

HAZARD MITIGATION PLAN for the City of Chelsea

November 2004



**HAZARD MITIGATION PLAN ADOPTION AND RESOLUTION
FOR THE CITY OF CHELSEA**

Whereas the Chelsea area 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 the City of Chelsea* 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 Chelsea 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 the City of Chelsea* is adopted as an official plan for the City of Chelsea,
2. The *Hazard Mitigation Plan for the City of Chelsea* will be an annual agenda item for the Chelsea City Council. 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 individual boards or council.
3. The *Hazard Mitigation Plan for the City of Chelsea* will be updated every five years as required by FEMA, with the assistance of Washtenaw County.
4. The Chelsea City Manager or his designee 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.

Passed this 23rd day of November 2004.

Table of Contents

	Page
1.0 INTRODUCTION_____	1
1.1 Purpose_____	1
1.2 Plan Organization_____	1
1.3 Public Participation_____	1
2.0. COMMUNITY PROFILE_____	3
2.1 Historic Overview_____	3
2.2 Natural Features_____	3
2.3 Land Use Patterns_____	3
2.4 Transportation_____	3
3.0 HAZARDS_____	4
3.1 Hazard Ranking_____	4
3.2 Hazard Assessment_____	4
4.0 HAZARD GOALS AND STRATEGIES_____	7
4.1 Non-Hazard Specific Goals and Strategies_____	7
4.2 Hazard Specific Goals and Strategies_____	7
5.0 IMPLEMENTATION AND MONITORING_____	12
5.1 Implementation_____	12
5.2 Sources of Financial Assistance_____	13
5.3 Monitoring_____	13

Tables

Table 1: Hazard Ranking Table_____	4
Table 2: Vulnerability Assessment Summary_____	5

Figures

Figure 1: Natural Features_____	2
Figure 2: Assets_____	6
Figure 3: Tornado Warning Siren Coverage and Past Events_____	8

Attachments

- 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. Chelsea 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 Chelsea; 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

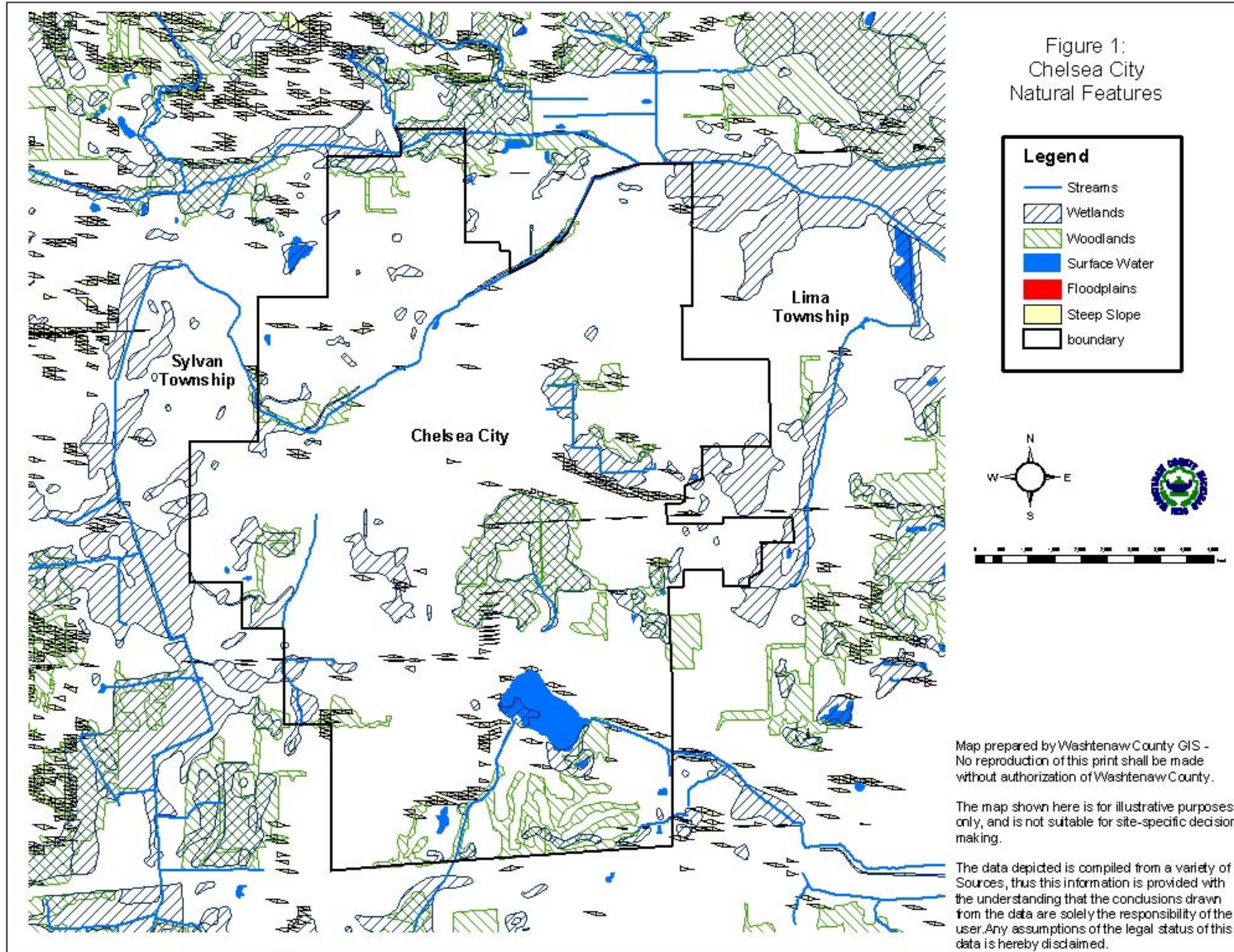
This Plan was prepared by Washtenaw County on behalf of the City of Chelsea. Individual plans were prepared for each local unit of government in recognition of their unique circumstances and potential differences in priorities, goals and mitigation strategies. General information, such as community profile 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 Chelsea 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 City Council also provided an opportunity for public comment prior to adopting the plan on November 23, 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 the Chelsea area will be shared with the City.



