

# HAZARD MITIGATION PLAN for the City of Ypsilanti

October 2004





Resolution No. 2004 – 201  
October 19, 2004

RESOLVED BY THE COUNCIL OF THE CITY OF YPSILANTI:

WHEREAS, The City of Ypsilanti, 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 natural and technological hazards; and

WHEREAS, The City of Ypsilanti 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;

NOW THEREFORE BE IT RESOLVED:

1. The Hazard Mitigation Plan is hereby adopted as an official plan of the City of Ypsilanti.
2. The Hazard Mitigation Plan will be an annual agenda item for the City of Ypsilanti City Council 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 City of Ypsilanti City Council.

3. The Hazard Mitigation Plan will be updated every five years as required by FEMA, with the assistance of Washtenaw County.
4. The City of Ypsilanti City Manager 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.

OFFERED BY: Council Member Gawlas

SUPPORTED BY: Council Member LaRue

YES: 7      NO: 0      ABSENT: 0      VOTE: Unanimous

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



## 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. The City of Ypsilanti 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 reduced 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 (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 a 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; 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 City's Master Plan, and other plans, as applicable.

## 1.2 Plan Organization

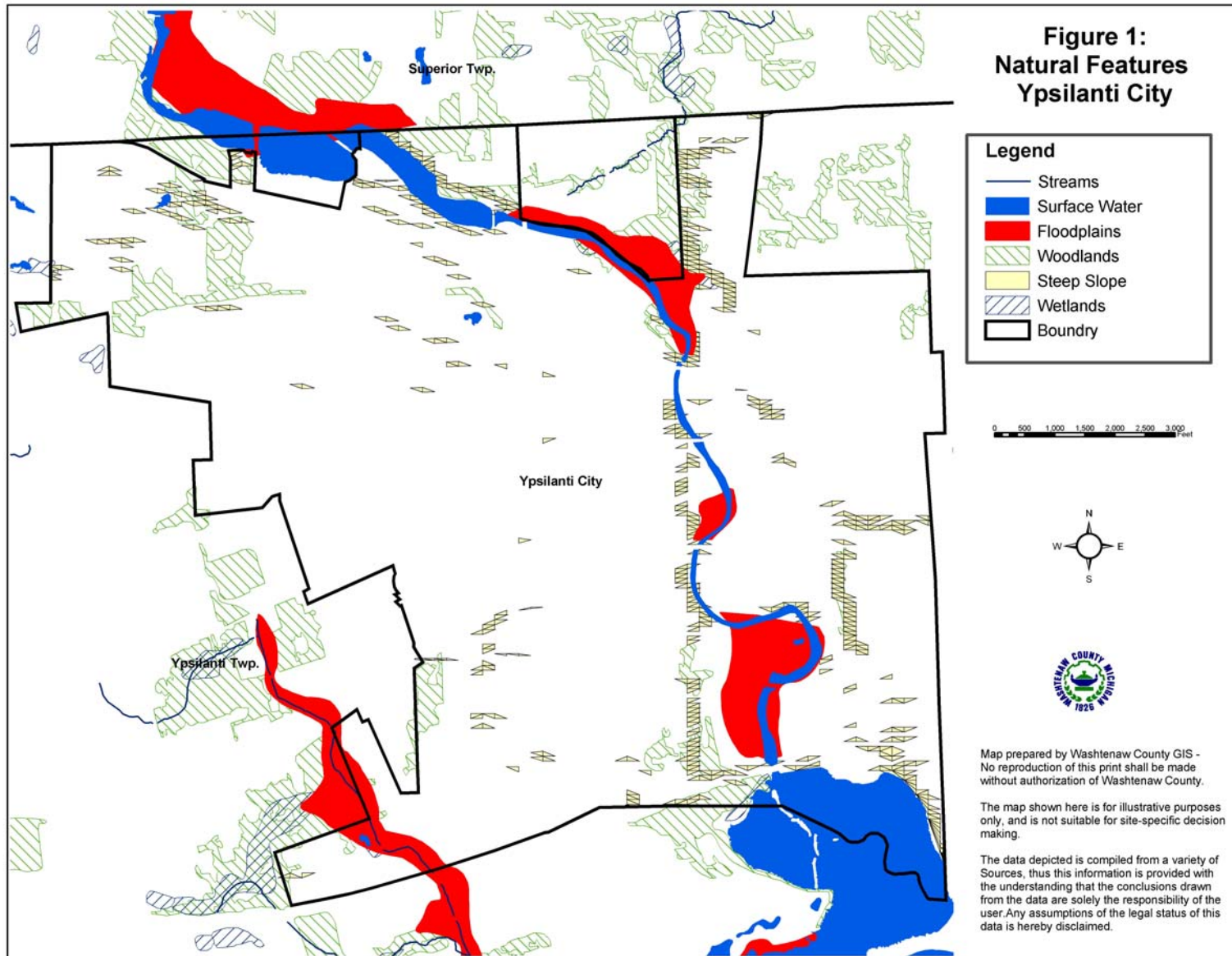
This Plan was prepared by Washtenaw County on behalf of the City of Ypsilanti. Individual plans were prepared for each local unit of government in recognition of their unique circumstances and potential differences in priorities, goals and mitigation strategies. General information, such as community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

