



# CITY OF IONIA

## CITY COUNCIL

### SPECIAL MEETING AGENDA

6:15 PM, Wednesday, October 15, 2025

IONIA CITY HALL - COUNCIL CHAMBERS

#### CALL TO ORDER

#### PLEDGE OF ALLEGIANCE

#### ROLL CALL

#### IV. Approval of Agenda

V. **Public Comments** – Section 3.02 of the City Council’s Rules of Order and Conduct for City Council Meetings provides opportunity for the public to address Council during the Public Comment section identified on the agenda. Your opportunity to speak occurs after you have been recognized by the Mayor. When addressing Council please state your name and address. Comments are limited to 5 minutes unless additional time (up to 10 minutes) is granted by the Mayor.

#### VI. Communications

#### VII. City Manager's Report

1. *Action Required* – Lawton Street Watermain Project
2. *Action Required* – Ionia County Hazard Mitigation Plan - 2025
3. *Action Required* – Purchase of Employee Health and Related Insurances
4. *Action Required* – PA 152 - 80/20 Cost Sharing of Publicly Funded Health Insurance

#### VIII. Good of the Order/ City Councilmember Comments

#### IX. Adjournment



# CITY OF IONIA

## STAFF REPORT FOR COUNCIL AGENDA ITEM

Agenda Item: VII.1

TO: Mayor Milewski and Councilmembers

FROM: Precia Garland, City Manager

DATE: October 15, 2025

RE: Lawton Street Watermain Project

### Background:

The watermain on Lawton Street is undersized and has exceeded its useful life. To avoid breaks, which are anticipated with colder weather, given the condition of this main, it is desirable to replace the main yet this construction season. The watermain lies outside the street pavement but still within the public right-of-way, which will make the construction project relatively straightforward and completable this year, except for turf restoration next spring.

Plans were recently prepared by Fishbeck Engineering for this project and issued for bid. On Monday, October 13 at 10 AM, bids were opened, as follows:

Bidder	Location	Bid
CL Trucking	Ionia, MI	\$124,055.50
Montgomery Excavating	Ionia, MI	\$212,145.00
All Seasons Underground Contracting	Tipton, MI	\$189,205.00

After reviewing the bids for completeness and accuracy, Fishbeck Engineering recommends the bid from CL Trucking in the amount of \$124,055.50 be awarded. The engineer's estimate for this project was \$110,987.50. Please see attached for details regarding Fishbeck's recommendation.

### Requested Action / Motion:

It is requested the Ionia City Council consider making a motion to approve the bid of \$124,055.50 from CL Trucking of Ionia, Michigan for the Lawton Street watermain project. Funds are budgeted for this project in the Water Fund, 591-560.000-980.000, Capital Outlay.

**Motion By:**

**Seconded By:**

<b>Roll Call Vote:</b>	Lee	_____	Winters	_____
	Cook	_____	Patrick	_____
	Millard	_____	Waterman	_____

Starr

— Cowling  
Milewski —

—

October 13, 2025  
Project No. 2501467

Precia Garland  
City Manager  
City of Ionia  
114 N Kidd Street  
Ionia, MI 48846

**City of Ionia – Lawton Street Water Main Replacement  
Bid Results for Executed Contract Documents**

On October 13, 2025, we received bids for the referenced project. The three low bids are:

- |  |              |
|--|--------------|
| 1. CL Trucking & Excavating, LLC             | \$124,055.50 |
| 2. All Seasons Underground Construction Inc. | \$189,205.00 |
| 3. Montgomery Excavating                     | \$212,145.00 |

Fishbeck has reviewed the bids and discussed the project with Nick Wharry of CL Trucking & Excavating. We recommend the project be awarded to CL Trucking & Excavating, LLC.

For the ECD process, we have attached the following documents for your review.

- This letter
- Bid Tabulation
- Notice of Award

Please execute the Notice of Award and return to Sandie Ross at [sross@fishbeck.com](mailto:sross@fishbeck.com) when complete. We will proceed to work with CL Trucking & Excavating in assembling bonds and insurance documents, etc.

If you have any questions or require additional information, please contact me at 616.464.3903 or [apowers@fishbeck.com](mailto:apowers@fishbeck.com).

Sincerely,



**Ashley Powers, PE**

Civil Engineer

Attachments

By email

Copy: Jeremy N. Kramer, PE – Fishbeck



# CITY OF IONIA

## STAFF REPORT FOR COUNCIL AGENDA ITEM

Agenda Item: VII.2

TO: Mayor Milewski and Councilmembers

FROM: Precia Garland, City Manager

DATE: October 15, 2025

RE: Ionia County Hazard Mitigation Plan - 2025

### Background:

Ionia County has prepared the "Ionia County Hazard Mitigation Plan - 2025," The Hazard Mitigation Plan for Ionia County was created to reduce the impact of natural hazards to the County and its constituent communities, such as the City of Ionia. The plan's primary goal is to protect the health, safety and economic interest of its residents through the development and implementation of mitigation strategies to address and reduce the effects of relevant hazards. The Plan has been prepared for full compliance with federal and state requirements governing the development and content of local hazard mitigation plans to make Ionia County and its participating communities eligible to receive funding under the Hazard Mitigation Assistance Program. It will be revisited and maintained as an ongoing process by Ionia County's Hazard Mitigation Planning Committee (ICHMPC) and will be updated and resubmitted to FEMA every five years in accordance with 44 CFR Part 201.

Ionia County recently received notice that the 2025 Hazard Mitigation Plan has been reviewed and approved by both FEMA and the State of Michigan. So that the City of Ionia is eligible for the benefits leveraged by the Plan, it is necessary for the Ionia City Council to approve Resolution 2025-26, a resolution to approve the Ionia County Hazard Mitigation Plan - 2025.

### Requested Action / Motion:

It is requested the Ionia City Council consider a making a motion to approve Resolution 2025-26, a resolution to approve the Ionia County Hazard Mitigation Plan - 2025.

### Motion By:

### Seconded By:

<b>Roll Call Vote:</b>	Lee	___	Winters	___
	Cook	___	Patrick	___
	Millard	___	Waterman	___
	Starr	___	Cowling	___
	Milewski	___		



# **Ionia County Hazard Mitigation Plan 2024**

Prepared in cooperation with Ionia County  
by Fleis & VandenBrink

September 2024  
852710



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# Part 1: Introduction and Planning Process

## Chapter 1.1: Introduction

### Section 1.1.1: Summary

This Hazard Mitigation Plan for Ionia County was created to reduce the impact of natural hazards to the County and its constituent communities. Its overarching goal is that of striving to protect the health, safety, and economic interests of its residents through the development and implementation of mitigation strategies to address and reduce the effects of relevant hazards. This Plan is designed for full compliance with federal and state requirements governing the development and content of local hazard mitigation plans as to render Ionia County and its participating jurisdictions eligible to receive funding under the Hazard Mitigation Assistance Grant program. It will be re-visited and maintained as an ongoing process by Ionia County's Hazard Mitigation Planning Committee (ICHMPC) and will be updated and re-submitted to FEMA every five years in accordance with 44 CFR Part 201.

In broad strokes, the process of hazard mitigation on the local level is accomplished by identifying the community's vulnerability to natural hazard risks based on factors such as location, resident demographics, topographical features, and hydrological conditions; ranking these hazards for mitigation action prioritization based on objective factors such as their frequency and severity of occurrence, with these factors weighted according to local needs and priorities; quantifying existing mitigation actions already taking place within the County and its communities; using these existing actions as a springboard to devise and strengthen ongoing mitigation strategies that are in line with local goals and objectives; and, developing a plan for maintaining and updating the Plan such that the progress of its proposed actions and activities may be tracked for future Plan updates.

### Section 1.1.2: Background

Ionia County produced their first draft Hazard Mitigation Plan over a decade ago in 2012. Although this unfinished draft Plan did not rank hazards, its identified issues included flooding, winter weather, thunderstorms, and hail. It particularly highlighted flooding events associated with the Grand River, as well as other rivers, streams, and inland lakes throughout the county. That planning process covered numerous mitigation actions for consideration and/or implementation, including warning system improvements, strengthening infrastructure against power failures, acquiring portable generators, and removing the Lyons Dam. While documentation of mitigation action progression between the original draft plan and the current plan development periods was not sufficient for a full progress report in this Plan, grants from the Department of Natural Resources and the U.S. Fish and Wildlife Service were successfully leveraged to fund the removal of the Lyons Dam, which took place in 2016.

## Chapter 1.2: Planning and Development

The groundwork for planning and development of this current Plan began in 2020 when County emergency management applied for Plan development grant funding. With this funding awarded the following year, Ionia County issued a Request for Proposals for planning and development services in August of 2021, selecting Fleis & VandenBrink, a multi-disciplinary engineering consulting firm based in Grand Rapids in September to provide these services.

The core planning process relied heavily on meetings, surveys, and one-on-one lines of communication. Broadly, meetings were used to present, and review working or finished aspects and details of the draft Plan, and to brainstorm on current and following steps in the Plan development process. Surveys were the tool of choice for collection of a wide range of detailed information from individual jurisdictions and other stakeholders, opening many individual communication avenues and driving much of the substance of the meetings. One-on-one communication filled in the remaining Plan development web, serving as an invaluable part of gathering information from specific jurisdictional and County departments and entities.

The solicitation of input from stakeholders such as County residents and representatives of outside jurisdictions was accomplished primarily through Internet postings and survey distributions. A workshop session was additionally held upon completion of the Plan draft for public comment and review in September 2024.

### Section 1.2.1: Plan Development Meetings

A total of six formal, scheduled meetings were held as part of the Plan development process. Related supplementary documentation, such as sign-in sheets, can be found in Appendix C.

1<sup>st</sup>: February 17<sup>th</sup>, 2022, virtual. This kick-off meeting facilitated the initial contact between representatives of Ionia County and its constituent communities, and the planning consultants of Fleis & VandenBrink, the latter of whom led a presentation to introduce the attendees to the principles of hazard mitigation, set the stage for further meetings, and summarize the scope of the planning process.

2<sup>nd</sup>: August 10<sup>th</sup>, 2022, in-person. Due to the presence of new attendees and a new County emergency manager, Fleis & VandenBrink's lead Hazard Mitigation planner led a review presentation that re-iterated hazard mitigation principles and with a much greater focus on Plan specifics such as expectations of included information and Committee participation along with discussion of the first survey disseminated to a range of community representatives, wrapping up with a conversational exchange of information such as a working list of natural hazards and ideas on continuing Plan development.

3<sup>rd</sup>: December 21<sup>st</sup>, 2022, in-person. This meeting, guided in part by the results of an information collection survey discussed at the previous meeting, focused on sharing and gathering of a wide range of information necessary for Plan development, such as accomplishing public outreach efforts and providing opportunities for stakeholder engagement, a discussion of current mitigation strategies and pre-existing planning documents, recommended sources for obtaining specific reports or pieces of information, and the establishment of a framework for Plan maintenance and update.

4<sup>th</sup>: February 8<sup>th</sup>, 2023, in-person. The hazard ranking criteria, as applicable to the list of hazards discussed and finalized during the second meeting, was discussed and finalized at this fourth meeting. The primary focus of this meeting was on the development of new mitigation strategies – a list of potential actions applicable to both the County and community levels were discussed among the committee, considered for viability and feasibility, and indicated as warranting further exploration or dismissed as too low-priority or unrealistic as appropriate.

5<sup>th</sup>: May 3<sup>rd</sup>, 2023, in-person. This meeting, featuring an expanded list of attendees including the County Drain Commissioner, the Intermediate School District Superintendent, and County Administration, focused on continued compilation and development of mitigation strategies and projects for implementation or consideration over the Plan's five-year lifespan, along with prioritization of these mitigation items. This development process was driven by a discussion of the County's current capacity for achieving hazard mitigation in multiple areas, with a focus and prioritization on developing capacity in areas such as county drainage, regulatory enforcement, public education and outreach, and facility protection from hazard events. The second survey, later distributed to jurisdiction administrators throughout Ionia County, was also presented and reviewed.

6<sup>th</sup>: August 13<sup>th</sup>, 2024, in-person. The primary focus of this meeting was a recap of project work completed to date, an overview of the Plan draft to date, and the review and finalization of major Plan elements such as the mitigation action list and prioritization ranking, along with remaining steps to draft completion and submission for regulatory approval. The draft public review session was discussed and scheduled.