City of Chelsea

2.0 Community Profile

2.1 Historic Overview

The City was established as a Village in approximately 1834. The area now known as the City of Chelsea was originally named the “Vermont Colony” in the early 1800s, due to the influx of families from Addison County, Vermont. Although the City of Chelsea did not have water power, it prospered as a center for trade after the railroad station, which burned down in Davison, relocated to the City. Over time, Chelsea has become a unique community, offering small-town character while developing a mix of residential, commercial and industrial land uses. The community reached city status in March 2004.

2.2 Natural Features

Letts Creek is the major water course in the City. Wetlands are located along the Creek, although there are no mapped floodplains associated with it. The City does not appear to be within a groundwater recharge area. The topography for the region is general rolling; there are some soils with severe septic limitations, and no indication of steep slopes. Figure 1 shows the City’s natural features.

2.3 Land Use Patterns

The City of Chelsea consists of approximately 2,100 acres. Single-family residential development takes up approximately 23% of the land area, and surrounds the downtown Main Street (M-52) to the north, east and west. Higher-density residential is found at the west end of the downtown area. Commercial and industrial is located north and south of the downtown. Schools are also located throughout the City.



Downtown Chelsea

2.4 Transportation Network

The transportation network consists of minor arterials, major collectors, and local streets and roads. Interstate 94 traverses the southern border of the City, with the interchange at M-52, a north-south State Highway, providing access south of the City. Both, M-52 and a major rail line run through the center of the City. Old US-12 and Dexter-Chelsea Roads are the main secondary roads. Public transportation is provided, connecting riders from the City to Dexter and the City of Ann Arbor.

3.0 HAZARDS

The City of Chelsea 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 Chelsea 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
Transportation Accidents: Air and Land	4
Infrastructure Failures	5
Severe Winter Weather Hazards (Snow Storms and Ice/Sleet Storms)	6
Extreme Temperatures	7
Flood Hazards: Riverine/Urban Flooding	8
Fire Hazards: Wildfires	9
Fire Hazards: Structural Fires	10
Public Health Emergencies	11
Sabotage & Terrorism	12
Drought	13
Earthquakes	14
Civil Disturbances	15
Dam Failure	16
Nuclear Attack	17
Oil and Gas Well Accidents	18
Petroleum and Gas Pipeline Accidents	19
Nuclear Power Accidents	20
Fire Hazard: Scrap Tires	21

