

HAZARD MITIGATION PLAN for Lodi Township

January 2005



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, OBJECTIVES AND STRATEGIES_____	7
4.1 Non-Hazard Specific Goals, Objectives and Strategies_____	7
4.2 Hazard Specific Goals, Objectives 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

Lodi Township

Lodi Township

1.0 INTRODUCTION

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

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

1.1 Purpose

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

1.2 Plan Organization

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

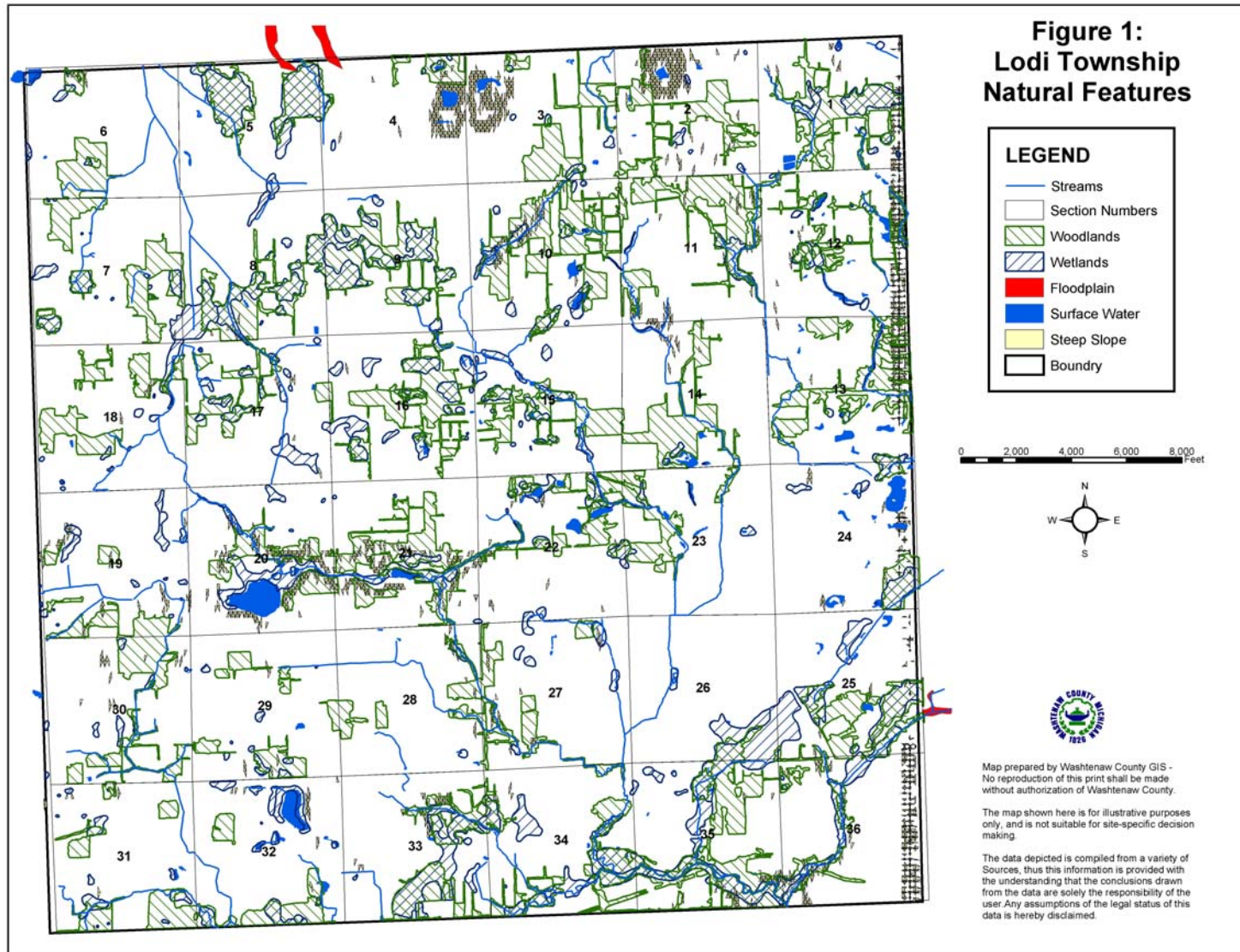
1.3 Public Participation

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

The Township Board of Trustees also provided an opportunity for public comment prior to adopting the plan in January of 2005.