### Section 1.2.2: Plan Development Surveys

A major component of the Plan development process was the distribution of surveys intended to standardize municipal participation and information gathering activities. Distributing surveys allows for decentralization of the planning process, mitigating difficulties in ensuring active participation by jurisdictions with less capacity or urgency, and allows for significantly increased flexibility in scheduling and coordination.

Two surveys were distributed as part of this development process. The first, disbursed in August of 2022, was used to establish community priorities as guidance for Plan development, shaping the direction of hazard ranking and mitigation action determination. The second, disbursed in May of 2023, was used to help communities meet the criteria for Plan participation, with completed surveys capturing all required elements of local input and constituting the bulk of individual jurisdictional participation. A follow-up to this second survey was collected in Q3 2024 as an open-ended narrative update; 14 out of 15 participants (all jurisdictions but Easton Township) submitted this optional third response. These surveys and responses are described in detail in Appendix A, with the original participant response forms included in Appendix B. The ICHMPC found distribution of surveys to be a successful method of requesting and receiving a wide variety of information and data, allowing respondents more time for internal data collection and reporting than is afforded during meetings. Surveys were also part of the public participation component of this Plan, which is detailed in the following section.

### Section 1.2.3: Public Participation

All Plan development meetings were held concurrently with Ionia County Local Emergency Planning Committee (LEPC). These meetings were all public and advertised in advance on the County website.

Public participation was solicited and gathered at multiple junctions throughout the Plan development process. Social media posts made to promote the Plan and gather local input were made in the latter third of 2022 by the Ionia County Sheriff Office, the Ionia County Health Department, and the Village of Saranac, and the ICHMPC's lead planner conducted interviews with the Greenville Daily News and Ionia Sentinel-Standard to spread awareness and promote a survey for gathering more detailed local input, with these published in January 2023. These combined efforts resulted in the receipt of input/comments from a total of sixteen individuals which were primarily used to guide mitigation action prioritization. Comments (included in Appendix C) primarily focused on identified needs for improvements to county infrastructure and maintenance, particularly those related to winter road conditions.

A review session was additionally held on September 10, 2024, at the Ionia County Courthouse and simultaneously broadcast via Zoom, presenting the draft Plan and its components for public comment.

### Section 1.2.4: Existing Resource Incorporation

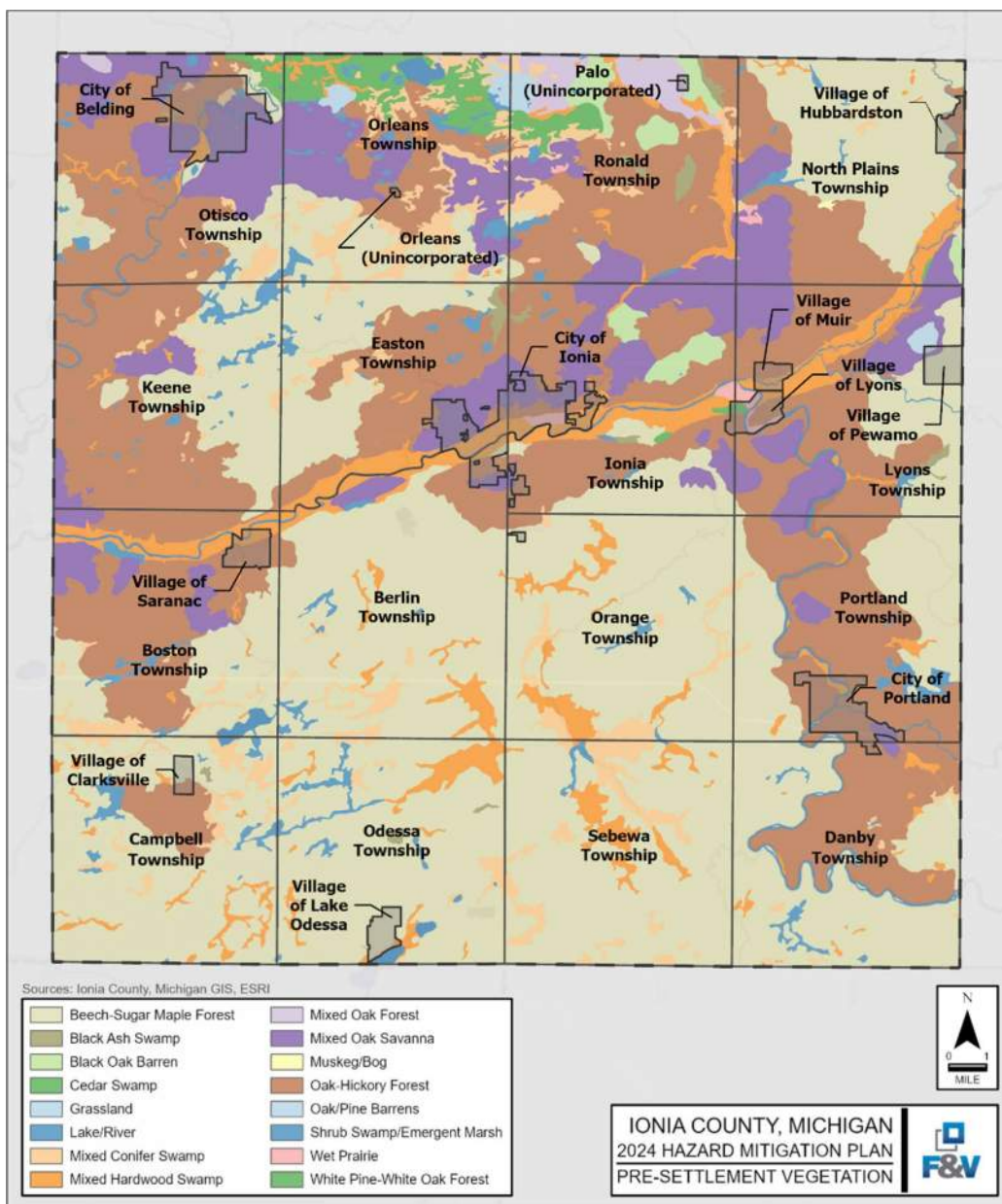
A wide range of existing plans, studies, reports, and technical information were reviewed and incorporated as appropriate into this Plan. The draft Ionia County Hazard Mitigation Plan referenced in the prior chapter was used as an initial template, with large parts of the hazard identification section imported into this finished Plan. The current Michigan HMP and hazard analysis documents, as well as the Region 6 Threat and Hazard Identification and Risk Assessment, were also extensively referenced throughout this Plan development. Other county Plans reviewed as part of this Plan development included those from Berrien, Cass, Ingham/Clinton/Eaton, Jackson, Kent/Ottawa, Lake, Livingston, Ontonagon, and Van Buren Counties. Local documents such as comprehensive plans and capital use plans were referenced for details on pertinent jurisdictions when available. Ionia County's GIS datasets were used to produce many of the maps used throughout this report. A wide range of public datasets were also used, especially for hazard risk analysis and census data, sourced from the Census Bureau, National Oceanic and Atmospheric Administration, Forest Service, National Weather Service, National Lightning Safety Institute, Federal Emergency Management Agency, National Integrated Drought Information System, Michigan Department of Natural Resources, US Geological Survey, and the Michigan Department of Environment, Great Lakes, and Energy, among others.

# Part 2: Community Profile

## Chapter 2.1: County Overview

Ionia County encompasses 580 square miles in the west central Lower Peninsula of Michigan. Part of the Grand Rapids-Kentwood Metropolitan Statistical Area, the county had an estimated population of 67,197 as of July 2021. Ionia County borders Kent, Eaton, Barry, Gratiot, Montcalm, and Clinton Counties, and its western border lies approximately 45 miles from Lake Michigan.

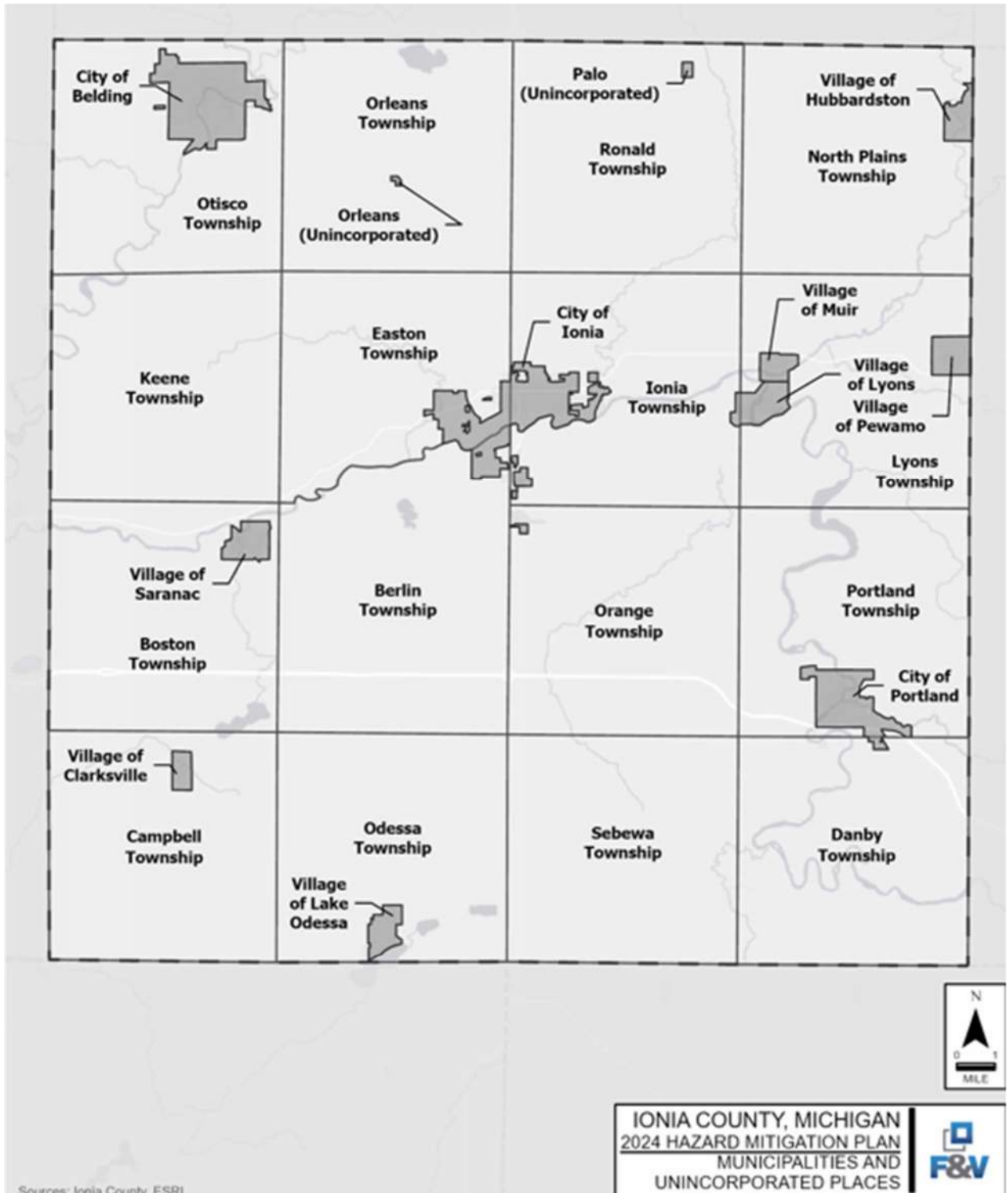
The county, named after the ancient Greek region of Ionia, was historically inhabited by Native American tribes, including the Ottawa and Chippewa. The first official mention of Ionia County was in 1831 by Michigan Legislature act, where the area was defined and “set off into a separate county by the name of Ionia”, although the newly formed county was not able to fully organize until 1837, when it was cleaved off Kent County and given a separate political organization. The county’s economic history lies primarily in its agricultural output, with that legacy continuing into the current day.



Ionia County is located in the Great Lakes region of North America, a region characterized by its extensive low-lying areas and river valleys that provide little protection from the cold Arctic air masses that regularly extend southward from Canada. As a region with a decidedly four-season continental climate, its residents are exposed to a wide range of seasonal natural hazards, such as thunderstorms during warmer months and blizzards during colder months. The proximity to the Great Lakes has uneven effects throughout the region, with certain areas west of the nearest Great Lake most vulnerable to increased precipitation year-round, along with effects such as delayed warming in spring and increased cloud cover throughout the year. While Ionia County is near enough to Lake Michigan for some lake-effect phenomena to be perceptible, it is inland enough to escape the majority of such effects.

