

HAZARD MITIGATION PLAN for Salem Township

September 2004



**Hazard Mitigation Plan Adoption and
Resolution for Salem Township (Resolution 2004-9-14-01)**

▸ **Motion:** Roperti moved, Witkowski seconded “**to adopt the Hazard Mitigation Plan Resolution, with amendments per the attached minutes as an official plan of Salem Township. Resolution 2004-9-14-01**

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

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

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

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

Whereas residents, community officials, business owners, education 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 is hereby adopted as amended per the attached minutes, as an official plan of Salem Township.
2. The Hazard Mitigation Plan will be an annual agenda item for the Salem Township Board of Trustees 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 this Board.
3. The *Hazard Mitigation Plan* will be updated every five years as required by FEMA, with the assistance of Washtenaw County.
4. The Salem Township Supervisor will be responsible for ensuring that the strategies in the Plan are implemented, with the understanding that implementation is based on the availability of funding and staff resources.”

Roll call vote: Trajkovski, yes; Witkowski, yes; Roperti, yes; DeLuca, yes; Hamilton, yes; Shusda, yes; Van Fossen, no (I would like to see somewhat of the final product with everything incorporated and I think that the public should be able to provide their comments before the Board acts.)

Resolution adopted.

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Attachments

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

Salem 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. Salem 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 Salem 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 Salem Township General Development Plan, and other plans, as applicable.