## 1.3 Public Participation

Representatives from the City worked with the Washtenaw County Emergency Management Division and Department of Planning and Environment to draft the hazard mitigation plan. An opportunity for Ypsilanti citizens 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 Ypsilanti City Council also provided an opportunity for public comment prior to adopting the plan on October 19, 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 area will be shared with the City.



# City of Ypsilanti

## 2.0 Community Profile

### 2.1 Historic Overview

The City of Ypsilanti, the second oldest city in the State of Michigan, was established in 1823. The City's first inhabitants included the Sauk Indians, later to be followed by French trappers and traders. The Sauk Indian Trail (US Highway 12) and the Huron River were the major attractions to the area. The Sauk Trail was the first road between Detroit and Chicago and once it spurred rapid growth in the area. These areas continue to be popular for the City: the current downtown and the historic Depot Town. The name Ypsilanti refers to General Demetrius Ypsilanti, a hero in the Greek war for Independence.

Eastern Michigan University is one of the major population centers in the City of Ypsilanti. The University, founded in 1849, was originally named Michigan State Normal College and is the oldest teachers' institution west of the Allegheny Mountains.

### 2.2 Natural Features

The City of Ypsilanti contains approximately 20 percent of Ford Lake within its boundaries, with the remainder of the Lake is located in Ypsilanti Township. The Huron River and the Paint Creek (drain) run north-south through the center of the City. Floodplains are associated with the Huron River and Paint Creek.

Two groundwater recharge areas are located in the community – one in the center of the City, east of the Huron River and one in the southwest area of the City, extending into the Township. Most of the land within the borders is developed; a larger wetland/woodland area is located east of the Huron River in the northern area of the City. Several smaller wetland and woodland areas are located in pockets, generally along the periphery. The topography of the area is relatively flat.

Generally, soils with severe septic occur in the center of the City.

### 2.3 Land Use Patterns

Ypsilanti City comprises approximately 2,875 acres. Eastern Michigan University, located on the northwest portion of the City, encompasses approximately 20% of the land. Single family residential is located on the eastern and western portions of the city, with the downtown dividing the two. Multiple-family residential is scattered throughout the City. Industrial uses are also located throughout the city, with heavy industrial uses located on the south side. The Huron River runs north-south through the downtown center.

### 2.4 Transportation Network

The City of Ypsilanti's extensive transportation network consists of interstate highways, principal arterials, minor arterials and local roads and streets. Interstate-94 offers east-west access, and US-23, located west of the City boundary, north-south access. The downtown area transportation route is on a grid pattern, with Michigan Avenue running through it (east-west).

## 3.0 HAZARDS

The City of Ypsilanti is susceptible to a variety of natural, technological, and societal hazards. The purpose of this section is to: rank the hazards for the City, analyze the risks for each hazard, identify vulnerable areas within the City, and appropriate goals and mitigation strategies for certain hazards.

### 3.1 Hazard Ranking

The ranking of hazards for the City of Ypsilanti is presented as Table 1. The ranking of hazards was determined on a county-wide basis, and adjusted based on input from local governments. 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.
- **Standard:** An explanation of concerns with limited quantitative research, prepared for hazards likely to occur and impact our communities.

