- Continue enforcement of requirements for 100-year storm water detention.
- Work with the Huron River Watershed Council, the Washtenaw County Drain Commissioners Office, and FEMA to ensure minimal impact of impervious surfaces, cleared/dredging of drains, and maintenance and upgrading of the Hydro Station.

## Mitigation Strategy: Flood Insurance Program

- Encourage residents to purchase Flood Insurance, which is available to them since the Township participates in the FEMA National Floodplain Insurance Program.

## **Nuclear Attacks**

Vulnerable areas in Ypsilanti Township include the Willow Run airport and other companies that could potentially provide military support industries. These facilities, coupled with the Township's strong military support history, make the Township more vulnerable to nuclear attacks than the rest of Washtenaw County.

Goal: Increase the Township's capacity to withstand a military nuclear attack

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## Mitigation Strategy: Warning Sirens

- Secure funding for installation of warning sirens. See strategy under Convective Weather for further discussion.

## Mitigation Strategy: Training

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

## Mitigation Strategy: Public Education

- Disseminate information regarding safety measures in the event of a Nuclear Attack. Information to be included with other public education material mailings. See strategy under Convective Weather for further discussion.

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

To the knowledge of the Township officials the Bridge Road Natural Gas Pipeline, the Grove Road/Ford Lake high pressure natural gas line and the Michcon natural gas mixing station are the most vulnerable areas in the Township.

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 Ypsilanti Township Fire Department.

## Mitigation Strategy: Public Education

- Distribute Emergency Preparedness information to residents. See strategy under Convective Weather for further discussion.

## **Fire hazard: Wildfires**

There are limited acres of open grasslands and woodlands, reducing the hazard associated with the wildland/urban interface.

Goal: Reduce the Township's vulnerability to wildfires.

## Mitigation Strategy: Training

- Train and equip the Fire Department staff. Quick response is the most important factor in order to minimize the area impacted.

## Mitigation Strategy: Burning Ban

- Continue to enforce the Township's wide-open burning ban.

## Mitigation Strategy: Public Education

- Conduct an educational campaign regarding fire safety through the Township Public Fire Education Committee. The program must include, fire and burn prevention programs targeted specifically at elementary school children, senior citizens and neighborhood watch groups. Also continue to maintain the "Juvenile Fire setting Counsel", Fire Prevention Week activities and the annual open house.

## **Fire Hazards: Structural**

The older structures located throughout the community were constructed prior to current fire code structures. Such buildings and homes are the most vulnerable.

Goal: Reduce the Township's vulnerability to and losses caused by structural fires.

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## Mitigation Strategy: Training

- Train and equip the Fire Department staff. Quick response is the most important factor in order to minimize the impact and damage.

## Mitigation Strategy: Enforcement

- Continue to dedicate the Township Fire Marshall to the enforcement of the Fire Prevention Code and the Townships' ordinances.
- Periodically review Township ordinances to stay current with new codes or discoveries that could prevent future fires.
- Maintain the Mutual Aid Agreements with the surrounding communities.

## Mitigation Strategy: Public Education

- Conduct an educational campaign regarding fire safety through the Township Public Fire Education Committee. The program must include, fire and burn prevention programs targeted specifically at elementary school children, senior citizens and neighborhood watch groups. Also continue to maintain the "Juvenile Fire setting Counsel", Fire Prevention Week activities and the annual open house.

## **Flood Hazards: Dam Failures**

There is one dam located in Ypsilanti Township, which is a hazard concern for the community.

Goal: Reduce the potential for a dam failure.

## Mitigation Strategy: Warning Sirens

- Secure funding for installation of warning sirens. See strategy under Convective Weather for further discussion.

## Mitigation Strategy: Plans

- Prepare an evacuation plan for both the North and South Hydro Parks.
- Conduct a vulnerability study for the Hydro Station area, and follow the recommendations.

## Mitigation Strategy: Maintenance

- Continue to maintain a full-time dam operator to conduct routine inspections, and provide repair and maintenance, as needed.
- Continue regular testing and upgrades to Hydro Station Emergency Management Plan.
- Work with FEMA and follow any recommendations provided with regard to dam safety.
- Continue the renewal of the Federal License, ensuring codes for the dam are followed.

## Mitigation Strategy: Public Education

- Disseminate information to residents that may be impacted by a dam failure. Information could be included with other public education material mailings.

## **Public Health Emergencies**

The most likely public health emergency scenario would be failure of the wastewater treatment facility. This may cause widespread sewer backups, polluting the water ways (rivers, lake, wetlands) and exposing the public to contaminants. The water and sewer systems are also potential breeding grounds for West Nile or other mosquito born diseases.

Goal: Increase the Township's ability to prepare for and respond to a public health emergency.