1.2 Plan Organization

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

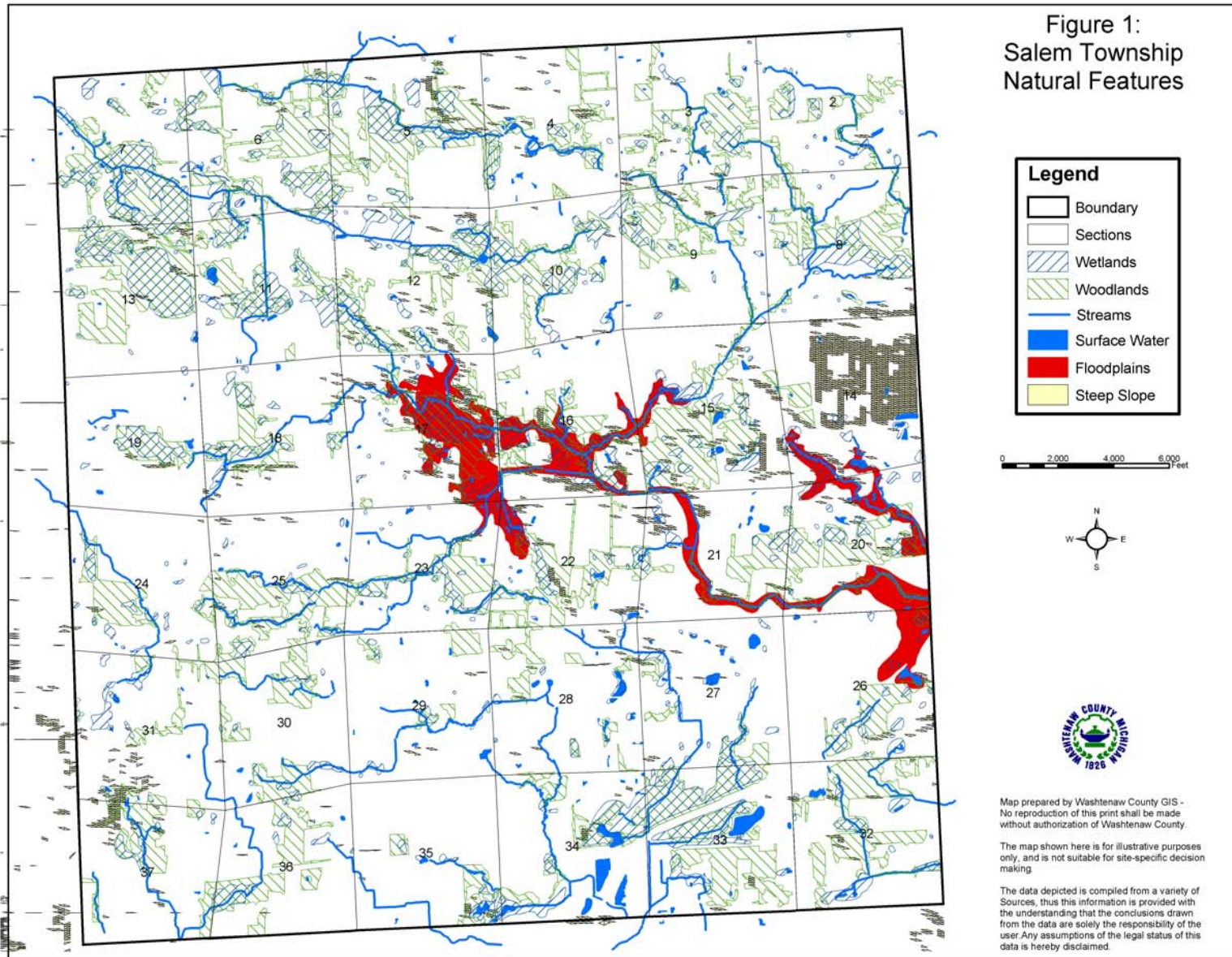
1.3 Public Participation

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

The Township Board of Trustees also provided an opportunity for public comment prior to adopting the plan during the September 14, 2004 Board meeting. Citizens were also encouraged to review the plan on the County's web site.

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 Salem Township will be shared with the Township.

Salem Township



Salem Township

2.0 Community Profile

2.1 Historic Overview

Salem Township was established in 1832. Early settlers were attracted to the land and proximity to the Rouge River. Land was cleared and farmed; an active saw mill was on the scene by 1829. Salem Hamlet was important as a stop along the Detroit to Lansing Railroad; however Hamlet declined as a center of activity once the automobile replaced railroad as the primary source of transportation.

2.2 Natural Features

Salem Township is rich with natural features. There are no lakes within the Township, however, there are approximately eighteen streams and drains. These flow in two major drainage basins within the Township: the Huron and Rouge River Basins. Lands in the northwest, west and southern portions of the Township largely flow into the Huron River watershed. Lands located centrally along the eastern border of the Township flow east into the River Rouge Basin. The four largest streams, Johnson Drain, Fleming Creek, John Wagner Drain, and Walker Drain, drain about 70% of the land area of the Township.

Floodplains are associated with Johnson and Salem & Plymouth drains. The Johnson Drain's unique character is quite extensive. Three groundwater recharge areas were delineated within Salem Township that are classified as highly sensitive to pollution. One major area is north and south of seven mile road, between Pontiac Trail and Tower Roads. Other locations are within sections 26 and 34.

Collectively wetlands cover about 4.5% of the Township's land. Significant wetland concentrations are located in the northwest and northeastern portions of the Township. Concentrations are also found in close proximity to the Salem

and Plymouth Drain. Approximately 13% of the Salem Township is presently woodland. Most of these are partially forested. The topography ranges from relatively flat areas to gently rolling areas. The highest land in the township is in Sections 2, 3, 30 and 31. The elevation drops from over 1,000 feet to just over 800 feet south and east of these high elevations. Slopes ranging from 6 to 12% are located primarily in the central parts of the township. Slopes ranging from 12 to 18% are located in the southwest portion of the Township.

Most of Salem Township is covered by organic soils, which are dominant in the northwestern and southeastern portions of the Township. This soil type is unsuitable for development including septic systems.

2.3 Land Use Patterns

The Township consists of approximately 22,000 acres. It is a residential community, with residents working in nearby communities, including Ann Arbor, Salem, Northville, Plymouth and South Lyon. The majority of land is agriculture (31%) and open space (43%). Large-lot single-family residences are scattered throughout the township, and comprises approximately 16% of township lands. There is one manufactured housing development, located in the north-central portion of the Township. Industrial development and other non-residential development are planned for the southeast portion of the Township.

2.4 Transportation Network

The transportation network consists of paved roads, gravel roads and railroads. The principal north-south carriers are Pontiac Trail, Curtis and Gotfredson. Principal east-west carriers are Eight-mile, Seven-mile, Six-mile and North Territorial. M-14 runs through the south-east corner of the Township, opening this area to development opportunities. There are no airports in Salem Township.

Salem Township

3.0 Hazards

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

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

3.1 Hazard Ranking

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

3.2 Hazard Assessment

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

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

Table 1: Hazard Ranking

Hazard	Ranking
Convective Weather (Severe Winds, Tornadoes, Lightning, Hail)	1
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, Land and Water	6
Extreme Temperatures	7
Flood Hazards: Riverine/Urban Flooding	8
Petroleum, Natural Gas and Landfill Gas Pipeline Accidents	9
Fire Hazards: Wildfires	10
Fire Hazards: Structural Fires	11
Fire Hazards: Scrap Tire Fires	12
Public Health Emergencies	13
Sabotage & Terrorism	14
Drought	15
Earthquakes	16
Civil Disturbances	17
Nuclear Attack	18
Nuclear Powerplant Accident	19
Flood Hazards: Dam Failures	20