City of Chelsea

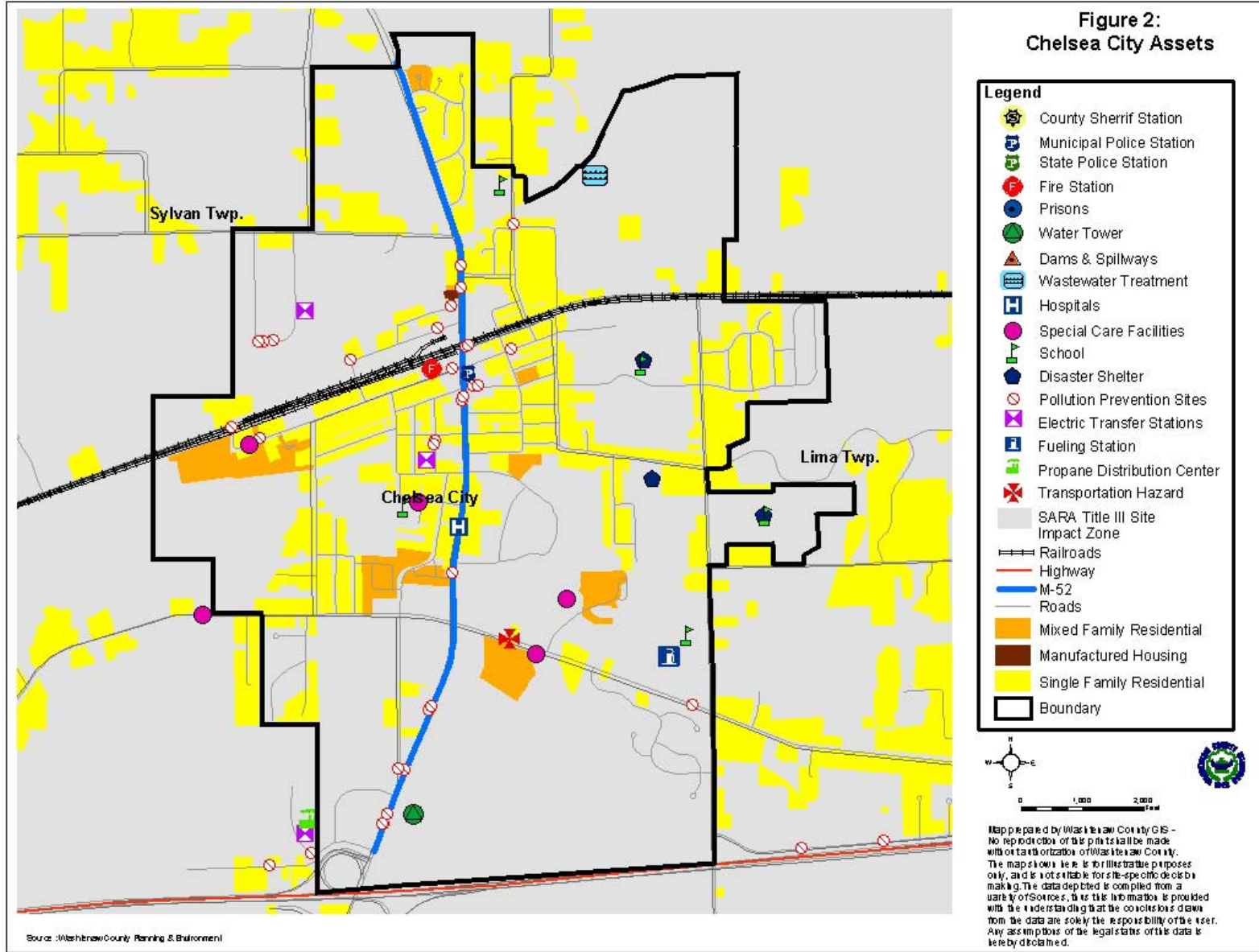
- **Advanced (Vulnerability):** A vulnerability determination using probabilities, prepared for hazards that have the highest frequency of occurrence and/or the most potential to cause death, injury or damage to personal property.

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



4.0 Hazards

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

Where possible, cost estimates for implementing the mitigation strategy are provided. 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 City Master Plan

Objective: Amend plan goals, objectives and policies to include mitigation strategies.

Mitigation Strategy: Plans

- Establish a Planning subcommittee charged with amending the General Development to include the goals, objectives and strategies provided herein, as applicable.