# Ypsilanti Township

## Mitigation Strategy: Plans/Program Implementation

- Continue to treat Township-owned known breeding areas to prevent the outbreak of diseases such as West Nile.
- Target buildings that pose to be a public health threat for condemnation and razing.
- Offer opportunities to seniors for flu vaccinations and encourage all residents to be vaccinated for all communicable diseases. Currently offered annually as part of Township's operating expenses.
- Provide free radon test kits to residents. Currently this is offered annually as part of Township's operating expenses.

## Mitigation Strategy: Plans

- Encourage YCUA to prepare a vulnerability study, and follow recommendations presented in the Plan.

## Mitigation Strategy: Public Education

- Work cooperatively with the Washtenaw County Department of Public Health on educational campaigns, including dissemination of information to prevent public health emergencies.

## **Sabotage and Terrorism**

There are areas in the Township that are most vulnerable terrorist or sabotage attacks. For security reasons, specific areas are not identified. In general, the drinking water supply and water treatment plant are the most likely targets.

Goal: Increase the Township's capacity to anticipate, manage and withstand potential incidents involving sabotage and terrorism.

## Mitigation Strategy: Studies and Plans

- Encourage YCUA to prepare a vulnerability study, and follow recommendations presented in the plan.

- Prepare studies and plans for other vulnerable facilities in the Township, and follow recommendations presented in the plan.

## Mitigation Strategy: Training

- Provide training and equipment to the Township Police to guarantee maximum security for all residents.
- Develop and implement a program for a computer data back-up system and anti-virus software to decrease vulnerability.

## Mitigation Strategy: Enforcement

- Ensure Township police services follow Homeland Security directives will minimize the chance of a sabotage and terrorist attack.
- Make Bridge Road a Tow Away Zone. A recommendation from the Hydroelectric Station Security Assessment was to remove any unauthorized along Bridge Road for security reasons.

## **Drought**

While a disaster from drought in Ypsilanti Township does seem unlikely, there have been water rationing rules enforced in recent times. If rains had not relieved the situation, further rationing steps would certainly have had an effect on its economy, namely industrial production.

Goal: Increase the Township's ability to maintain a water supply for the community under drought conditions.

## Mitigation Strategy: Enforcement

- Work with YCUA to ensure that water is available for drought conditions.

# Ypsilanti Township

## Mitigation Strategy: Public Education

- Work with YCUA to educate consumers about the benefits of saving water. Information to be included with other public education materials.

## **Earthquakes**

Infrastructure failures are the primary concern, in addition to vulnerable “mid rise” buildings in the community with regard to earthquakes.

Goal: Minimize damage and losses due to an earthquake event.

## Mitigation Strategy: Warning Sirens

- Secure funding for installation of warning sirens. See strategy under Convective Weather for further discussion.

## Mitigation Strategy: Enforcement

- Continue to enforce the BOCA code to ensure safe structures and expand the enforcement in the Township’s property maintenance code.

## Mitigation Strategy: Public Education

- Distribute Emergency Preparedness information to residents. See strategy under Convective Weather for further discussion.

## Mitigation Strategy: Shelter Locations, Generators

- Secure funding to install emergency generators. 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

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.

Ypsilanti Township currently implements many valuable strategies listed in Section 4.0. This section mainly lists new initiatives the Township will undertake; most strategies that are a continuation of current efforts are not restated in this Section.

## **High Priority Strategies**

### Warning Sirens

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

*Estimated Cost:* Total protection for Ypsilanti Township is \$162,000. This includes 9 omni direction sirens and \$4,500 annually to maintain.

Emergency Generators: Maintenance of existing generators and installation at Township Civic Center, special care facilities and potentially schools if designated as a shelter.

*Responsible Agencies:* Ypsilanti Township

*Estimated cost per generator:* \$5.00 to \$10.00 per square foot of building space.

# Ypsilanti Township

## Safety Shelters for Manufactured Housing Communities

*Responsible Agency:* Ypsilanti Township to work with Community Owners

*Estimated Cost:* To be determined.

## Assist Manufactured Home Owners with Obtaining Funds to Properly Anchor Unit

*Responsible Agency:* Ypsilanti Township, Unit Owner

*Estimated Cost:* Staff time.

## **Other Important Strategies**

### Classify Bridge Road a Tow-Away Zone to Prevent Unauthorized Vehicles from Parking in this Area

*Responsible Agency:* Ypsilanti Township

*Estimated Cost:* Staff time.

### Target Buildings that Pose a Public Health Threat for Condemnation/Demolition

*Responsible Agency:* Ypsilanti Township

- *Estimated Cost:* Estimated cost: in-house enforcement \$5,000; attorney fees \$5,000; demolition costs (average one home per year) \$20,000.