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 Lodi area will be shared with the Township.

Lodi Township



Lodi Township

2.0 Community Profile

2.1 Historic Overview

When officially established in 1836, Lodi Township was primarily an agricultural community. Agriculture thrives in Lodi Township yet today. Although development has occurred along the northern and eastern portions of the township, it continues to be one of the more rural communities in the County.

2.2 Natural Features

Lodi Township is situated in south-central Washtenaw County. The City of Saline is located in the southeast corner of the Township, and the City of Ann Arbor, while not within the Township's boundaries, is located to the northeast. The topography is relatively flat, although steep soils are present under Lindemann Road in Section 19. Erodible soils are generally located in the northeast portion of the Township, and run southwest to the southern border.

The Township is located in the Huron River and River Raisin watersheds. There are three small lakes in the Township: Arnold, Birkle and Lambarth, all connected to the Saline River through tributaries. The Saline River's spillway lies within Saline City. A very small portion of the Saline River is shown as flood prone (Figure 1). One of the larger groundwater recharge areas is located on the eastern side of the Township, in the vicinity of the Travis Pointe Subdivision.

Woodlands and wetlands are found as a network connecting the waterways of the Township. This system has been fragmented by development but still functions to protect the riverside habitat.

2.3 Land Use Patterns

Lodi Township totals approximately 21,775 acres. A majority of the land use, 71%, is agricultural; 14% of the land remains in



open space. Most of the development has occurred along the eastern and northern portions of the Township, and includes schools, churches, golf-courses, single family residential subdivisions, a manufactured housing community, and extraction operations. Figure 2 shows the location of land uses and assets in the Township. Lodi Township is also one of the fastest growing townships in Washtenaw County in terms of population; however the future land use plan indicates that development will be contained to the north and east.

2.4 Transportation Network

The transportation network consists of primarily major and minor collectors and local streets and roads. There are no railroads, highways or airports located within Lodi Township.

2.5 Special Community Facilities and Events

Lodi Township has two venues that draw large crowds and therefore should be considered when planning for hazards. The Washtenaw Farm Council Grounds, located at the southeast

Lodi Township

corner of Pleasant Lake and Ann Arbor-Saline Roads, and is available for year-round use. Events that take place at the fair grounds attract between 3,000 to nearly 40,000 people. There are at least nine events that take place throughout the year. Past events include the Ann Arbor Antiques Market, the Saline Fair, 4-H Club fairs, weddings and estate sales. St. Nicolas Church is a second venue that attracts many people during its annual Greek Festival. The church was recently built south of Scio-Church Road, east of Wagner Road.

3.0 HAZARDS

Lodi Township is susceptible to a variety of natural, technological, and societal hazards. The purpose of this section is to rank, analyze risk, and identify vulnerable areas for each hazard. Goals and mitigation strategies for certain hazards are also provided in this section.

3.1 Hazard Ranking

The hazard were ranked on a county-wide basis, and adjusted for the Township based on local input. The Washtenaw County Emergency Management Division used a program provided by the Michigan State Police Emergency Management Division. The model takes into account worst-case scenario data for frequency of occurrence, likelihood of occurrence, significance of impact/threat, potential size of geographic area impacted and total population impacted. Table 1 presents the hazard ranking for Lodi Township.

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:

Table 1: Hazard Ranking

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

Lodi Township

- **Cursory:** A short statement explaining why the hazard is not a threat, prepared for hazards that have little impact or are unlikely to occur.
- **Standard:** An explanation of concerns with limited quantitative research, prepared for hazards likely to occur and impact our communities.
- **Advanced (Vulnerability):** A vulnerability determination using probabilities, prepared for hazards that have the highest frequency of occurrence and/or the most potential to cause death, injury or damage to personal property.