4.2 Hazard Specific Goals and Strategies

Convective Weather

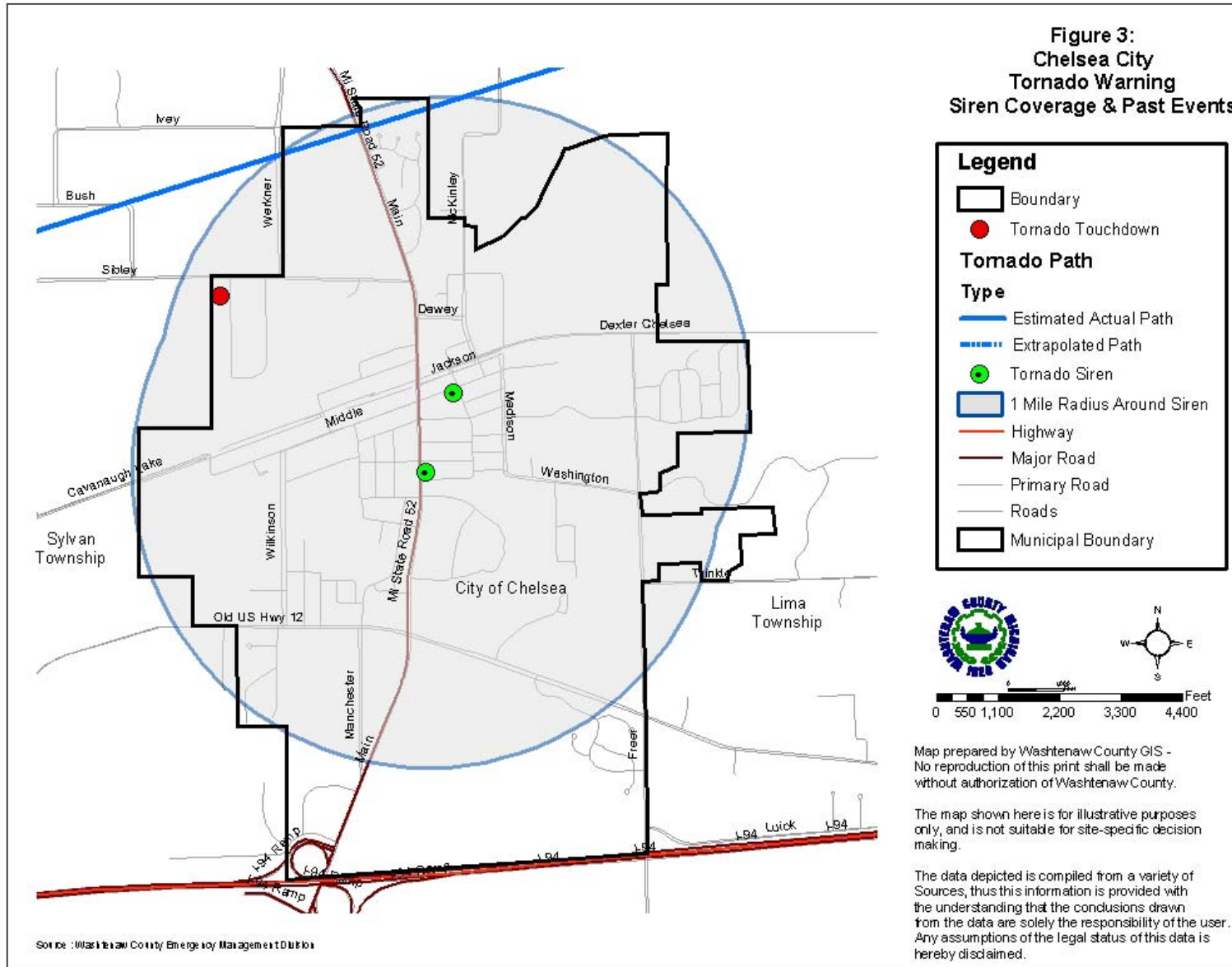
Goal: Reduce the City's vulnerability to convective weather storm hazards, minimize loss of life and injury, and damage to public property

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>



City of Chelsea

Mitigation Strategy: Warning Sirens

- Secure funding for warning sirens There are two warning sirens in the City, covering approximately 93% of the population. Additional sirens should be located on the south side of the City, to reach the population currently not covered.

Mitigation Strategy: Emergency Generators

- Secure funding for emergency generators at key City buildings. There are some City buildings that have a central function, yet do not have emergency generators. These buildings or facilities should be inventoried and installation of generators pursued.

Mitigation Strategy: Public Education

- Distribute Emergency Preparedness materials to City residents, informing them on actions to take during an event, or actions to minimize damage caused by an event (see Family Preparedness Kit information box). Methods to disseminate the information include: an on-line link to Washtenaw County's Emergency Management Division website or within the City newsletter.