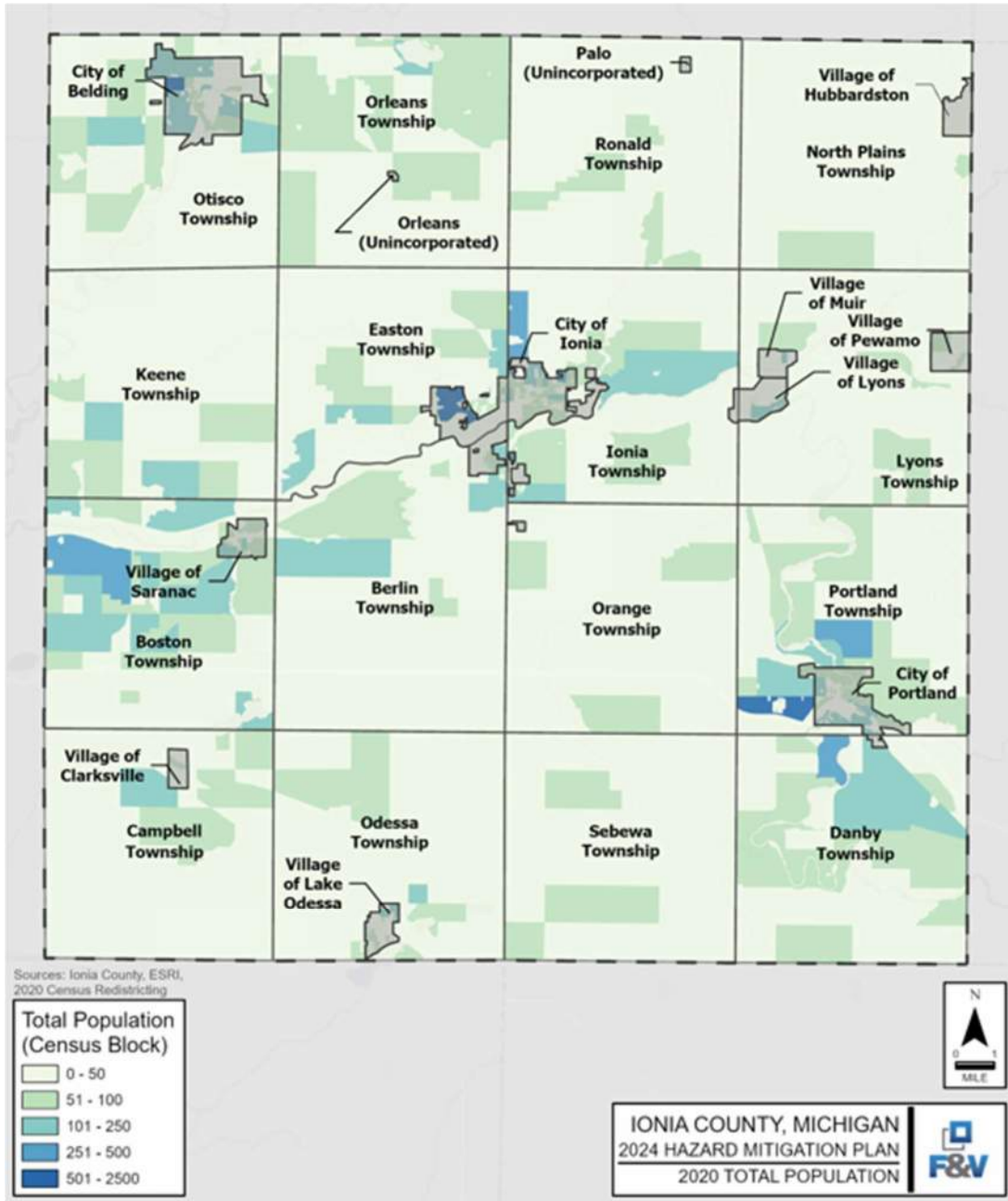
Ionia County is composed of three cities, seven villages, and sixteen townships. Their populations are shown below, with Plan participation additionally indicated by a green highlight:

<b>City/Village/Township</b>	<b>2021 Population Estimate (US Census)</b>
City of Ionia (county seat)	11,704
City of Belding	6,129
City of Portland	3,947
Clarksville Village	413
Hubbardston Village	348
Lake Odessa Village	2,128
Lyons Village	801
Muir Village	666
Pewamo Village	538
Saranac Village	1,424
Berlin Township	2,138 (2020)
Boston Township	6,021 (2020)
Campbell Township	2,399 (2020)
Danby Township	2,953 (2020)
Easton Township	3,058 (2020)
Ionia Township	3,961 (2020)
Keene Township	1,730 (2020)
Lyons Township	3,513 (2020)
North Plains Township	1,191 (2020)
Odessa Township	3,918 (2020)
Orange Township	1,012 (2020)
Orleans Township	2,664 (2020)
Otisco Township	2,268 (2020)
Portland Township	3,881 (2020)
Ronald Township	1,861 (2020)
Sebewa Township	1,124 (2020)



## Chapter 2.2: Population and Demographics

The population of Ionia County was estimated at 67,197 in July 2021, up from 61,518 in 2000, reflecting an increase of 9.2%. During the same 21-year period, Michigan's population increased by only 1.1%. All three of the county's cities, four out of seven of its villages, and eleven out of sixteen of its townships experienced population growth in this time period. The growth of Ionia County's townships is especially significant, as many townships do not provide complete emergency services for their residents who rely instead on county facilities. It also demonstrates the county's population is dispersed over a large area, which often creates issues related to the logistics of providing emergency services and facilities. This is bolstered by population density data: in 2020, Ionia County had a population density of 116.9 people per square mile, significantly lower than the Michigan average of 178.0 people per square mile.



### Section 2.2.1: Race and Ethnicity

Of the total population in 2021, 92.0% were white, 4.9% were African American, 0.7% were American Indian, 0.5% were Asian, and 1.9% were two or more races; Hispanic or Latino people of any race were 5.2% of the population. Compared to Michigan, Ionia County has a higher percentage of white people, a lower percentage of African Americans, a lower percentage of American Indians, a lower percentage of Asians, a lower percentage of those who indicated a different race, and a lower percentage of those who indicated two or more races.

### Section 2.2.2: Age

The age distribution of a county can influence the facilities and programs necessary for effective emergency response especially as child and senior age cohorts are more vulnerable to natural hazards. The distribution of age groups in Ionia County is very similar to Michigan as a whole. The age distribution table is provided below:

Age	Ionia County		Michigan	
	Population	% of total	Population	% of total
Under 10 years	7484	11.620938	1153156	11.561728
10 to 19 years	8836	13.720284	1274832	12.781671
20 to 29 years	8520	13.229608	1373662	13.772557
30 to 39 years	9027	14.016863	1204555	12.077063
40 to 49 years	8096	12.571233	1193489	11.966113
50 to 59 years	8463	13.1411	1374362	13.779575
60 to 69 years	7848	12.186146	1261817	12.651181
70 to 79 years	4191	6.5076629	723276	7.2516818
80 years and over	1936	3.0061645	414758	4.1584306

Source: 2020 U.S. Census of Population

### Section 2.2.3: Gender

Most communities have a higher proportion of females due to their longer average life expectancy. Females accounted for 50.4% of the population in Michigan and 45.9% of the population in Ionia County in 2020; the lower female percentage in the county is primarily due to the largely-male population housed in Ionia's state prisons.

### Section 2.2.4: Socioeconomic

Between 2016 and 2020, the median household income in Ionia County was \$60,139, with a per capita income of \$25,997. These compare similarly with Michigan's values; the state had a median household income of \$59,234 and a per capita income of \$32,854 in the same time period. Ionia County has a lower percentage of people in poverty than the state as a whole at 9.6%, comparing against Michigan's 12.6%.

### Section 2.2.5: Employment

60.3% of the population 16 years of age and older was in the labor force in 2020, comparing similarly to Michigan's 61.5%. The unemployment rate in Ionia County was 5.1% in 2020. The table below identifies employment sector distribution in the county and in Michigan. In Ionia County, the largest employment category is Manufacturing (21.1%), followed by Educational Services, and Health Care and Social Assistance (17.4%) and Retail Trade (11.8%). Compared to Michigan, Ionia County has a notably higher percentage of people employed in Agriculture, Forestry, Fishing and Hunting, and Mining, and a notably lower percentage of people employed in Professional, Scientific, and Management, and Administrative and Waste Management Services; Educational Services, and Health Care and Social Assistance; and Arts, Entertainment, and Recreation, and Accommodation and Food Services.

Industry	Ionia County		Michigan
	Number	Percent	Percent
Civilian employed population 16 years and over	29,585	100%	100%
Agriculture, forestry, fishing and hunting, and mining	1,601	5.4%	1.1%
Construction	2,042	6.9%	5.5%
Manufacturing	6,243	21.1%	18.6%
Wholesale trade	649	2.2%	2.4%
Retail trade	3,479	11.8%	10.7%
Transportation and warehousing, and utilities	1,130	3.8%	4.4%
Information	328	1.1%	1.3%
Finance and insurance, and real estate and rental and leasing	1,856	6.3%	5.6%
Professional, scientific, and management, and administrative and waste management services	1,858	6.3%	9.7%
Educational services, and health care and social assistance	5,136	17.4%	23.4%
Arts, entertainment, and recreation, and accommodation and food services	1,906	6.4%	9.2%
Other services, except public administration	1,511	5.1%	4.6%
Public administration	1,846	6.2%	3.5%

Source: 2020 U.S. Census of Population

### Section 2.2.6: Housing

Housing is an important consideration in the development of a hazard mitigation plan, as it is where the population lives and stores a significant part of its wealth. The location and quality of housing can influence the amount of damage a community sustains in many types of emergencies.

Ionia County had 23,071 occupied housing units in 2020 according to U.S. census data, with an average household size of 2.64. Compared to Michigan, Ionia County has a higher percentage of owner-occupied housing units at 76.4% compared to 71.7%, and over twice the percentage of mobile homes, at 11.2% compared to 5.0%. Residents of mobile homes are, on average, more likely to be vulnerable to natural hazards than residents of permanent housing structures. Mobile homes are significantly more likely to be located in floodplains than traditional homes, and their construction, particularly with older mobile homes, is often lower in quality and safety than traditional homes. Additionally, mobile homes are generally found in parks with a concentration of socially and financially vulnerable populations, who may not be able to access resources after a disaster as readily as other households.

Housing costs less in Ionia County than is average for Michigan, where housing is already cheaper than the national average. The median value of owner-occupied houses from 2016 to 2020 was \$140,800, less than Michigan's \$162,600 average and much less than the United States' \$229,800 average. Median gross rent was also cheaper in Ionia County during that time period, averaging \$781/month compared to Michigan's \$892/month and the United States' \$1,096/month. However, housing affordability does not necessarily factor into hazard mitigation, unless less expensive housing is directly coupled with factors such as use of inferior construction materials or being located in a floodplain.