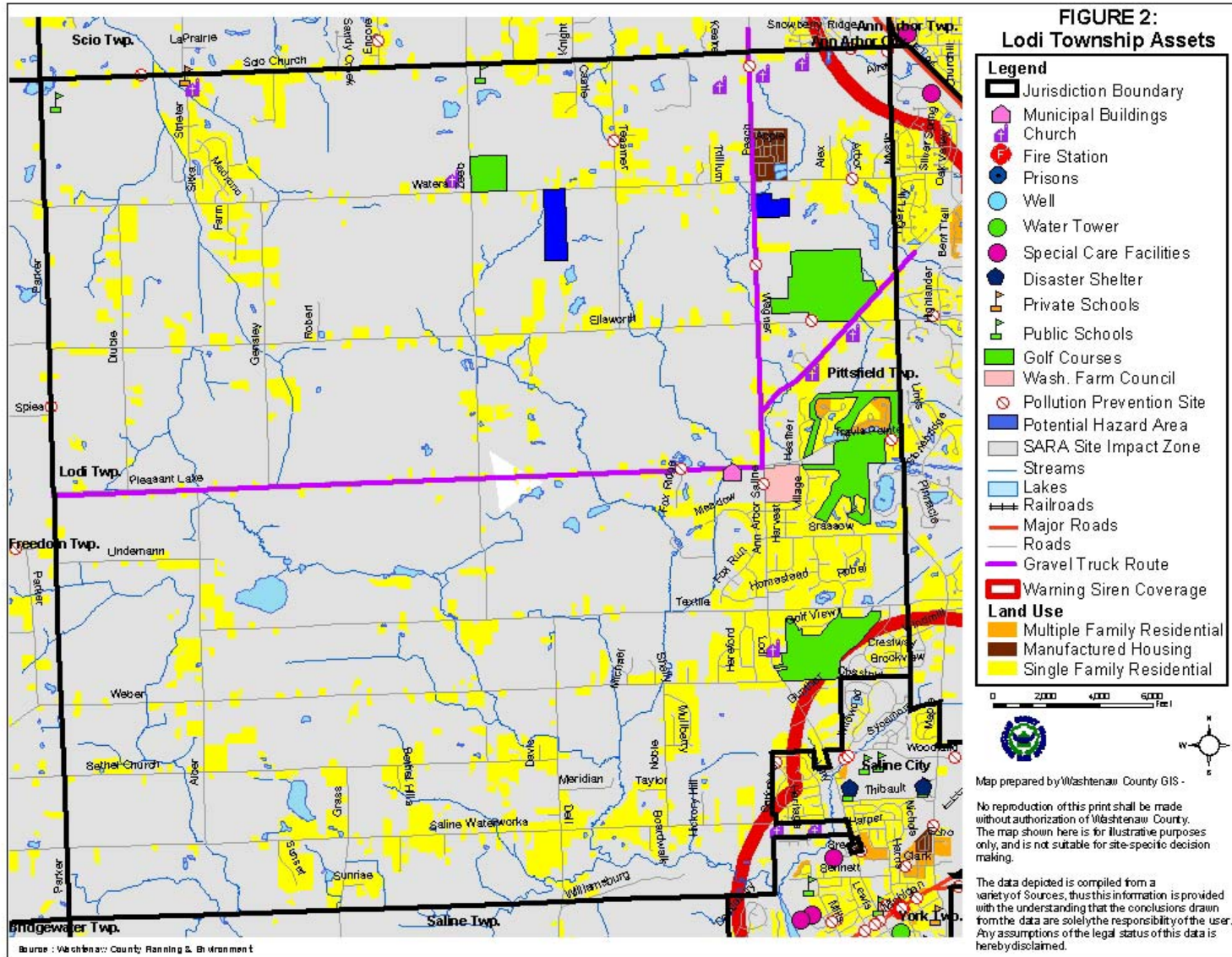
Vulnerability assessments were prepared for convective weather, hazardous materials transportation incidents, hazardous materials fixed site incidents, infrastructure failures and severe winter weather hazards. The goal is to quantitatively measure the threat experienced by Washtenaw County communities.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