Mitigation Strategy: Maintenance

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

Mitigation Strategy: Training

- Encourage residents to attend Washtenaw County Emergency Management Division Skywarn Spotter training program. Training is free to anyone 18 years of age or older.

Mitigation Strategy: Emergency Shelters for Manufactured Housing Communities (MHC)

- Work with the park owner to provide an emergency shelter for park residents. There is one 20-unit community in Chelsea, located on the northwest side of the downtown. The owner has publicly stated that the community will be closing within the near future. However, in the event that the park continues, or that another park is developed in its stead, the new park should be equipped with a shelter.
- Assist unit owners of existing units with proper fastening of units if not already anchored properly.

Hazardous Materials Transportation Incidents

Vulnerable areas

The City of Chelsea is very vulnerable to transportation accidents since both the railroad and the highway M-52 run directly through the downtown. An incident in the City center involving hazardous materials could easily impact the creeks on the north side of the City, as well as have tremendous impact on the people and business. The railroad is a particularly vulnerable area since it is only a single railroad track. In case of two ways traffic trains have to use the sidings where they can pull off to let other trains go by.

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: Road Regulations

- Work with Washtenaw County and the State of Michigan to provide safer roads, resulting in the decrease of accidents. Ensure that officers are following and enforcing Michigan Department of Transportation regulations for Hazardous

City of Chelsea

Material transportation, as well as being diligent in enforcement of weight and travel restrictions.

Mitigation Strategy: Training

- Continue to support, train and equip the City of Chelsea Fire Authority and Washtenaw County Hazardous Materials Response Teams.

Mitigation Strategy: Plans

- Expand existing emergency response plans to include hazardous materials incidents along roadways and railways.

Mitigation Strategy: Public Education

- Distribute informational materials to all residents. See strategy under Convective Weather for further information.

Mitigation Strategy: Hazardous Spill Expense Recovery Ordinance

- Adopt a Hazardous Spill Expense Recovery Ordinance, vehicle by which local unit of governments may recover costs of response and recovery to a release of hazardous materials

Hazardous Materials Fixed Site Incidents

The Chelsea Milling Company Jiffy Mix, located west of North Main Street in Chelsea, the railroad siding, and the propane distribution center are three major areas of concern for the community. An incident at any of these sites could require evacuations given the proximity to residential neighborhoods and the downtown businesses. Detrimental impacts to the water quality in the area are also possible, as Letts Creek, which feeds into the Huron and Detroit Rivers, runs immediately adjacent to the facility. The City has an evacuation plan already prepared for such emergencies.

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: Warning Sirens

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

Mitigation Strategy: Training

- Continue to support, train and equip the City of Chelsea Fire Authority and Washtenaw County Hazardous Materials Response Teams.
- Facilitate information exchange between facilities and the County Hazardous Material Response Team, with regard to the location/content of chemicals stored in the City.
- Encourage businesses to work with the Washtenaw County Pollution Prevention Program.

Mitigation Strategy: Public Education

- Distribute informational materials to all residents. See strategy under Convective Weather for further information.

Mitigation Strategy: Hazardous Spill Expense Recovery Ordinance

- Adopt a Hazardous Spill Expense Recovery Ordinance, vehicle by which local unit of governments may recover costs of response and recovery to a release of hazardous materials.

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,

City of Chelsea

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, specifying addresses and locations of problem trees. Maintenance

Mitigation Strategy: Public Education

- Distribute informational materials to all residents. See strategy under Convective Weather for further information.

Mitigation Strategy: Shelter Locations.

- Work with the Red Cross and surrounding communities to designate emergency shelter(s)/warming shelter(s). These buildings would be available to residents without heat, or power to generate heat, as a result of a hazard event.

Infrastructure Failure

Southeast Michigan, New York and portions of Ohio lost power for one to three days during August 2003, due to a grid malfunction. Because of its diesel-powered emergency generator at the Industrial Park substation, while many communities were struggling to assist their citizens, Chelsea was haven for their residents and those of surrounding communities.

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 key City buildings. There are some City buildings that have a central function, yet do not have emergency generators.

Mitigation Strategy: Maintenance

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

Mitigation Strategy: Public Education

Distribute informational materials to all residents. See strategy under Convective Weather for further information.