**Table 1: Hazard Ranking**

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

- **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.

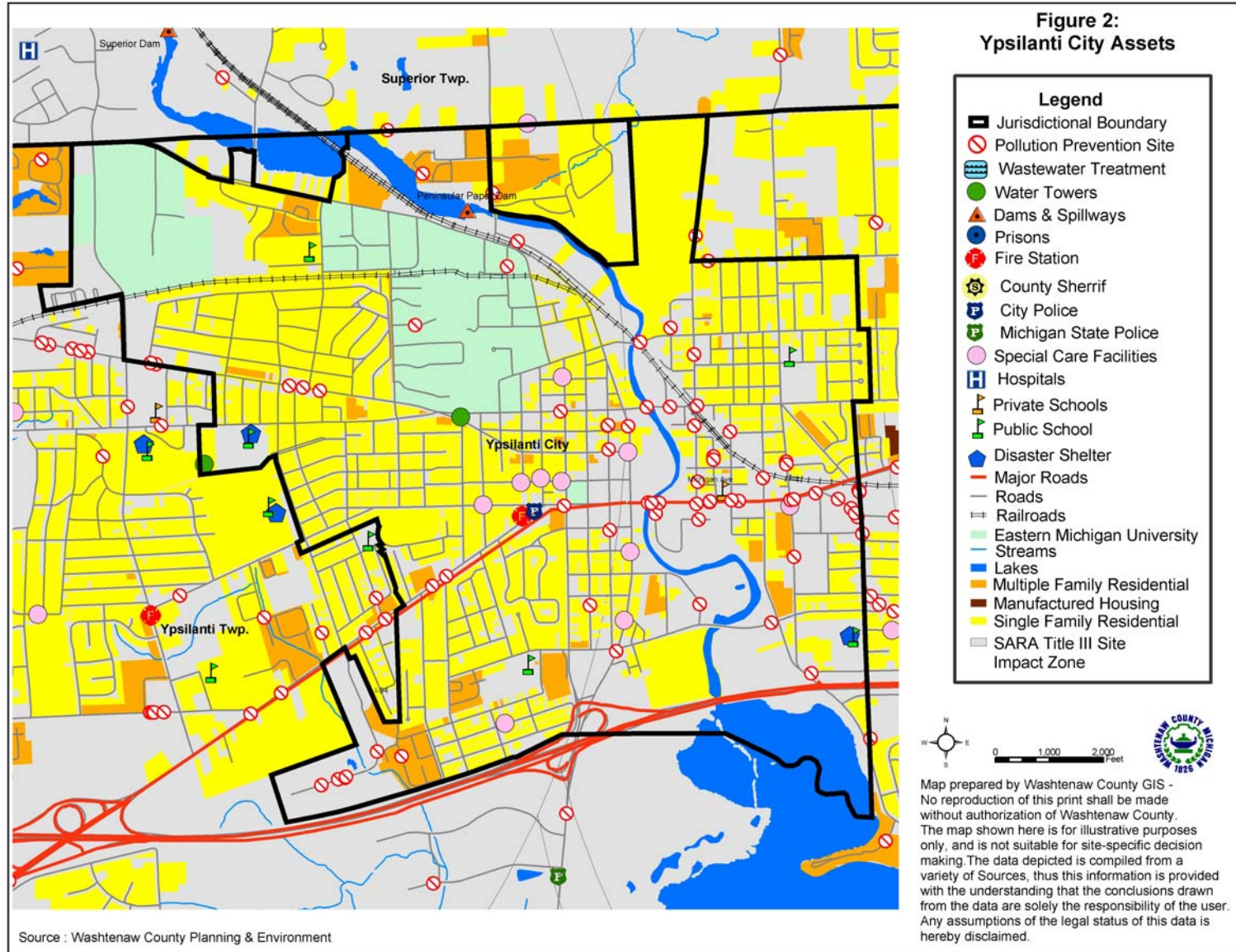
Vulnerability assessments were prepared for convective weather, hazardous materials transportation incidents, hazardous materials fixed site incidents, infrastructure failures and severe winter weather hazards. The goal is to quantitatively measure the threat experienced by Washtenaw County communities. 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
<b>#1</b>	<b>Convective Weather</b>	
	Tornado	\$5,078,755
	Severe Winds and Lightning	\$90,242,418
	Hail Storm	\$3,738,153
<b>#2</b>	<b>Hazardous Material Transportation Incidents</b>	\$6,838,963
<b>#3</b>	<b>Hazardous Material Fixed Site Incidents</b>	\$2,913,038
<b>#4</b>	<b>Severe Winter Weather</b>	\$36,191,763
<b>#5</b>	<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 annually per each hazard, but rather an annual mailing regarding family preparedness kits would be sufficient for all hazards for which this strategy is listed.