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

Table 2. Vulnerability Assessment Summary

Rank	Hazard	Estimated Annual Cost
#1	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

Lodi Township



4.0 Hazard Goals, Objectives and Strategies

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

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

4.1 Non-Hazard Specific Goals, Objectives and Strategies

Goal: Integrate mitigation strategies into the Township General Development Plan

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, Objectives and Strategies Convective Weather

There are a number of facilities that hold large numbers of people, and are therefore particularly vulnerable areas during convective weather hazard event (Figure 2). Such facilities include: Ann Arbor Baptist, Christ Our King, First Unitarian Universalist, Holy Faith, Keystone, Knox Presbyterian, and St. Nicholas churches; the Travis Pointe Clubhouse; Emerson, Salem Lutheran Schools; the Saline Early Childhood Center; and the Washtenaw Farm Council grounds.

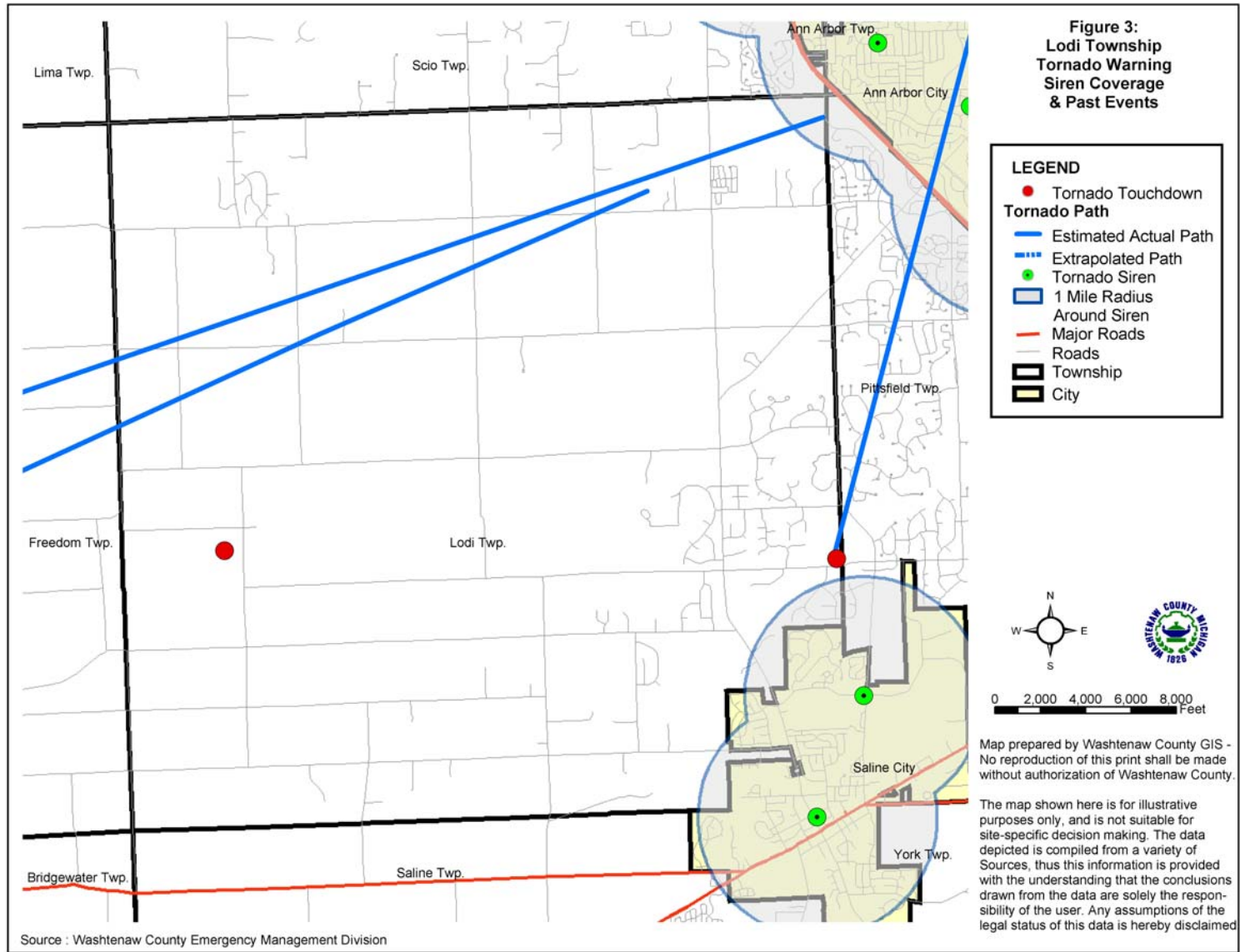
Family Preparedness Kits

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>

Lodi Township



Lodi Township

Concentrated residential developments, like the Travis Pointe Condominiums and the Orchard Grove Manufactured Housing Community, are also areas of concern. In addition, there are four golf courses in the Township that are of concern with regard to lightning storms: Lake Forest, Travis Pointe, Brookside and Kim Driving Range (Figure 2).

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

Objective: Increase safety to Township residents

Mitigation Strategy: Warning Sirens

- Currently, populations in the southeast and northeast corners of Lodi Township are covered by warning sirens located in the cities of Ann Arbor and Saline (Figure 3). These sirens reach approximately 156 persons, or 3% of the Township's population. Two of the facilities that hold large populations – the Keystone Church and Christ Our King Church – are located within the siren coverage area.

Future sirens should be strategically located to maximize coverage of residents and large facilities. As Figure 2 indicates, the Township Hall, schools, churches and higher-density residential developments, a manufactured housing community and recreational facilities are concentrated on the eastern portion of the Township. More than one siren is needed to cover the Township's vulnerable areas.

Mitigation Strategy: Emergency Generators

- Consider funding to install an emergency generator at the Township Hall. Currently the Township Hall is not equipped with an emergency generator. A generator is a priority because it would allow the Township to function