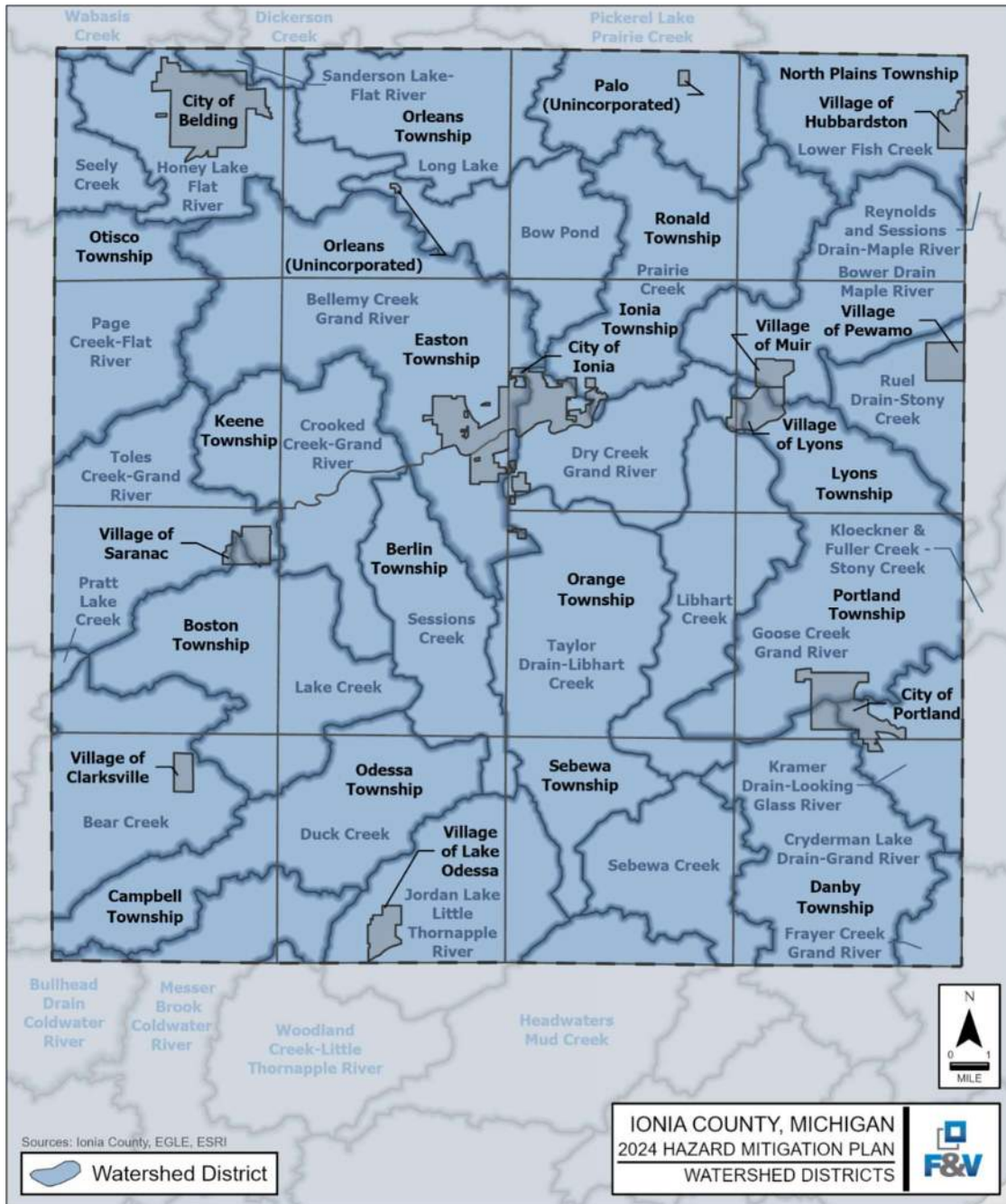
While not a traditional or preferable form of housing, the state prisons in Ionia County house a notable minority of County residents, with a combined population of 5,077 inmates in 2012 among four prisons (note that the Michigan Reformatory was closed in 2022). Prisons and jails have a unique hazard vulnerability – the facilities are typically more hazard-resistant than typical housing structures, but the high resident density leads to high potential consequences in the event of a particularly severe hazard scenario. As prisoners are counted by the Census as residents of the jurisdiction in which they are

housed, this also has a significant impact on population demographics and statistics, particularly in the city of Ionia where the entirety of the county's prison population is found; the population of the city of Ionia was 11,602 in 2012, meaning at that time prisoners comprised nearly 44% of the city's population.

## Chapter 2.3: Land and Region

### Section 2.3.1: Land Use

According to the US Census Bureau, Ionia County has a total area of approximately 580 square miles, with 571.3 square miles of land and 8.7 square miles of water.



### Section 2.3.2: Climate

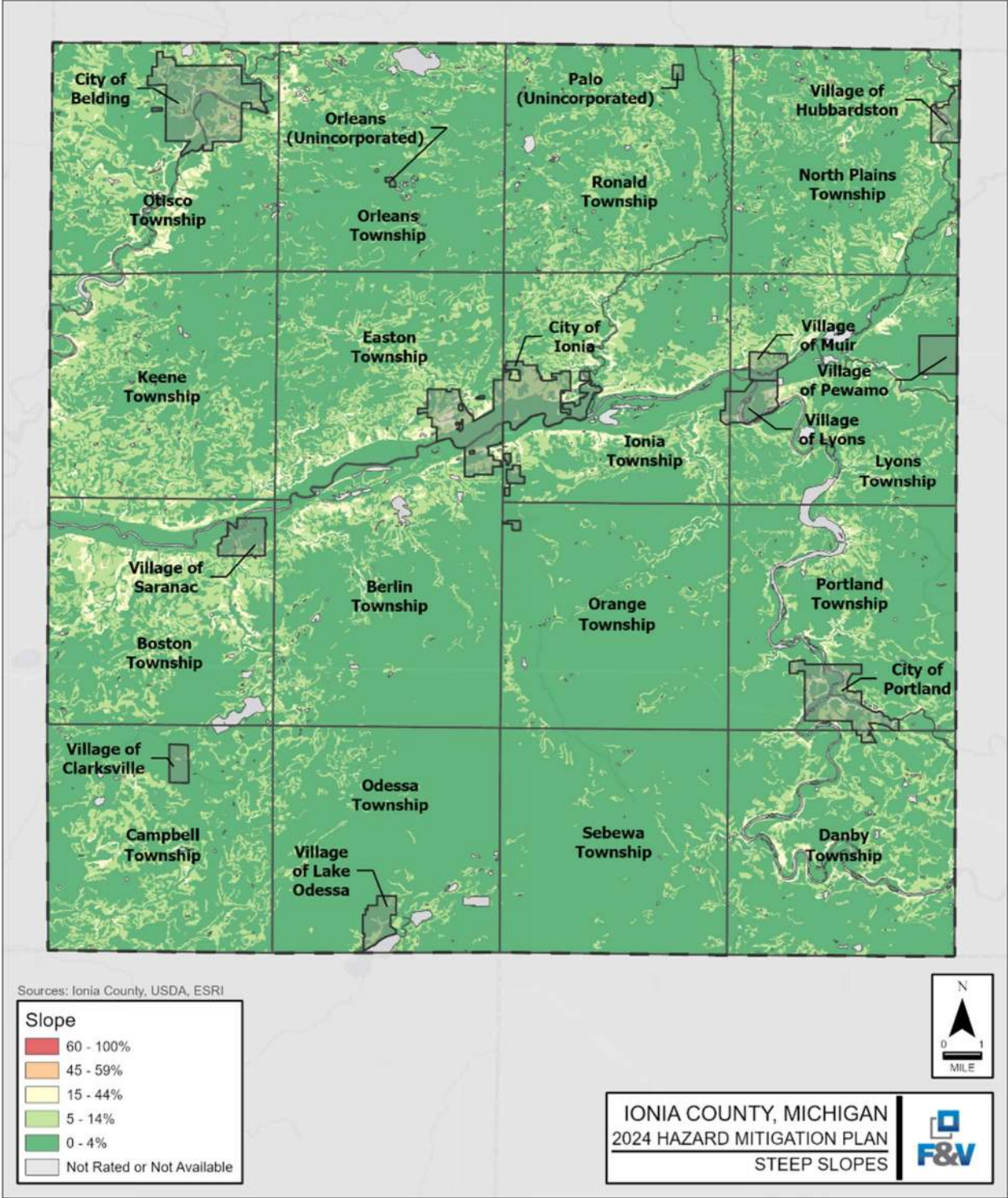
Ionia County features a humid continental climate influenced somewhat by Lake Michigan, with warm to hot summers and cold to severely cold winters. Historical climate data provided by NOAA for Ionia County for 1991-2020 reveals that the average yearly temperature for the County is 47.1 degrees Fahrenheit, with average monthly temperatures ranging between 16 degrees and 29 degrees Fahrenheit in January, to between 60 degrees and 81 degrees Fahrenheit in July.

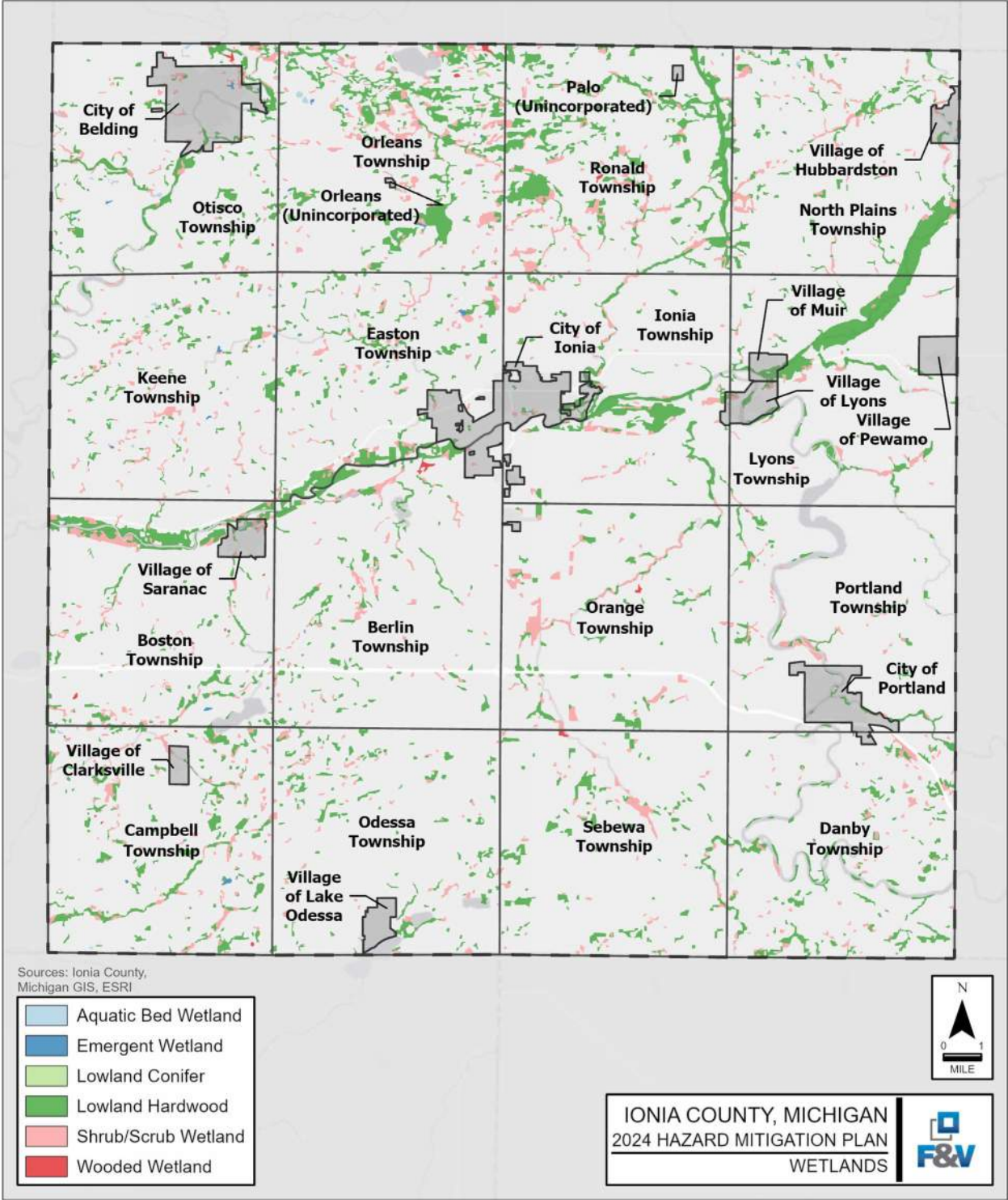
The average annual precipitation is 35.92 inches, with no significant precipitation difference between seasons. There are an average of 138 days per year with precipitation above 0.01 inches. The average annual snowfall is 54.2 inches, with at least 0.01 inches of snowfall occurring during 49 days per year, and an average of 78 days per year that see a snow depth of at least one inch.

According to historical climate data aggregated by *Weather Spark*, the growing season in Ionia County, consisting of days that remain entirely above freezing, typically lasts from about May 1<sup>st</sup> to October 12<sup>th</sup>, totaling 154 days or about 5.4 months.