### 4.1 Non-Hazard Specific Goals and Strategies

Goal: Integrate mitigation strategies into the City Master Plan.

#### Mitigation Strategy: Plans

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

### 4.2 Hazard Specific Goals and Strategies

#### **Convective Weather**

The City is an urban area, with high density residential, as well as commercial and industrial land uses. The Eastern Michigan University campus is located in Ypsilanti, adding numerous apartment communities, dorms and large public gathering places (stadium, lecture halls). Other major population centers include senior care facilities, hospitals and public buildings. Given the concentration of buildings and people, a tornado touch-down in any area of the City has the potential to result in substantial losses.

Goal: Reduce the City'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: Emergency Generators

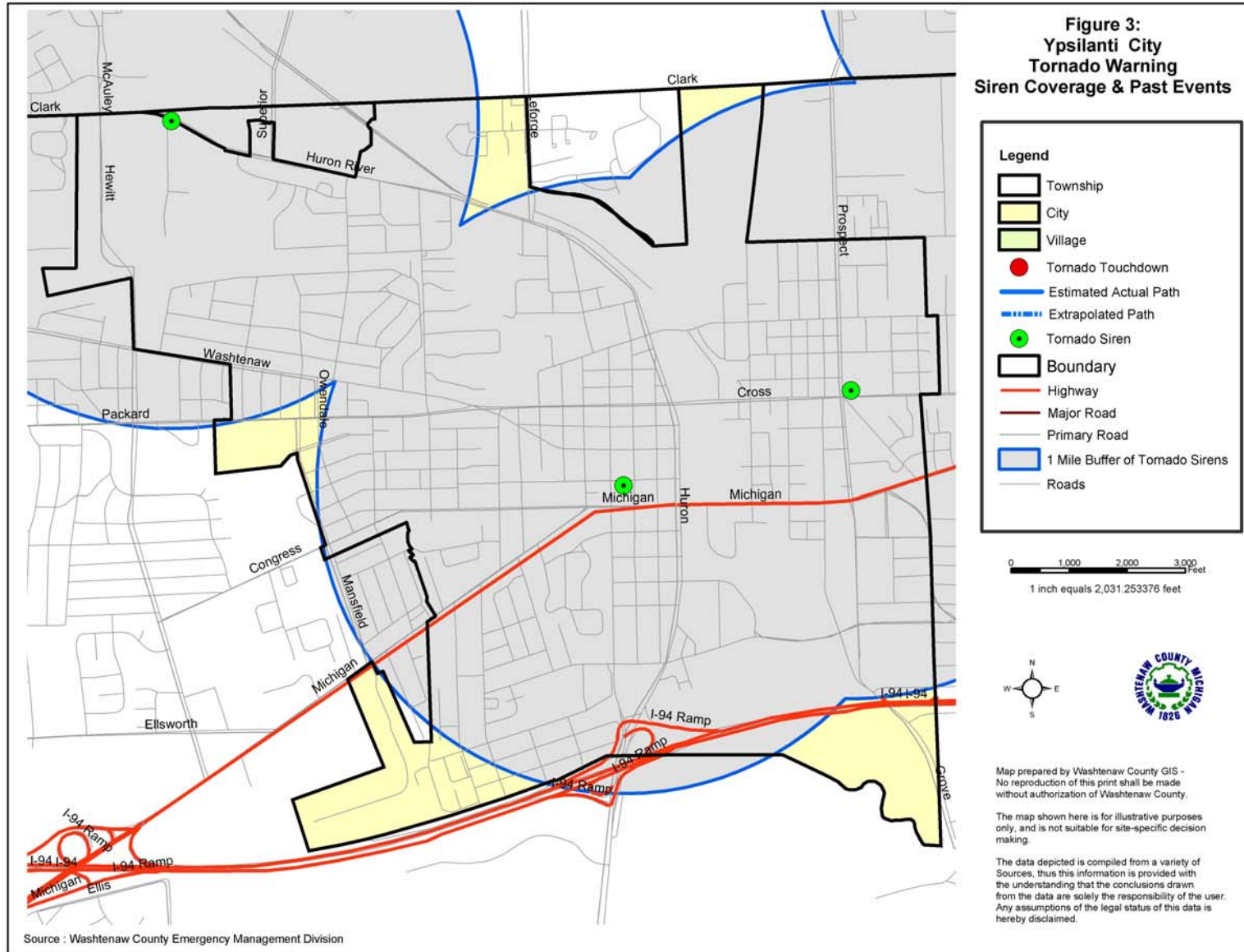
- During the blackout of August 2003, Fire Departments, Police Departments and governments across the State discovered that they were well prepared with regard to some responses, and not as prepared for others. The immediate concern was the availability of drinking water for everyone, including the water the Fire Department uses in case of emergencies. The second concern was the availability of fuel for the Cities apparatus. Third, was the availability for powering City-owned structures by use of generators. Continuing to expand generators throughout the City, as well as providing a shelter for the inhabitants, will prevent the entire City from shutting down.