and provide assistance to residents, visitors and travelers often drawn to Lodi Township by fairground events.

- Encourage the owners of the Travis Pointe Condominiums and the Orchard Grove Manufactured Housing Community to install emergency generators for the wastewater treatment plants. In the event of an infrastructure failure, wastewater treatment plants may back-up, creating a potential public health emergency. A generator could prevent a back-up from occurring.

Mitigation Strategy: Manufactured Housing Units

- Encourage unit owners to have units inspected and to pursue grant funds to properly anchor if unit is not secured to a foundation.
- Encourage the park owner to provide an emergency shelter at Orchard Grove Community for park residents.

Mitigation Strategy: Emergency Shelter at Fairgrounds

- Encourage owner to construct an emergency shelter at the Washtenaw Farm Council Fairgrounds. The fairgrounds attract crowds from 3,000 to 40,000 people. As such, an emergency shelter would provide a safe place for residents and visitors to go in the event of a severe convective weather storm.

Mitigation Strategy: Public Education

- Distribute Emergency Preparedness materials to Township 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 Township newsletter.

Lodi Township

Hazardous Materials Transportation

Pleasant Lake Road, Ann Arbor-Saline Road and Wagner Road are the primary transportation routes. In addition to trucks carrying hazardous materials, these roads are heavily traveled by gravel trucks, approximately 400 per day. Incidences may impact residences, businesses and the environment in close proximity to the roadway, as well as cause delays to vehicles traveling in either direction.

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

Objective: Increase safety on all Township roadways.

Mitigation Strategy: Warning Sirens

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

Mitigation Strategy: Emergency Generator

- Consider funding to install an emergency generator at the Township Hall and encourage owners and operators of wastewater treatment plants to purchase generators for their facilities. See strategy under Convective Weather for further information.

Mitigation Strategy: Road Regulations

- Continue diligent enforcement of weight and travel restrictions
- Work with the Michigan Department of Transportation to perform random safety inspections frequency and severity.
- Work with Washtenaw County to improve site distance standards at intersections, and amend the zoning ordinance to ensure compliance with the standards developed.