### Section 2.3.3: Topography

Ionia County's topography is primarily a flat to gently sloping landscape. There are areas of moderate (10 to 25 percent) and extreme (greater than 25 percent) slopes isolated within the Grand River valley.



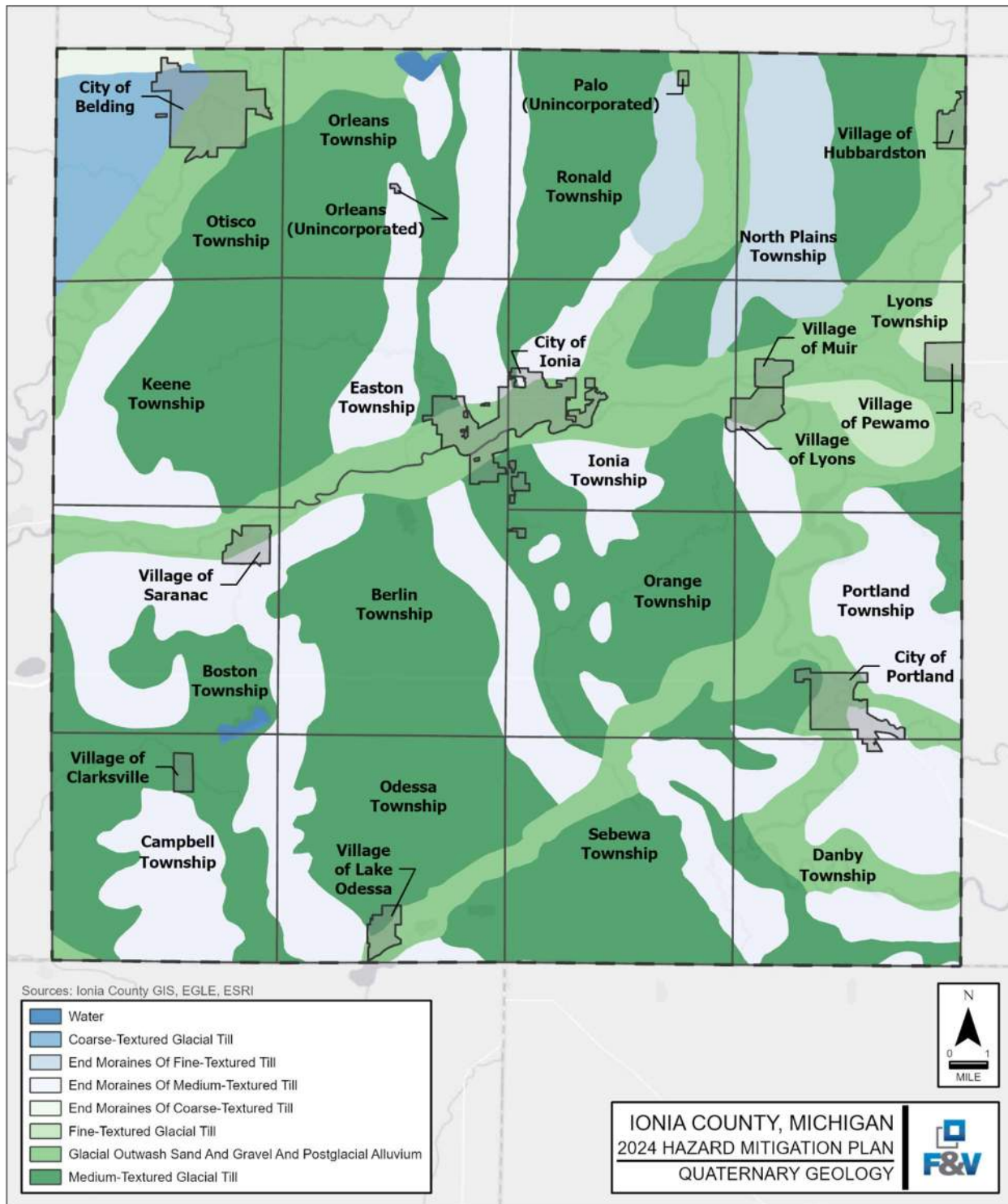


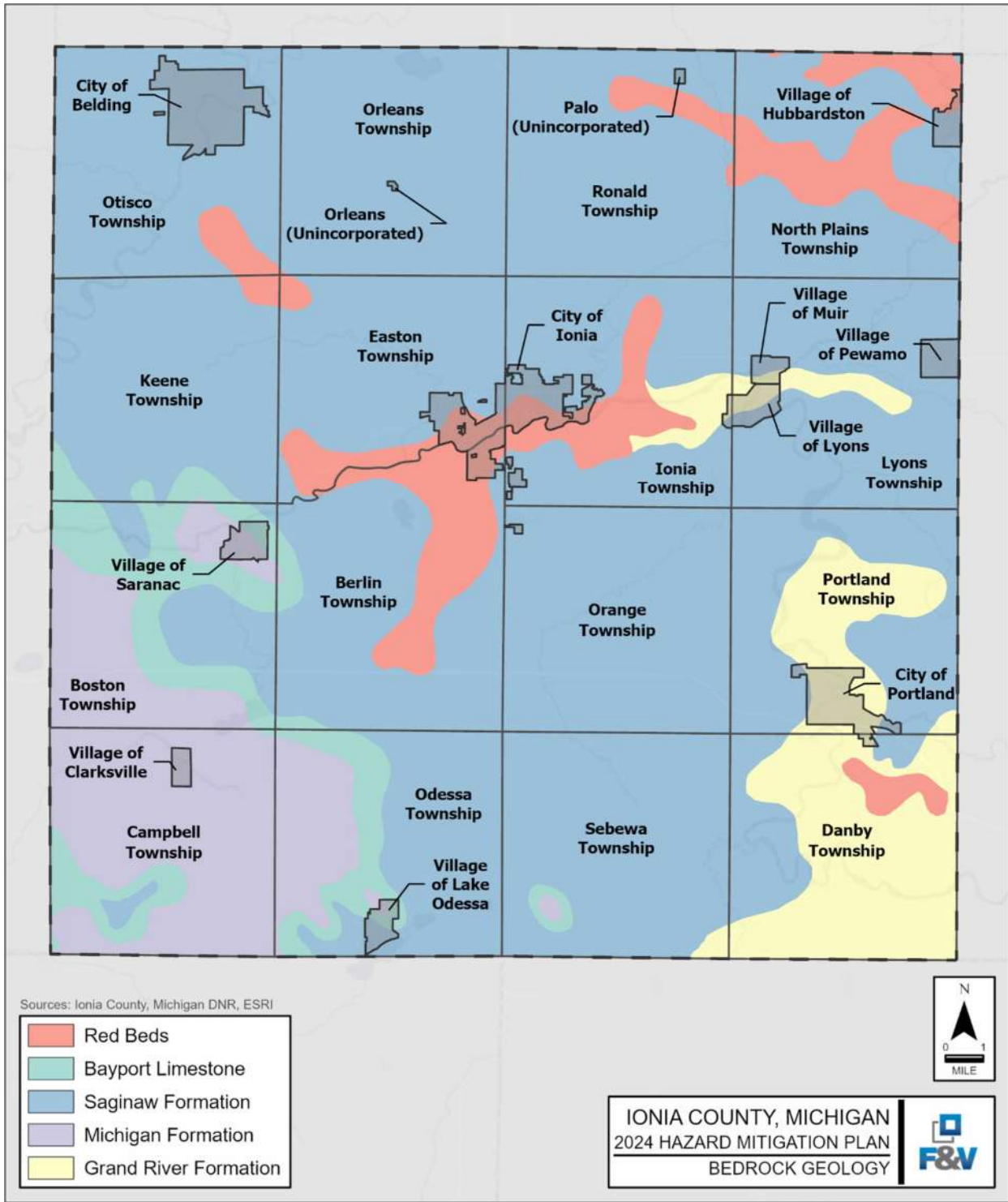
### Section 2.3.4: Soil

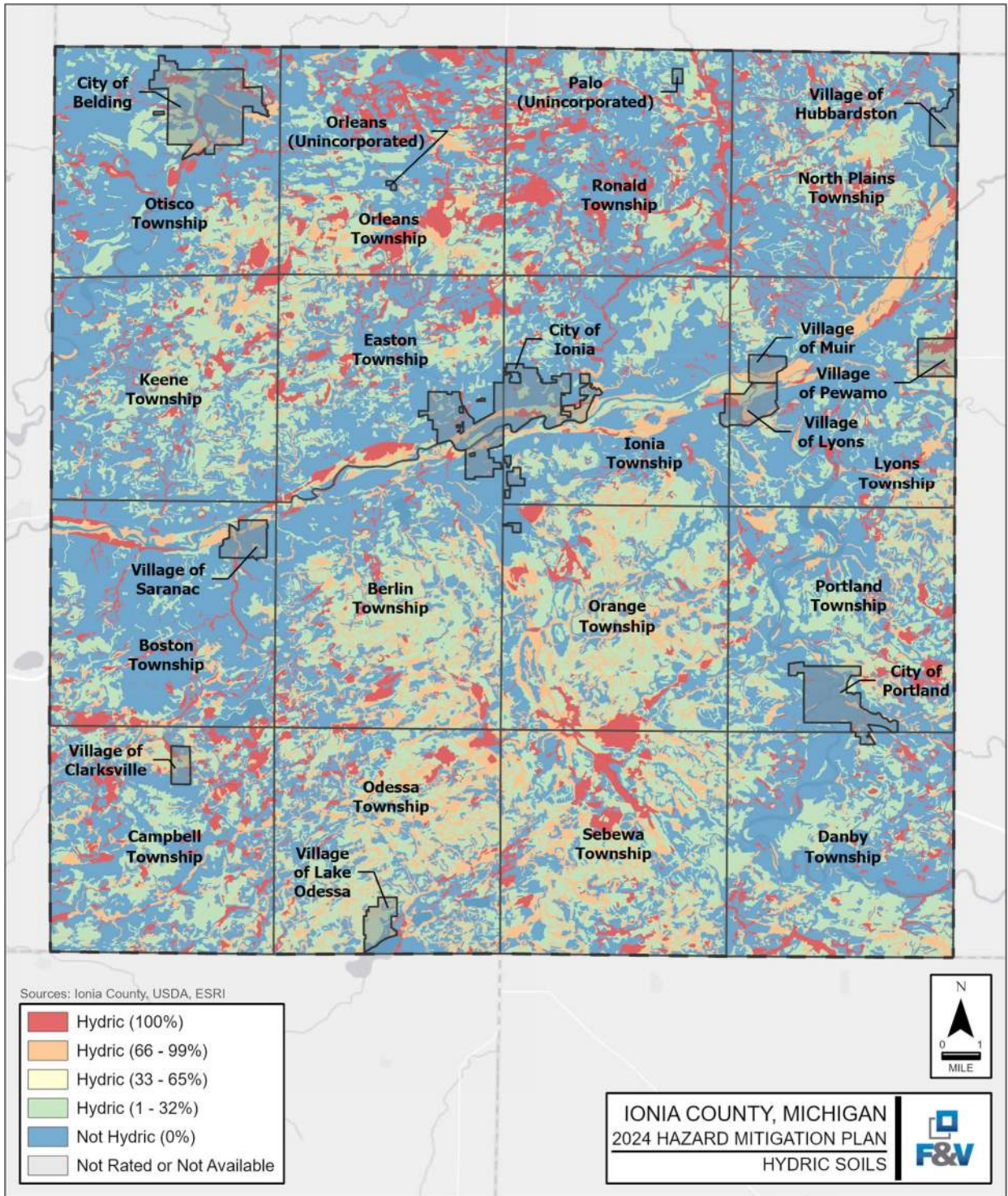
According to the *Soil Survey of Ionia County*, the underlying bedrock is covered by 50 to 500 feet of glacial material, except for one small area east of the City of Ionia along the south side of the Grand River.