Salem Township

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

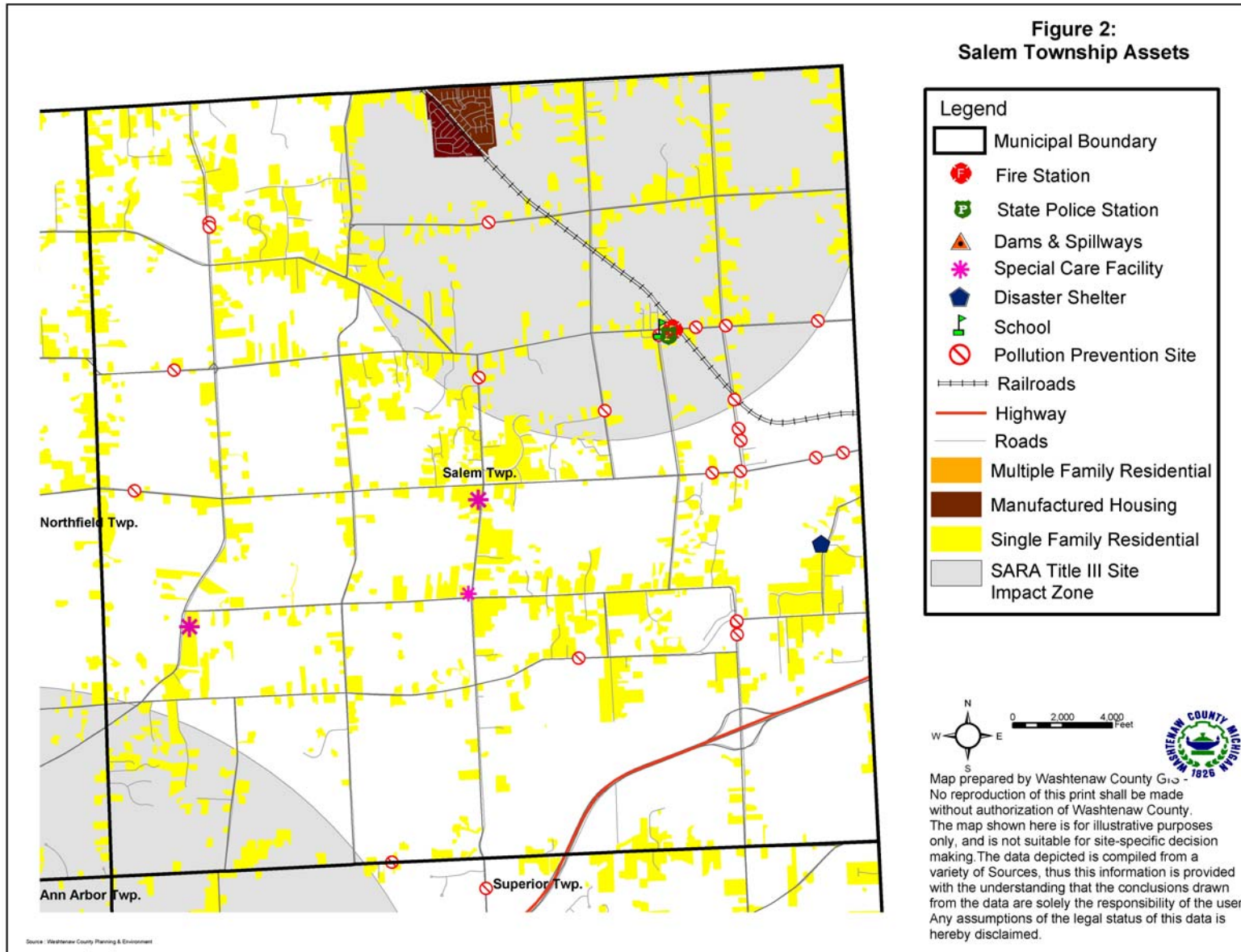
Vulnerability assessments were prepared for convective weather, hazardous materials transportation incidents, hazardous materials fixed site incidents, infrastructure failures and severe winter weather hazards. The goal is to quantitatively measure the threat experienced by Washtenaw County communities.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

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

Table 2. Vulnerability Assessment Summary

Rank	Hazard	Estimated Annual Cost
#1	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

Salem Township



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4.0 Hazard Goals and Strategies

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

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

4.1 Non-Hazard Specific Goals, Objectives and Strategies

Goal: Integrate mitigation strategies into the Township General Development Plan

Mitigation Strategy: Plans

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

4.3 Hazard Specific Goals, Objectives and Strategies

Convective Weather

There is one manufactured housing community located in the Township. This development is covered by the northern warning siren.