Mitigation Strategy: Hazardous Spills Expense Recovery Ordinance

- Adopt the Hazardous Spills Expense Recovery Ordinance, a vehicle whereby a local unit of government may recover costs of response and recovery to a release of hazardous materials.

Hazardous Materials Fixed Site Incidents

There are facilities in the Township that contain quantities of hazardous materials which subject them to reporting requirements. Local Fire Department and Emergency Managers are aware of such facilities, knowing their locations as well as the amount and type of materials stored within each facility, and are prepared to respond in the event of an incident. A hazardous material fixed site accidents can impact residences, businesses and the environment located in close proximity to the facility.

Goal: Reduce the risks of hazardous material fixed site incidents in the Township

Objective: Increase public safety during and after a fixed site incident

Mitigation Strategy: Warning Sirens

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

Mitigation Strategy: Emergency Generator

- Consider funding to install an emergency generator at the Township Hall. See strategy under Convective Weather for further information.

Mitigation Strategy: Resident Support

- Assist owners of facilities with obtaining grant funds for pest control, tire clean-up, and brownfield redevelopment projects.

Lodi Township

- Encourage facilities to work with the Washtenaw County Pollution Prevention program. Through the program, facilities that store, manufacture, or use hazardous, toxic, or polluting materials are inspected. Inspectors ensure that facilities utilize and dispose of hazardous materials properly, thereby preventing environmental contamination the safe handling of hazardous materials, storage and handling and transportation.

Mitigation Strategy: Hazardous Spills Expense Recovery Ordinance

- Adopt the Hazardous Spills Expense Recovery Ordinance, a vehicle whereby a local unit of government may recover costs of response and recovery to a release of hazardous materials.

Infrastructure Failures

Travis Pointe Condominiums and the Orchard Grove Manufactured Housing Community each have a wastewater treatment plant. In the event of an infrastructure failure, wastewater treatment plants may back-up, creating a potential public health emergency. Without emergency generators in the event of an infrastructure failure, these two residential communities will be in need of assistance.

Goal: Decrease the Township's vulnerability to infrastructure failures

Objective: Protect residents from sewer treatment plant failures that are likely to occur due to an infrastructure failure.

Mitigation Strategy: Emergency Generator

- Consider funding to install an emergency generator at the Township Hall and encourage owners and operators of wastewater treatment plants to purchase generators for their facilities. See strategy under Convective Weather for further information.

Mitigation Strategy: Public Education

- Encourage owners of manufactured housing communities to inform their residents of the hazards associated with wastewater treatment plant failures, and actions to take in the event of an infrastructure failure.
- Distribute informational materials to all residents. See strategy under Convective Weather for further information.

Flooding

There is one known area in the Township that is particularly vulnerable to flooding. Rain events cause runoff from Maple Road onto the Brookside Golf Course and into Pittsfield #1 Drain, near Saline-Ann Arbor Road. Just east of this area is the Gunthers Garden subdivision. To date, at least one home owner in this subdivision has reported flood damage.

Goal: Reduce the Township's vulnerability to flooding

Objective: Provide homeowners with mechanisms to obtain assistance for flood damage.

Mitigation Strategy: Collaboration

- Work with the Huron River Watershed Council, the Washtenaw County Drain Commissioner's Office, and the Washtenaw County Road Commission to ensure minimal impact of impervious surfaces, cleared/dredging of drains.

Mitigation Strategy: FEMA Floodplain Insurance Program

- Enroll in the FEMA Floodplain Insurance Program. Currently Lodi Township is not a participating member. In order for residents of the Township to receive grant and loan assistance for flood damages, the Township in which they reside must be in the program. If a flood event occurs, residents must wait for assistance until the Township is enrolled. There is no cost to the Township to enroll in FEMA's program.

Lodi Township

- Encourage residents to purchase Flood Insurance, after the Township participates in the FEMA National Floodplain Insurance Program.