The *Soil Survey* also details the soil associations in Ionia County. Soil associations are landscapes that have a distinctive proportional pattern of soils, normally consisting of two or more major soils and at least one minor soil. The soils in one association may occur in another, but in a different pattern. These soil associations are detailed below:

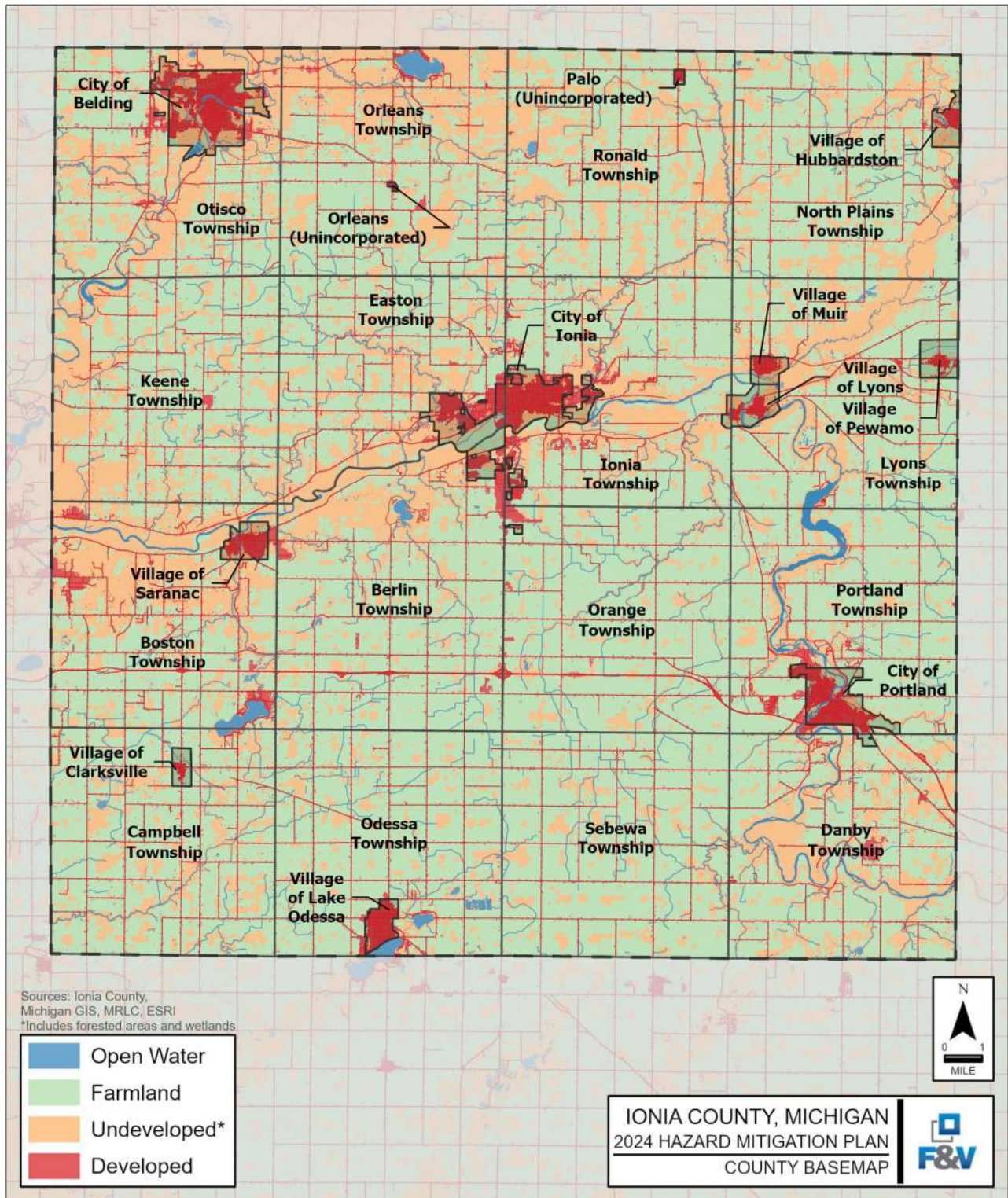
1. Carlisle-Cohoctah-Sloan: Level, very poorly drained organic soils in depressions, and poorly drained loamy soils that formed in alluvium on flood plains. This association is found along stream valleys and on the uplands. Most of this association is cultivated, and natural fertility is generally moderate or moderately high. However, there is a cover of second-growth forest in some undrained areas of organic soils and in very sandy or swampy depressions and oxbows.
2. Morley-Blount-Nester: Rolling, well-drained to somewhat poorly drained loamy soils. This association is found in the northeastern part of the county, and consists of short, relatively steep, irregular slopes, narrow hilltops, and shallow depressions. Most of this association is cultivated, and natural fertility is moderately high or high.
3. Miami-Celina-Marlette: Gently undulating to rolling, well drained and moderately well drained loamy soils. This association occurs throughout the county and has a rolling topography that consists mainly of gentle to steep slopes with a few level areas and depressions. The steeper slopes generally are adjacent to well-developed natural drainageways, and relatively large areas of this association are along the Grand and Maple Rivers. The dominant soils in this association are moderately high in natural fertility. This association and the Conover-Brookston association comprise the major farming areas of the county.
4. Conover-Brookston: Level to gently undulating, somewhat poorly drained and poorly drained loamy soils. This association is in the southern part of the county and consists mainly of low swells and undulating uploads with broad level tops, interspersed with low-lying swales and irregularly shaped flats. Most of this association is intensively cultivated, although a few scattered wet areas remain in forest. The natural fertility of the dominant soils is high or moderately high.
5. McBride-Lapeer-Coral: Level to strongly rolling, well-drained to somewhat poorly drained loamy soils. The complex topography of this association ranges from broad level or nearly level areas to numerous knobs, narrow hilltops, shallow to deep basins, and sharply sloping draws and ravines. It occurs mainly in the western half of the county, and most of its area is cultivated. This association has a medium natural fertility and a moderately low available moisture capacity.
6. Matherton-Sebewa-Wasepi: Level, somewhat poorly drained and poorly drained loamy soils underlain by sand and gravel. This association is found in the southern half of the county and consists of shallow, elongated depressions that in places are as much as 10 miles long. Most of this association is cultivated; some areas, particularly the wetter areas, are still forested. Natural fertility and available moisture content are generally medium or moderately high.
7. Mancelona-Fox-Boyer: Level to steep, well-drained loamy soils underlain by sand and gravel. This association is along rivers and creeks throughout the county; large areas border the Grand, Maple, and Flat Rivers and Prairie Creek. Most of the association is cultivated, and the major limitations that affect the production of crops are susceptibility to erosion, stoniness, and droughtiness.
8. Grayling-Spinks-Montcalm: Rolling to hilly, well drained and moderately well drained sandy soils. This association is found in mainly the western part of the country and consists of rolling to hilly uplands that are dissected by deep cuts and narrow draws and drainageways. While much of the association has been cleared and cultivated, many areas have reverted to brush and second-growth forest or have been planted to trees. This association has a low natural fertility.



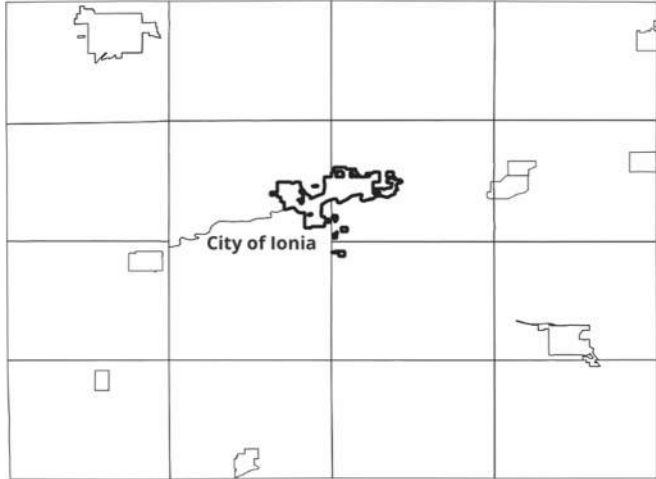




## Chapter 2.2: City Profiles

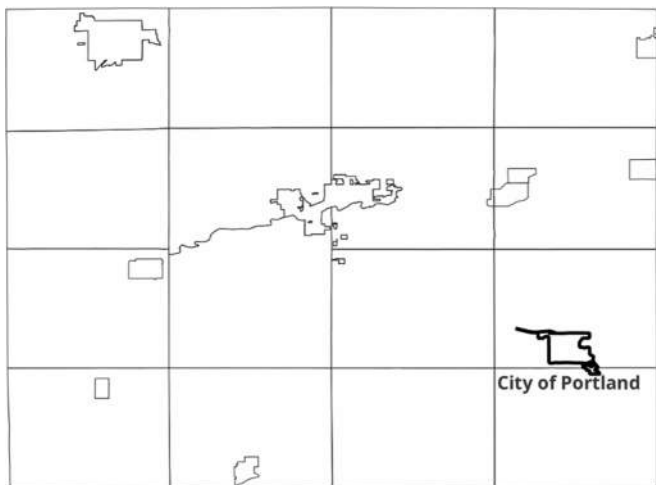
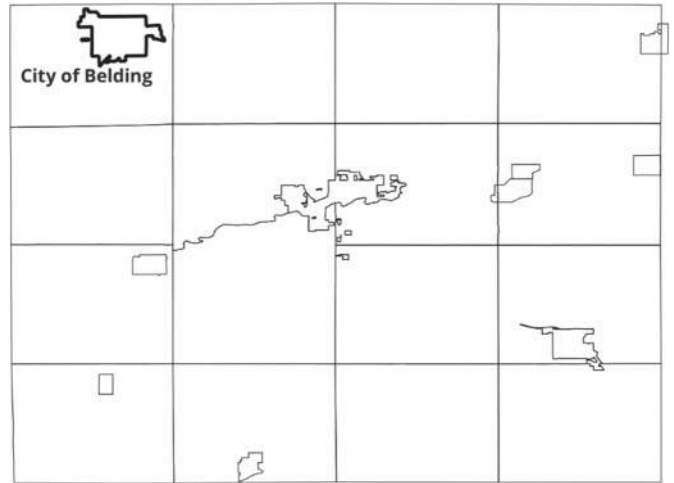


Note that in the following three chapters, “undeveloped” land primarily refers to land with wild tree or plant cover; additionally, both participating and non-participating jurisdictions are included, ordered in each chapter by population – non-participating jurisdictions are indicated by italicized descriptions.



The City of Ionia is the most populous city in Ionia County at 11,704 in 2021 and serves as the county seat. The city is contained mostly within Ionia Township, near the center of the county, and extends into Easton and Berlin Townships as well. Ionia has the lowest developed land percentage of the county's three cities and is the largest city by area.

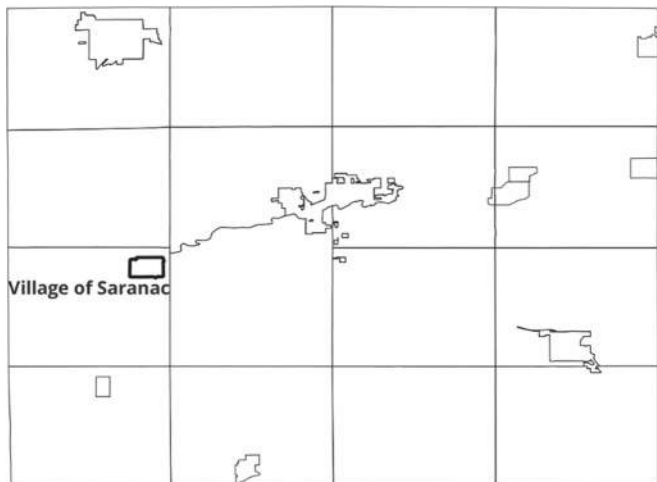
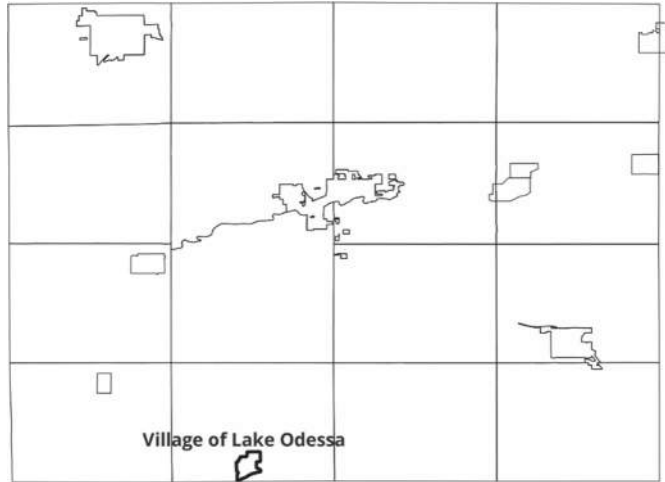
The City of Belding is the next-most populous city in Ionia County at 6,129 in 2021. Belding is enclosed entirely within Otisco Township near the northwest corner of the county. The city has the highest undeveloped land percentage and the lowest percentage of land used for farming of Ionia County's three cities.