Transportation Accidents: Air and Land

The City of Chelsea is vulnerable to transportation accidents. High volumes of traffic renders the State Highway M-52 very vulnerable to transportation accidents; cars and trucks prefer to use M-52 as an alternative to I-96 and US-23. The railroad is also a vulnerable area since it is only a single railroad track. In case of two ways traffic trains have to use the sidings where they can pull off to let other trains go by.

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

Mitigation Strategy: Transportation Planning

- Work with the Washtenaw County Road Commission, Washtenaw Area Transportation Study, and the Michigan Department of Transportation to provide a safer road system.

Mitigation Strategy: Training of Emergency Responders

- Continue training and providing the necessary equipment to emergency responders for handling ground transportation accidents as well as casualty accidents involving all modes of transportation. .

Mitigation Strategy: Public Education

- Distribute informational materials to all residents. See strategy under Convective Weather for further information.

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.

High Priority Strategies

Warning Sirens

Responsible Agencies: City of Chelsea and Washtenaw County Emergency Management Division

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

*Hazard Mitigation Plan
November 2004*

Assist Manufactured Housing Community Owner, Current or Future, with Securing Funding for an Emergency Shelter

Responsible Agency: City of Chelsea

Estimated Cost: To be determined.

Other Important Strategies

Training and Education for First Responders

- Continue to support training, equipment and maintenance for the Hazardous Material Response Team.
- Encourage residents and businesses to work with the Washtenaw County Pollution Prevention Program.

Responsible Agency: City of Chelsea

Estimated Cost: To be determined.

Road Safety Enforcement

- Work with WCRC and MDOT on weight and travel restrictions.
- Work with WCRC to improve site distance standards at intersections.
- Consider partnerships with surrounding communities to share weigh-master facility and patrol.

Responsible Agency: City of Chelsea

Estimated Cost: Staff time.

Public Education: Dissemination of family preparedness information

Responsible Agency: City of Chelsea

Estimated Cost: \$2,500 annually.

Adopt Spill Expense Recovery Ordinance

Responsible Agency: City of Chelsea

Estimated Cost: Staff time.

Amend Master Plan to incorporate hazard mitigation goals, strategies

Responsible Agency: City of Chelsea

Estimated Cost: Staff time.

Work with the Red Cross and Surrounding Communities to Establish Emergency Shelters

Responsible Agency: City of Chelsea

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 Chelsea at this time. The strategies listed in this plan that qualify for FEMA funds include emergency generators, warning sirens, an emergency shelter for the Washtenaw Farm Council Fairgrounds, and assist residents of manufactured housing units with obtaining financial aide through FEMA for proper anchoring.

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 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 Chelsea

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
FEDERAL SOURCES																											
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 Chelsea

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
FEDERAL SOURCES																											
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 Chelsea

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
FEDERAL SOURCES																											
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 Chelsea

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
FEDERAL SOURCES																											
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 Chelsea

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
FEDERAL SOURCES																											
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 Chelsea

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
STATE OF MICHIGAN																											
Department of Agriculture																											
Energy Conservation Program									√														√			√	√
Groundwater Stewardship Program											√							√								√	√
Intercounty Drain Program (available to Drain Commissioner only)								√	√	√																	√
Economic Development Corporation																											
Community Development Block Grant									√	√			√													√	√
Urban Land Assembly									√																	√	√
Environmental Quality																											
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 Chelsea

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
STATE OF MICHIGAN																											
Housing Development Authority																											
Community Development Block Grants/Housing Resource Fund						√			√	√										√		√			√	√	
Home/Property Improvement Loans						√			√	√										√		√			√	√	
Department of Natural Resources																											
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					√	√	√																			√	√
State Police																											
Emergency Management Performance Grants	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Flood Mitigation Assistance									√	√																√	√
Hazard Mitigation Grant Program	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
Individual and Family Grant Program									√	√			√													√	

City of Chelsea

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
STATE OF MICHIGAN																											
State Police (continued)																											
Interagency HazMat Public Sector Training and Planning Grants (HazMat Emergency Preparedness Grant)											√	√		√	√	√	√									√	
Project Impact	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Public Assistance Grant Program	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Department of Transportation																											
Rail Loan Assistance Program												√	√													√	
Trans. Econ. Development Fund								√	√	√																√	
Department of Treasury																											
Municipal Bond Authority-Local Government Loan Program				√		√			√	√			√						√	√	√	√	√	√		√	
Municipal Bond Authority-State Aid Note Program				√		√			√	√			√						√	√	√	√	√	√		√	