The Fire Department has a generator and was able to function during the blackout. However, the Police Department, City Hall and the Department of Public Works do not, and the need to have generators at these buildings quickly became apparent.

#### Mitigation Strategy: Warning Sirens

- Secure funding for warning sirens. The City of Ypsilanti and Eastern Michigan University have four of the County's 36 sirens located within the community to warn the citizens of impending danger. Ypsilanti Township has no warning siren at this time. During an actual emergency, any or all of the sirens may be activated. The sirens within the City are adequate but would improve greatly with the installation of additional sirens in the City and Township.

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## Mitigation Strategy: Public Education

- Distribute Emergency Preparedness information to residents, informing them of actions to take during an 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. Addresses or problem areas should be specified.

## Mitigation Strategy: Training

- Encourage citizens to enroll in the Washtenaw County 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.

## **Hazardous Materials Incidents - Transportation**

The City's most vulnerable areas would include the major highways and interchanges, including I-94 and Michigan Avenue. Both are major east-west travel corridors for all of southeast Michigan and untold amounts of hazardous material travel this road daily. As dense human populations surround the highways, any accident happening in the City center would be very dramatic.

## **Family Preparedness**

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>

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: Emergency Generators

- Secure funding for emergency generators at the Police Department, Department of Public Works, and City Hall. See Strategy under Convective Weather for further discussion.

#### Mitigation Strategy: Warning Sirens

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

#### Mitigation Strategy: Public Education

- Distribute materials to residents. See strategy under Convective Weather for further discussion.

#### Mitigation Strategy: Road Regulations

- Work with Washtenaw County and the State of Michigan to provide safer roadways, which would result in the decrease of accidents. Ensuring that enforcement officers are following and enforcing Michigan Department of Transportation 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 the City of Ypsilanti.

#### Mitigation Strategy: Training

- Continue to train, equip and maintain Fire Department staff and expand emergency response plans to include hazardous materials accidents along roadways, railways and at the nearby Willow Run airport would ensure a quality response in case of an emergency.

#### **Hazardous Materials Incidents - Fixed Site**

There are facilities in the community that store hazardous materials and therefore have the potential for impacting people and causing environmental impact.

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

#### Mitigation Strategy: Emergency Generators

- Secure funding for emergency generators at the Police Department, Department of Public Works, and City Hall. See strategy under Convective Weather for further discussion.

#### Mitigation Strategy: Warning Sirens

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

#### Mitigation Strategy: Public Education

- Distribute materials to residents. See strategy under Convective Weather for further discussion.