The least populous of Ionia County's three cities at 3,947 in 2021, the City of Portland sits in the south-central part of the county, enclosed within Portland Township and administered separately. Portland has the highest developed and farming land percentages of the county's three cities.

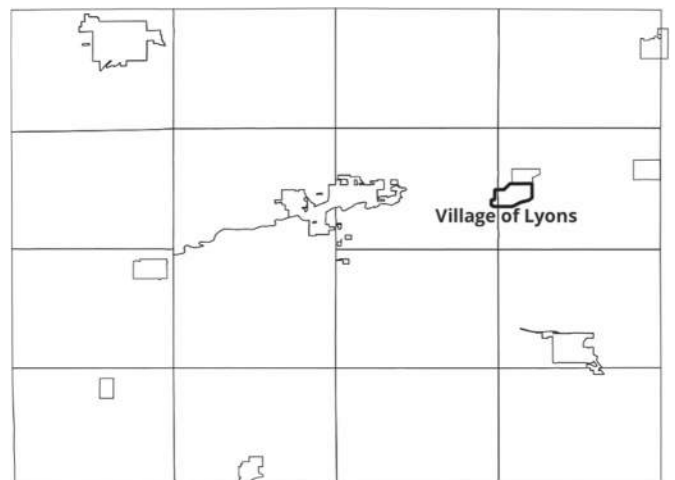
## Chapter 2.3: Village Profiles

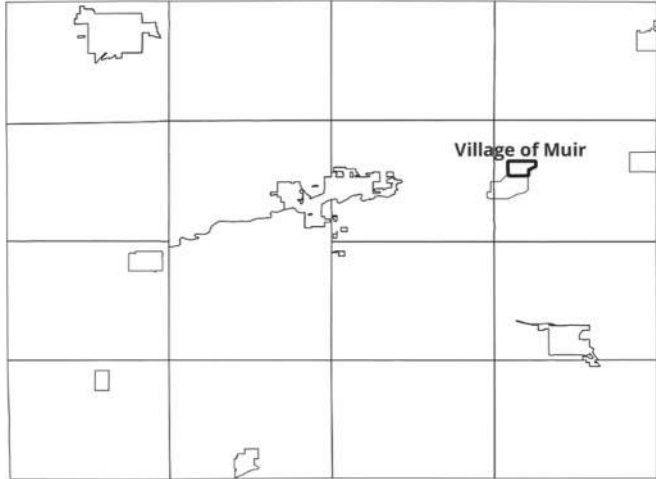
The Village of Lake Odessa is Ionia County's most populous village at 2,128 in 2021, enclosed entirely within Odessa Township on the county's southern border with Barry County. The village is almost completely developed and has the lowest percentage of land used for farming of Ionia County's seven villages.



The Village of Saranac is Ionia County's second-most populous village at 1,424 in 2021, enclosed within Boston Township in the east-central part of the county. The village is moderately developed at 60% of land cover.

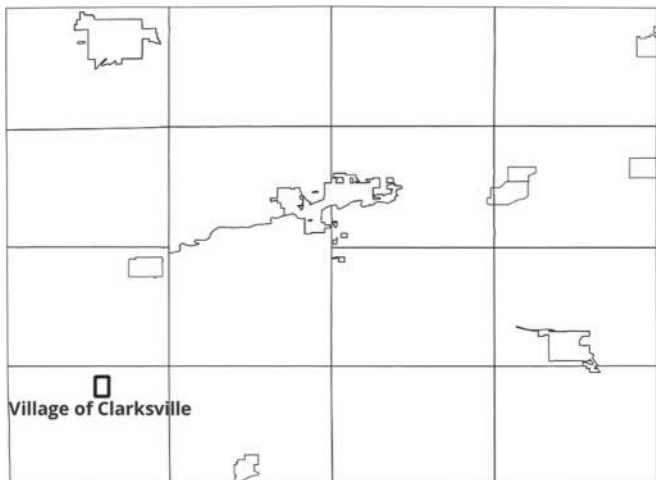
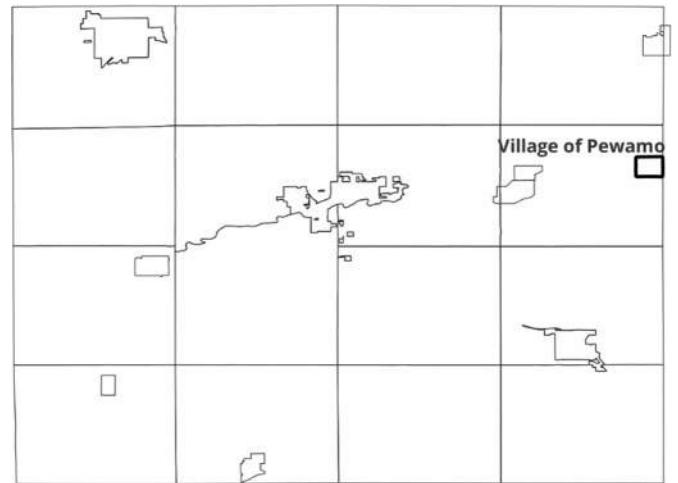
*The Village of Lyons is the third-most populous village in Ionia County at 801 in 2021, and is contained mostly within Lyons Township while extending slightly into Ionia Township. The Grand River runs through and along the village, giving it the largest land cover percentage of open water of any of the county's cities or villages.*





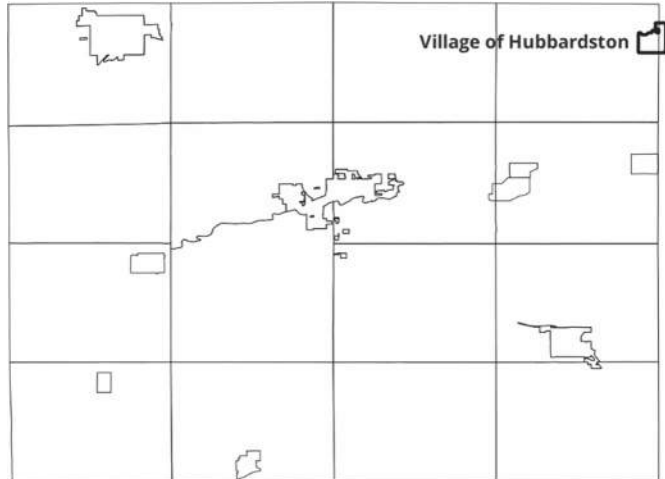
The Village of Muir is enclosed within Lyons Township and had a population of 666 in 2021. The village is moderately developed at just under half of its land cover.

The Village of Pewamo is enclosed within Lyons Township and had a population of 538 in 2021. The village is primarily a farming community, with 70% of its land used for farming.

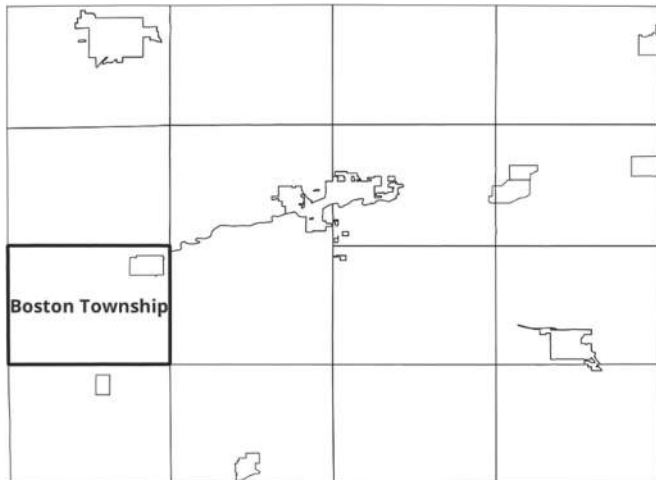


The Village of Clarksville is enclosed within Campbell Township and had a population of 413 in 2021. The village is primarily a farming community, with 68% of its land used for farming.

The Village of Hubbardston is contained mostly within North Plains Township while extending slightly into Lebanon Township in Clinton County and had a population of 348 in 2021. The village had the highest percentage of undeveloped land of any of Ionia County's cities or villages at 46%.

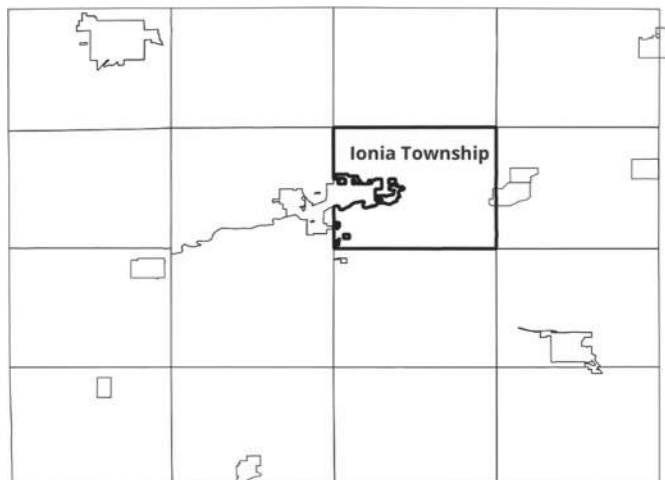


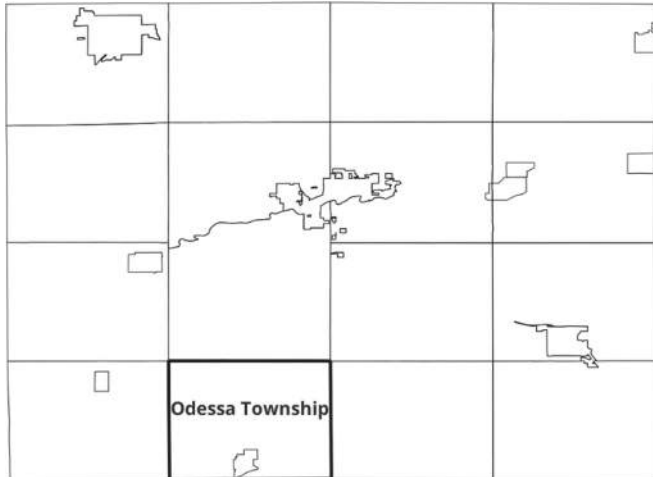
### Chapter 2.4: Township Profiles



Boston Township is Ionia County's most populous township at 6,021 in 2020 and borders Kent County to the west. The township has the highest percentage of undeveloped land of any township in Ionia County at 41%, and is also moderately farmed with 45% of land used for farming.

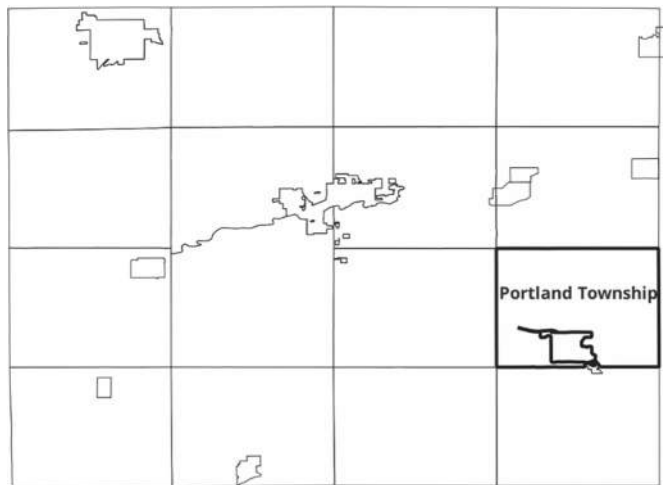
Ionia Township is Ionia County's second-most populous township at 3,961 in 2020. The township is moderately farmed, with 60% of its land being used for farming, and contains a moderate percentage of undeveloped land at 30%.