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

Mitigation Strategy: Warning Sirens

- Secure funding for installation of warning sirens. A portion of the Salem Township population is covered by two warning sirens (Figure 3). The sirens are located at the north and Hamlet area of the Township and would reach approximately 29% of the population (1,624 people). Additional sirens should be located to cover the Township's special care facilities and other large population centers.

Mitigation Strategy: Public Education

- Distribute an Emergency Preparedness booklet informing residents about actions to take during an event, or actions to minimize damage caused by an event (See Family Preparedness Kit information box). Information could be disseminated via the website, newsletters, or with annual mailings to residents (e.g. tax bills).

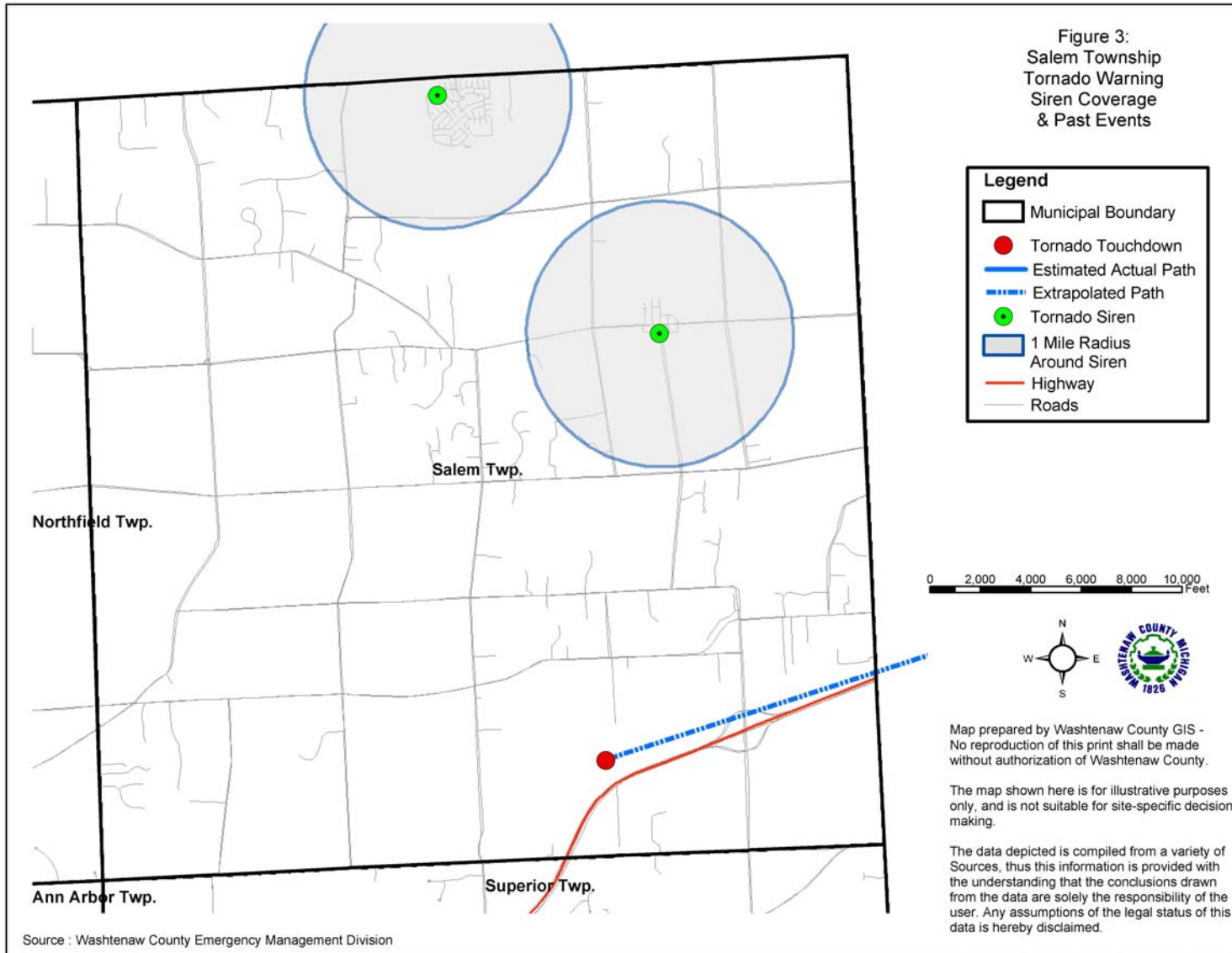
Mitigation Strategy: Maintenance

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

Mitigation Strategy: Training

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

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Mitigation Strategy: Manufactured Home Communities

- Encourage construction of safety shelters in existing communities.
- Encourage park owners to provide safety shelters be part of new manufactured home communities.