### Public Education

- Distribute family preparedness information to residents. Include information regarding dam failures, public health emergencies (\$7,500 annually)
- Conduct fire safety educational campaign targeting elementary schools and continue Juvenile Fire Setting Counsel and Fire Prevention Week (\$13,000)

*Responsible Agency:* Ypsilanti Township

*Estimated Cost:* As stated above.

### Distribute Annual Reminders to Utility Companies

*Responsible Agency:* Ypsilanti Township

*Estimated Cost:* Staff time.

## Plans

- Prepare a Storm Debris Clean-Up Plan (\$10,000)
- Expand emergency response plans to include HazMat transportation incidents
- Prepare a vulnerability study for YCUA and implement recommendations (\$20,000)
- Prepare a vulnerability study for the Hydro Station and implement recommendations (\$20,000)
- Prepare evacuation plans for North and South Hydro Parks (\$15,000)

*Responsible Agency:* Ypsilanti Township

*Estimated Cost:* As noted above.

## Training and Support Opportunities

- Encourage residents to attend Skywarn Spotter Training course by Washtenaw County Emergency Management Division (Free to residents 18 years and older)
- Continue to support Hazardous Materials Response Teams (\$116,000 annually)
- Encourage residents to work with the Washtenaw County Pollution Prevention Program (\$2,500)
- Continue participation with Washtenaw County Emergency Action Guidelines (\$1,000)

*Responsible Agency:* Ypsilanti Township

*Estimated Cost:* As noted above.

## Road Regulations

- Continue to work with Washtenaw County Road Commission to provide safer roads
- Continue diligent enforcement of weight and travel restrictions

*Responsible Agency:* Ypsilanti Township

*Estimated Cost:* Staff time.

## Shelter Locations

- Work with Red Cross and schools to designate official emergency shelters, warming stations, particularly for the southern portion of the Township.

*Responsible Agency:* Ypsilanti Township

*Estimated Cost:* Staff time.

## Encourage Residents to Participate in FEMA Flood Plain Insurance Program

*Responsible Agency:* Ypsilanti 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 the 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 are not a priority for Ypsilanti Township at this time. The strategies listed in this plan that qualify for FEMA funds include emergency generators, warning sirens and providing shelters for manufactured housing communities and anchoring manufactured units, both at the request of the owner.

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 (EMPG). 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 governments, 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 the Ypsilanti Township Supervisor. The plan will be an annual agenda item for the Ypsilanti Board of Trustees. 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 the Ypsilanti Township Board of Trustees.



**Attachment 1  
County Hazard Plan**



**Attachment 2  
Alternative Funding Sources**

# Ypsilanti 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>																											
Business and Industry Loans	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
CDC-Investigations and Technical Assistance																		√									√
CEPP Technical Assistance Grants Program											√	√						√								√	√
Community Assistance Program-State Support Services Element (NFIP)								√	√	√																	√
Community Development Block Grant/Economic Development Initiative									√	√			√										√				√
Community Development Block Grant/Entitlement Grants	√	√	√	√	√	√	√	√	√	√	√	√	√					√	√	√	√	√	√	√	√	√	√
Community Development Block Grant/Small Cities Program	√	√	√	√	√	√	√	√	√	√	√	√	√					√	√	√	√	√	√	√	√	√	√
Community Development Block Grant/State's Program	√	√	√	√	√	√	√	√	√	√	√	√	√					√	√	√	√	√	√	√	√	√	√
Community Disaster Loans	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Community Facilities Loans and Grants	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Community Outreach Partnership Center Program	√	√	√	√	√	√	√	√	√	√	√	√						√	√	√	√	√	√	√	√	√	√
Conservation Reserve Program									√	√															√	√	√
Cooperative Forestry Research							√																			√	√
Cora Brown Fund	√	√	√	√	√	√	√	√	√	√	√	√			√	√	√	√	√	√	√	√	√	√	√	√	√
Direct Housing Natural Disaster (Very Low/Low Income Loans)							√	√												√	√	√			√	√	√
Disaster Housing Program	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Disposal of Federal Surplus Property (Transfers)									√																		√
Economic Adjustment Assistance								√	√	√													√			√	√
Economic Development Tech Assistance									√																	√	√
Emergency Advance Measures for Flood Protection								√	√	√																√	√

# Ypsilanti 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								√	√	√			√													√	

# Ypsilanti 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>																											
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																√	√										√

# Ypsilanti 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											√	√			√	√	√	√									√

# Ypsilanti 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									√																		√

# Ypsilanti 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									√	√																√	√

# Ypsilanti 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									√	√			√														√	

# Ypsilanti 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				√		√			√	√			√						√	√	√	√	√	√		√	