#### Mitigation Strategy: Training and Support

- Continue to participate and belong to the Washtenaw County Hazardous Materials Response Authority.
- 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.
- Continue inspections of all SARA Title III sites.

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- Work with Washtenaw County's Pollution Prevention Program to ensure that facilities that store, manage or produce hazardous materials are using best management practices, and to facilitate information exchange between the facility, the Fire Department and the Hazardous Materials Response Team.

## Mitigation Strategy: Plans

- Continue to monitor and update in-house evacuation plans.

## **Infrastructure Failure**

During the blackout in August 2003, one of the major concerns was assurance of the water supply for City residents. The City has a short-term emergency water supply, however, a longer-term solution is critical.

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

## Mitigation Strategy: Emergency Generators

- Secure funding for emergency generators at the Police Department, Department of Public Works, and City Hall. See strategy under Convective Weather for further discussion.

## Mitigation Strategy: Increase Storage of Potable Water Supplies

- Prepare a plan and implement recommendations in the plan for ensuring that residents have potable water during infrastructure failures. The two existing towers are not sufficient to provide citizens water in the event of a long-term infrastructure failure. A plan should be developed to proactively identify water reserves that may be tapped into in the event of a water shortage. Options include working

with utility providers, the Red Cross or other agencies on a water-exchange program, where 6-oz potable water bottles are stored and recycled, or devising a joint generator-water supply agreement with Ypsilanti Township.

## Mitigation Strategy: Public Education

- Distribute materials to residents. 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. Addresses or problem areas should be specified.

## **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: Shelter Locations, Generators

- Prepare a list of potential shelter locations in the City. Such locations may include existing commercial buildings that have the facilities necessary to provide shelter in times of severe winter weather. Generators at key City buildings are another avenue for providing resources to residents in need of assistance during cold periods. (See strategy

under Convective Weather for further discussion on generators).

## Mitigation Strategy: Public Education

- Distribute materials to residents. See strategy under Convective Weather for further discussion.
- Educate at-risk residents on programs to assist with utility bill payments, as well as warming shelter locations.
- Support or coordinate philanthropist activities to provide blankets, coats, gloves for at-risk people, minimizing the amount of people suffering.

## Mitigation Strategy: Maintenance

- Distribute annual reminders to ground utility providers, encouraging them to keep power lines clear of trees and tree limbs. Addresses or problem areas should be specified.

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

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

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

## Mitigation Strategy: Enforcement

- Continue to work with 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.

## 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 attend boater safety classes. This would include advertising, venue and instructor fees.

## **Extreme Temperatures**

The City's most vulnerable areas are dispersed throughout the community: elderly residents and those living below the poverty level.

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

## Mitigation Strategy: Shelter Locations, Generators

- Prepare a list of potential shelter locations in the City. Such locations may include existing commercial buildings that have the facilities necessary to provide shelter in times of severe winter weather. Equipping City buildings with emergency generators is another avenue for providing resources to residents in need of assistance during cold periods. (See strategy under Convective Weather for further discussion on generators).

## Mitigation Strategy: Public Education

- Distribute materials to residents. (See strategy under Convective Weather for further discussion).
- Educate at-risk residents on programs to assist with utility bill payments, as well as warming shelter locations.
- Support or coordinate philanthropist activities to provide blankets, coats, gloves for at-risk people, minimizing the amount of people suffering.

## Mitigation Strategy: Enforcement

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

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

Potential vulnerable areas with regard to flooding include the Huron River and Ford Lake. Though the Peninsular Spillway was last inspected in 1999 and found to be sound, an incident causing a dam failure could impact the downstream community.

Goal: Reduce the City's vulnerability to riverine flooding

## Mitigation Strategy: Inspections

- Continue annual inspections of the Peninsular Spillway, implementing recommendations as necessary.

## Mitigation Strategy: Early Warning Sirens

- Develop public awareness with regard to warning siren activation in the event of a flood. Additional warning sirens may be required.

## Mitigation Strategy: Plans

- Develop site emergency plans for sites within the dam hydraulic shadow.

## Mitigation Strategy: Preparedness

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

## **Nuclear Attacks**

The proximity of the Willow Run airport and companies located within the City that could potentially provide military support industries make it vulnerable to nuclear attacks.