Hazardous Materials Incidents - Transportation

Michigan State Road, M-14, traverses the southeast portion of the Township at a diagonal. Haulers of hazardous materials use the route as a thoroughfare.

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

Mitigation Strategy: Warning Sirens

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

Mitigation Strategy: Training and Support

- Continue to support training and equipment for the Salem Township Fire Department and Washtenaw County HazMat Response Team.

Mitigation Strategy: Hazardous Spills Expense Recovery Ordinance

- Enforce 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 Incidents - Fixed Site

There are several facilities located in Salem Township 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 Township by increasing the ability to respond

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and minimizing the impacts to the citizens, environment and economy.

Mitigation Strategy: Warning Sirens

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

Mitigation Strategy: Training and Support

- Ensure that the Salem Township Fire Department and County Hazardous Material Response Team is knowledgeable of the locations and chemicals stored at Sara Title III facilities facilitates response to incidents.
- Support and cooperate with the Washtenaw County Pollution Prevention Program.
- Continue to participate in the Washtenaw County Emergency Preparedness Plan.

Mitigation Strategy: Hazardous Spills Expense Recovery Ordinance

- Enforce 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.

Salem Township

Infrastructure Failure

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

Mitigation Strategy: 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.

Mitigation Strategy: Public Education

- Distribute an Emergency Preparedness booklet to residents. See strategy under convective weather for further discussion.

Severe Winter Weather Hazard

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

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

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. 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 website at <http://www.fema.gov/pdf/library/yfdp.pdf>

Salem Township

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.

Mitigation Strategy: Public Education

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

Mitigation Strategy: Shelter Locations

- Establish shelter/warming locations for residents in the event of heat loss. Notify residents of locations, and the process for being notified of shelters in the event of an emergency (map be part of other public education initiatives).

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: Salem Township and Washtenaw County Emergency Management Division

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

Shelter for Manufactured Home Community

Responsible Agencies: Owner of MHC.

Estimated Cost: To be determined.

Other Important Strategies

Shelter Locations throughout Township

Responsible Agency: Salem Township (coordinate with Red Cross)

Estimated Cost: Staff time.

Enforce Hazardous Spills Expense Recovery Ordinance

Responsible Agency: Salem Township

Estimated Cost: Staff time.

Training and Support

- Ensure the Salem Township Fire Department and Washtenaw County Hazardous Material Response Team is knowledgeable of the locations and chemicals stored at Sara Title III facilities facilitates response to incidents.
- Support and cooperate with the Washtenaw County Pollution Prevention Program.
- Continue to participate in the Washtenaw County Emergency Management Division Action Guidelines

Responsible Agency: Salem Township

Estimated Cost: Staff time.

Salem Township

Public Education (disseminating information on Family Preparedness through Township newsletters and other Township publications available at Township offices)

Responsible Agency: Salem Township

Estimated Costs: Staff time

Update Plans to incorporate mitigation goals, strategies

Responsible Agency: Salem Township

Estimated Cost: Staff time.

5.2 Sources of Financial Assistance

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

FEMA emphasizes the implementation of structural mitigation strategies. The strategies that are a priority for FEMA are not a priority for Salem Township at this time. The strategies listed in this plan that qualify for FEMA funds include emergency warning sirens and a shelter for the manufactured housing park, which is dependent upon the park owner .

Financial support for other mitigation strategies proposed in this plan may be sought through alternative funding sources. For example, funds for public outreach, equipment and training may be obtained through FEMA's 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 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 Township Supervisor. The plan will be an annual agenda item for the Salem Township Board of Trustees. At a minimum, during its review, the Board will discuss the monitoring of the plan, the number of projects pursued, or reasons for lack of pursuit for approved projects. Prior to the meeting, the Washtenaw County Emergency Management Division can be contacted for updates or recommended amendments to the plan.

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

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

**Attachment 1
County Hazard Plan**

**Attachment 2
Alternative Funding Sources**

Salem 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								√	√	√																√	√

Salem 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								√	√	√			√													√	

Salem 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																√	√										√

Salem 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											√	√			√	√	√	√								√	

Salem 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									√																		√

Salem 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									√	√																√	√

Salem 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									√	√			√														√	

Salem 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				√		√			√	√			√						√	√	√	√	√	√		√	