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). **Implementation of the suggested strategies below is dependent on the availability of resources, staff and funding.**

High Priority Strategies

- Warning Sirens
Estimated Cost: \$18,000 for siren and first year of maintenance fees, \$500 annually thereafter (does not include replacement parts).
Point of Contact: Lodi Township or Washtenaw County Emergency Management Division
- Emergency Generator for Township Hall
Estimated Cost: \$5,000
Point of Contact: Lodi Township

Proper anchoring manufactured housing units by each unit owner.

Point of Contact: Manufactured Housing Unit Owners

Estimated Cost: To be determined.

Other Important Strategies

- Flood-Prevention Implementation Strategies
 - Work with Huron River Watershed Council, the Drain Commissioner's Office, and the Road Commission
 - Enroll in the FEMA Floodplain Insurance Program (FIP) and encourage residents to purchase insurance.
Point of Contact: Lodi Township
Estimated Cost: Staff time; There is no cost to enroll in the FIP.
- 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.
Point of Contact: Lodi Township
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.
Point of Contact: Lodi Township
Estimated Cost: Staff time.

- **Public Education:** Disseminate family preparedness information through mailings, website or newsletter.
Point of Contact: Lodi Township [Manufactured Housing Community Owners are responsible for educating residents with regard to potential hazards during power failures.]
Estimated Cost: To be determined.
- **Adopt Spill Expense Recovery Ordinance**
Point of Contact: Lodi Township
Estimated Cost: To be determined.
- **Amend Master Plan to incorporate hazard mitigation goals, strategies**
Point of Contact: Lodi Township
Estimated Cost: To be determined.
- **Place Hazardous Materials Fixed Site Incidents on the Board of Trustees Agenda to Create Awareness and Further Strategies**
Point of Contact: Lodi Township
Estimated Cost: To be determined.

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 Lodi Township 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

This plan should be monitored regularly. Monitoring may occur by placing the plan on the Township Board agenda annually. The Board may discuss projects pursued, and potential future projects to target. Prior to the meeting, the Washtenaw County Emergency Management Division can be contacted for updates or recommended amendments to the plan.

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

A potential long-term goal for Lodi Township would be to review the plan annually. Although a formal revision may not be needed each year, the plan should be updated every five years, as resources allow. Washtenaw County may be available to provide assistance with plan updates.

**Attachment 1
County Hazard Plan**

**Attachment 2
Alternative Funding Sources**

Lodi Township

Funding Source	Civil Disturbance	Drought	Earthquake	Extreme Temperature	Scrap Tire Facilities	Structural Fire	Wildfire	Dam Failure	Flooding: Riverine	Flooding: Urban	Hazardous Materials Incidents - Fixed Site	Hazardous Materials Incidents - Transportation	Infrastructure Failure	Nuclear Attack	Nuclear Power Plant Incidents	Oil/Nat Gas Well Incidents	Petrol/Nat Gas Pipeline Incidents	Public Health Emergencies	Sabotage/Terrorism	Hail	Lightning	Severe Winds	Severe Winter Weather	Transportation Accidents	Tornado	Financial Assistance	Technical Assistance
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								√	√	√																√	√

Lodi Township

Funding Source	Civil Disturbance	Drought	Earthquake	Extreme Temperature	Scrap Tire Facilities	Structural Fire	Wildfire	Dam Failure	Flooding: Riverine	Flooding: Urban	Hazardous Materials Incidents - Fixed Site	Hazardous Materials Incidents - Transportation	Infrastructure Failure	Nuclear Attack	Nuclear Power Plant Incidents	Oil/Nat Gas Well Incidents	Petrol/Nat Gas Pipeline Incidents	Public Health Emergencies	Sabotage/Terrorism	Hail	Lightning	Severe Winds	Severe Winter Weather	Transportation Accidents	Tornado	Financial Assistance	Technical Assistance
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								√	√	√			√													√	