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

## Mitigation Strategy: Warning Sirens

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

## Mitigation Strategy: Shelters

- Develop a plan that identifies neighborhood in-place shelters.

## Mitigation Strategy: Plans

- Develop site emergency plans for all public assembly facilities.

## **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 City's vulnerability to and losses caused by structural fires.

## Mitigation Strategy: Training

- Continue to train and equip the Fire Department staff. A quick response is the most important factor in order to minimize the impact and damage.

## Mitigation Strategy: Code Enforcement

- Continue strict enforcement of fire prevention and building codes.
- Periodically review City ordinances to stay current with new codes or discoveries that could prevent future fires.

## Mitigation Strategy: Public Education

- Conduct an educational campaign regarding fire safety; the program should include fire and burn prevention techniques. Potential audiences include school children, Eastern Michigan University students, senior citizens and neighborhood watch groups.

## **Flood Hazard: Dam Failure**

The Peninsular Park Dam is a spillway built in 1914. It has 232 feet of spillway that is approximately 16 feet high. The impounded water body is the Huron River with a drainage area of 802 square miles. The dam was created to produce hydroelectric power for the Peninsular Paper Company located at the southern end of the spillway.

Over the years, the generators and all equipment associated with the dam were removed, leaving a vacant structure attached, and part of the dam, on the north end of the spillway. The release of water under the generator portion of the structure and the gated spillway forms a very rapid current. The remainder of the 232-foot spillway allows water to overflow its entire length.

Emergency situations may occur as the result of failure or imminent danger of failure of the dam. Although the over-topping of the spillway is a designed feature of the dam, high flows during the late winter (ice) or early spring can result in tremendous pressure resulting in possible dam failure.

The dam was last inspected by the Land and Water Management Division, Michigan Department of Environmental Quality in 1999. The dam was determined to be of fair condition with no apparent structural deficiencies.

Goal: Reduce the potential for a dam failure.

## Mitigation Strategy: Warning System

- Install a public warning system that would alert downstream residents and businesses in the event of a dam failure, giving them time to evacuate. (See strategy under Convective Weather for further information).

## Mitigation Strategy: Dam Repairs

- Secure funding to implement recommendations put forth in the State of Michigan inspection reports (dams are inspected every two years).

## **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 City's ability to prepare for and respond to a public health emergency.

## Mitigation Strategy: Emergency Generators

Vaccination can occur as a response, as well as a preventative measure. Vaccination can provide protection even after exposure. Emergency generators may be needed to keep vaccines cold. (See strategy under Convective Weather for further information).

## Mitigation Strategy: Prevention/Response

- Continue to treat 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 vaccinations and encourage residents to be vaccinated for all communicable diseases.

## Mitigation Strategy: Public Education

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

## **Sabotage and Terrorism**

There are areas in the City that are most vulnerable to 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 City's capacity to anticipate, manage and withstand potential incidents involving sabotage and terrorism

## Mitigation Strategy: Studies and Plans

- Prepare a plan to study the vulnerable facilities in the City, and follow recommendations presented in the plan.

## Mitigation Strategy: Training

- Continue to train and provide appropriate equipment to the City 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 City police services follow Homeland Security directives that will minimize the chance of a sabotage and terrorist attack.

## **Drought**

While a disaster from drought in City of Ypsilanti does seem unlikely, water rationing rules have been 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 City's ability to maintain a water supply for the community under drought conditions.

## Mitigation Strategy: Potable Water Supply

- Prepare a plan and implement recommendations in the plan for ensuring that residents have potable water during infrastructure failures. (See Strategy under Infrastructure Failures for further discussion).
- Partner with Ypsilanti Township regarding a water supply program. Tapping into the Township's wells may be a reserve option for the City, in the event that the City is in need of a reserve.

## Mitigation Strategy: Ordinance Enforcement

- Adopt and enforce a water rationing ordinance to control water usage in times of potential drought. The ordinance would include methods for notifying the public.

## Mitigation Strategy: Draft Sites

- Develop a plan for draft sites for fire fighting water supplies.

## **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 warning sirens. See strategy under Convective Weather for further discussion.