Lodi Township

Funding Source	Civil Disturbance	Drought	Earthquake	Extreme Temperature	Scrap Tire Facilities	Structural Fire	Wildfire	Dam Failure	Flooding: Riverine	Flooding: Urban	Hazardous Materials Incidents - Fixed Site	Hazardous Materials Incidents - Transportation	Infrastructure Failure	Nuclear Attack	Nuclear Power Plant Incidents	Oil/Nat Gas Well Incidents	Petrol/Nat Gas Pipeline Incidents	Public Health Emergencies	Sabotage/Terrorism	Hail	Lightning	Severe Winds	Severe Winter Weather	Transportation Accidents	Tornado	Financial Assistance	Technical Assistance
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																√	√										√

Lodi Township

Funding Source	Civil Disturbance	Drought	Earthquake	Extreme Temperature	Scrap Tire Facilities	Structural Fire	Wildfire	Dam Failure	Flooding: Riverine	Flooding: Urban	Hazardous Materials Incidents - Fixed Site	Hazardous Materials Incidents - Transportation	Infrastructure Failure	Nuclear Attack	Nuclear Power Plant Incidents	Oil/Nat Gas Well Incidents	Petrol/Nat Gas Pipeline Incidents	Public Health Emergencies	Sabotage/Terrorism	Hail	Lightning	Severe Winds	Severe Winter Weather	Transportation Accidents	Tornado	Financial Assistance	Technical Assistance
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											√	√			√	√	√	√								√	

Lodi Township

Funding Source	Civil Disturbance	Drought	Earthquake	Extreme Temperature	Scrap Tire Facilities	Structural Fire	Wildfire	Dam Failure	Flooding: Riverine	Flooding: Urban	Hazardous Materials Incidents - Fixed Site	Hazardous Materials Incidents - Transportation	Infrastructure Failure	Nuclear Attack	Nuclear Power Plant Incidents	Oil/Nat Gas Well Incidents	Petrol/Nat Gas Pipeline Incidents	Public Health Emergencies	Sabotage/Terrorism	Hail	Lightning	Severe Winds	Severe Winter Weather	Transportation Accidents	Tornado	Financial Assistance	Technical Assistance
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									√																		√

Lodi Township

Funding Source	Civil Disturbance	Drought	Earthquake	Extreme Temperature	Scrap Tire Facilities	Structural Fire	Wildfire	Dam Failure	Flooding: Riverine	Flooding: Urban	Hazardous Materials Incidents - Fixed Site	Hazardous Materials Incidents - Transportation	Infrastructure Failure	Nuclear Attack	Nuclear Power Plant Incidents	Oil/Nat Gas Well Incidents	Petrol/Nat Gas Pipeline Incidents	Public Health Emergencies	Sabotage/Terrorism	Hail	Lightning	Severe Winds	Severe Winter Weather	Transportation Accidents	Tornado	Financial Assistance	Technical Assistance
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									√	√																√	

Lodi Township

Funding Source	Civil Disturbance	Drought	Earthquake	Extreme Temperature	Scrap Tire Facilities	Structural Fire	Wildfire	Dam Failure	Flooding: Riverine	Flooding: Urban	Hazardous Materials Incidents - Fixed Site	Hazardous Materials Incidents - Transportation	Infrastructure Failure	Nuclear Attack	Nuclear Power Plant Incidents	Oil/Nat Gas Well Incidents	Petrol/Nat Gas Pipeline Incidents	Public Health Emergencies	Sabotage/Terrorism	Hail	Lightning	Severe Winds	Severe Winter Weather	Transportation Accidents	Tornado	Financial Assistance	Technical Assistance
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									√	√			√														√

Lodi Township

Funding Source	Civil Disturbance	Drought	Earthquake	Extreme Temperature	Scrap Tire Facilities	Structural Fire	Wildfire	Dam Failure	Flooding: Riverine	Flooding: Urban	Hazardous Materials Incidents - Fixed Site	Hazardous Materials Incidents - Transportation	Infrastructure Failure	Nuclear Attack	Nuclear Power Plant Incidents	Oil/Nat Gas Well Incidents	Petro/Nat Gas Pipeline Incidents	Public Health Emergencies	Sabotage/Terrorism	Hail	Lightning	Severe Winds	Severe Winter Weather	Transportation Accidents	Tornado	Financial Assistance	Technical Assistance
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				√		√			√	√			√						√	√	√	√	√	√		√	