### Mitigation Strategy: Enforcement

- Continue strict enforcement of fire and building codes to ensure safe structures and expand the enforcement in the City’s property maintenance code.

### Mitigation Strategy: Public Education

- Distribute materials to residents. See strategy under Convective Weather for further discussion.

### Mitigation Strategy: Shelter Locations, Generators

- Prepare a list of potential shelter locations in the City. Such locations may include existing commercial buildings that have the facilities necessary to provide shelter in times of severe winter weather. Generators at key City buildings is another avenue for providing resources to residents in need of assistance during cold periods (see mitigation under Convective Weather for further discussion on emergency generators).

## **Civil Disturbances**

The City of Ypsilanti is home to a major educational institution, Eastern Michigan University. Sporting events may give rise to riots or civil disturbances. Given that it is an urban area, festivals, demonstrations or protests may also ignite undesirable behavior that requires police response.

Goal: Reduce the potential for civil disturbance occurrence, and ensure the best response to such events

### Mitigation Strategy: Training

- Continue to train local law enforcement agencies on crowd control.
- Facilitate close working relationships with the Michigan State Police Department and National Guard.

## 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 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

##### Emergency Generators for City Hall, Police Station and Department of Public Works Building

*Responsible Agency:* City of Ypsilanti

*Estimated Cost:* The total cost for the generators is \$108,000. Estimated cost by building: City Hall, \$38,815; Department of Public Works Building, \$29,140; and Police Station, \$30,145.

##### Warning Sirens

*Responsible Agency:* City of Ypsilanti

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

##### Peninsular Dam Repairs (based on annual inspections)

*Responsible Agency:* City of Ypsilanti

*Estimated Cost:* To be determined.

## Other Important Strategies

Increase City's Potable Water: partner with Ypsilanti Township on an alternative water source during extended power failures and/or initiate a program for maintaining potable water on-site (program to involve rotating water bottles with other groups prior to expiration to ensure use)

*Responsible Agency:* City of Ypsilanti

*Estimated Cost:* To be determined.

Public Education: disseminate materials on preparedness, fire safety (target student population), public health.

*Responsible Agency:* City of Ypsilanti

*Estimated Cost:* \$6,000 annually.

#### Ordinances and Ordinance Enforcement

- Adopt and enforce a water rationing ordinance to control water usage in times of potential drought.

*Responsible Agency:* City of Ypsilanti

*Estimated Cost:* Staff time.

#### Enforcement of Codes, Ordinances:

- Fire prevention and building codes.
- Industrial, fire and safety regulations
- SARA Title III sites inspections
- Washtenaw County's Pollution Prevention Program
- Periodically review City ordinances to stay current with new codes or discoveries that could prevent future fires

*Responsible Agency:* City of Ypsilanti

*Estimated Cost:* Staff time.

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

*Responsible Agency:* City of Ypsilanti

*Estimated Cost:* Staff time.

## Training and Support

- Washtenaw County Hazardous Materials Response Authority
- Washtenaw County Pollution Prevention Program.
- Washtenaw County Emergency Action Guidelines

*Responsible Agencies:* City of Ypsilanti and Washtenaw County Emergency Management Division

*Estimated Cost:* NA

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

*Responsible Agency:* City of Ypsilanti

*Estimated Cost:* Staff time.

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

*Responsible Agency:* City of Ypsilanti

*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 and are a priority for Ypsilanti are: emergency generators, warning sirens and any necessary repairs or maintenance on the Peninsular Dam. 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 the City Manager. The plan will be an annual agenda item for the City Council. At a minimum, during its review, the Council 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 City 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 City Council.

**Attachment 1  
County Hazard Plan**



**Attachment 2  
Alternative Funding Sources**

# City of Ypsilanti

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								√	√	√																√	√

# City of Ypsilanti

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								√	√	√			√													√	

# City of Ypsilanti

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																√	√										√

# City of Ypsilanti

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											√	√			√	√	√	√									√

# City of Ypsilanti

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									√																		√

# City of Ypsilanti

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									√	√																√	

# City of Ypsilanti

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									√	√			√														√

# City of Ypsilanti

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				√		√			√	√			√						√	√	√	√	√	√		√	