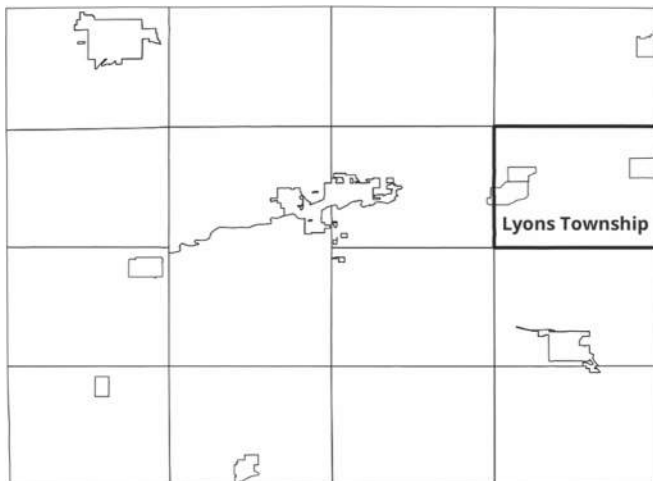


Odessa Township is Ionia County's third-most populous township at 3,918 in 2020 and borders Barry County to the south. The township is primarily a farming community, with 79% of its land used for farming.

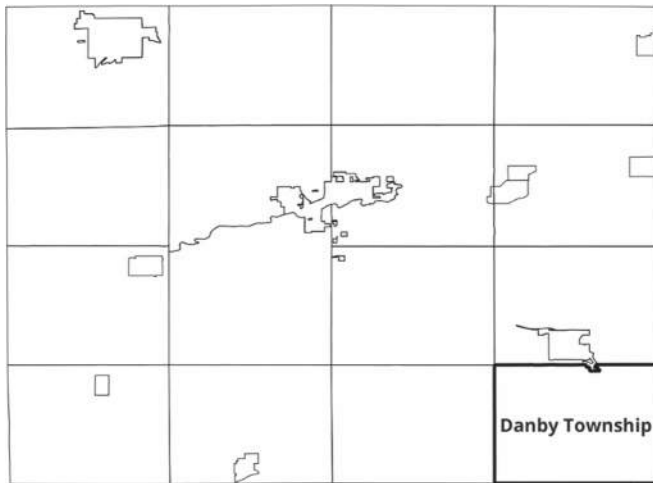
*Portland Township had a population of 3,881 in 2020 and borders Clinton County to the east. The township is primarily a farming community, with 73% of its land used for farming.*



Lyons Township had a population of 3,513 in 2020 and borders Clinton County to the east. The township is moderately farmed, with 63% of its land being used for farming, with most of the rest (29%) undeveloped land cover.

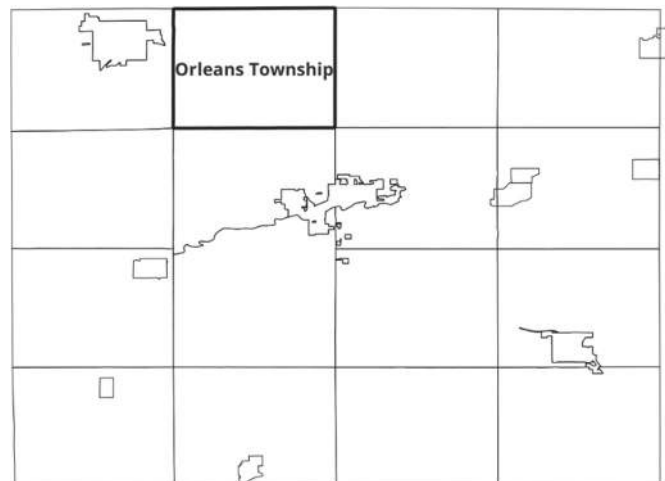


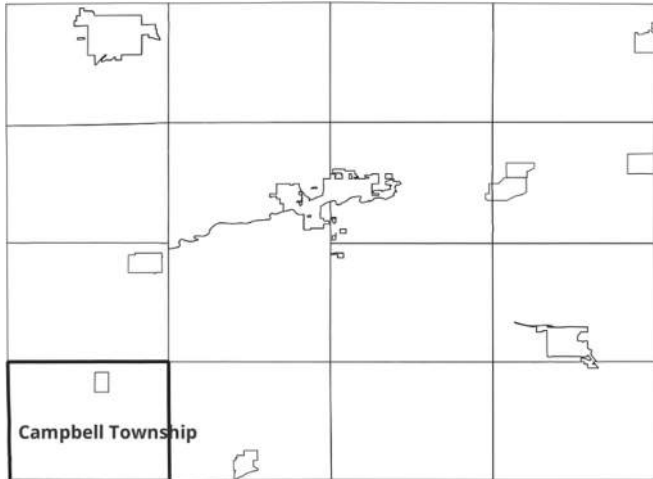
Easton Township had a population of 3,058 in 2020. The township is moderately farmed, with 58% of its land being used for farming, with most of the rest (33%) undeveloped land cover.



Danby Township had a population of 2,953 in 2020 and borders Clinton and Eaton Counties. The township is moderately farmed, with 60% of its land being used for farming, with most of the rest (30%) undeveloped land cover.

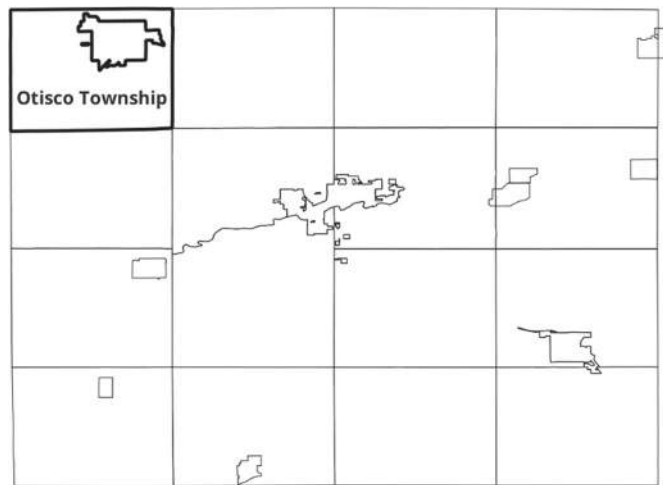
Orleans Township had a population of 2,664 in 2020 and borders Montcalm County to the north. The township is moderately farmed, with 51% of its land being used for farming, with most of the rest (40%) undeveloped land cover.



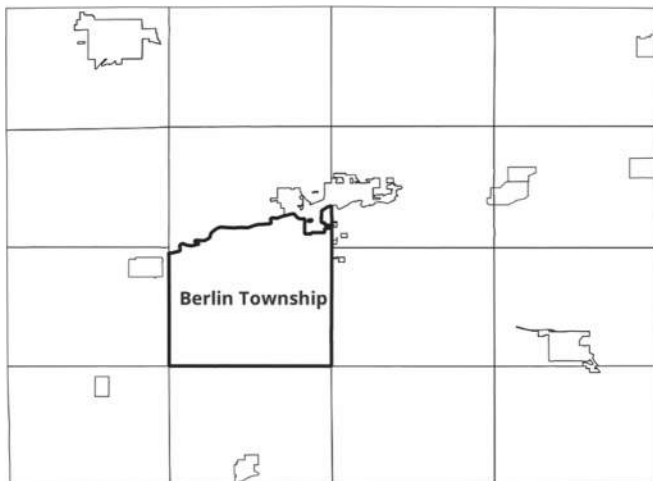


Campbell Township had a population of 2,399 in 2020 and borders Barry and Kent Counties. The township is primarily a farming community, with 72% of its land being used for farming.

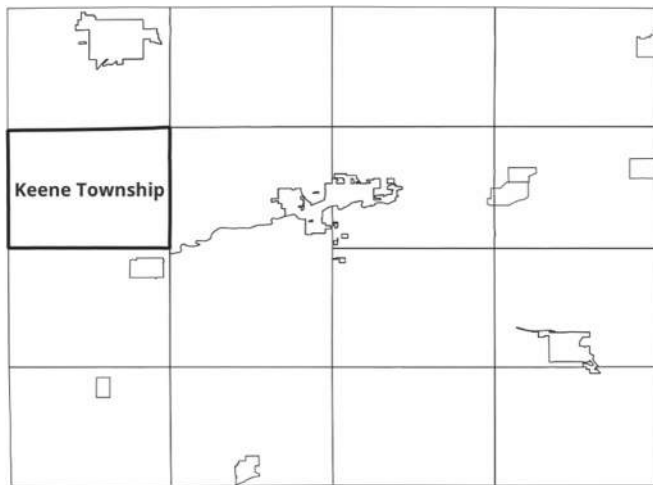
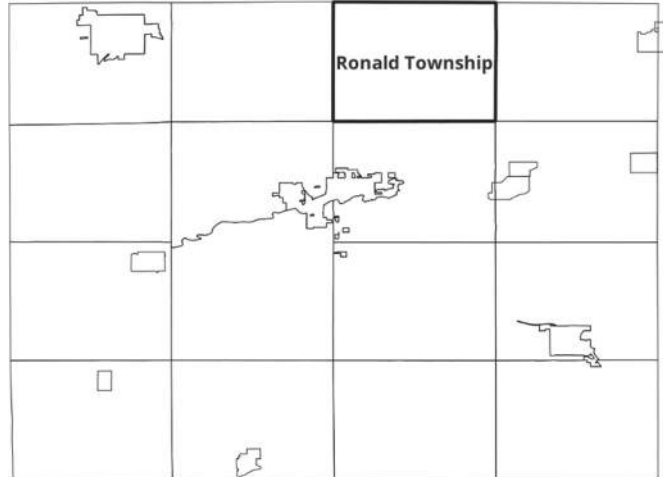
*Otisco Township had a population of 2,268 in 2020 and borders Kent and Montcalm Counties. The township is moderately farmed, with just over half of its land being used for farming, with most of the rest (40%) undeveloped land cover.*



Berlin Township had a population of 2,138 in 2020. The township is primarily a farming community, with 67% of its land being used for farming.

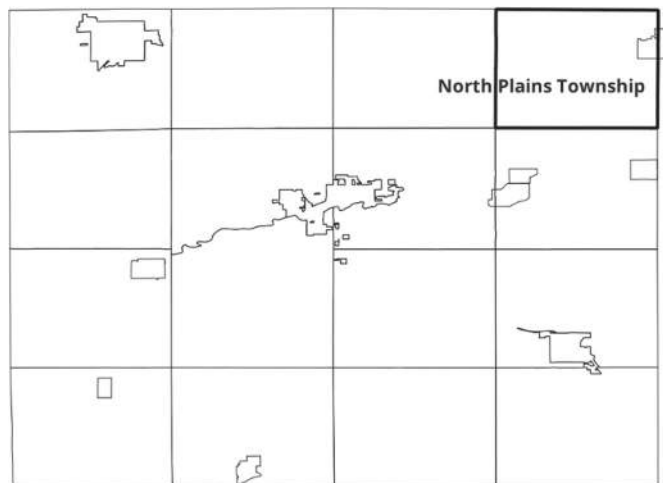


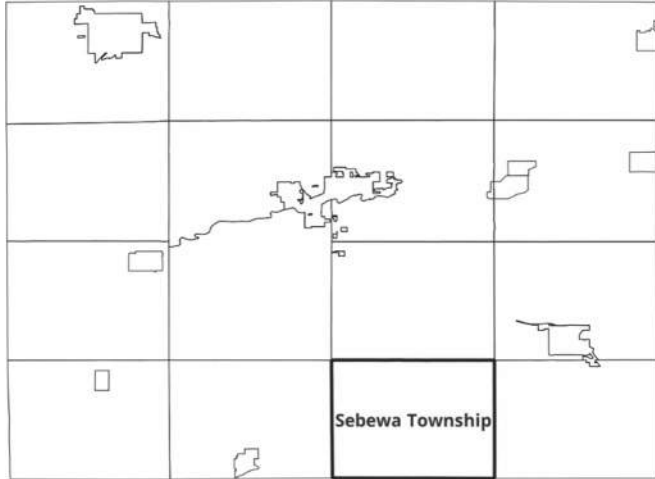
*Ronald Township had a population of 1,861 in 2020 and borders Montcalm County to the north. The township is moderately farmed, with 61% of its land being used for farming, with most of the rest (34%) undeveloped land cover.*



*Keene Township had a population of 1,730 in 2020 and borders Kent County to the west. The township is moderately farmed, with 60% of its land being used for farming, with most of the rest (33%) undeveloped land cover.*

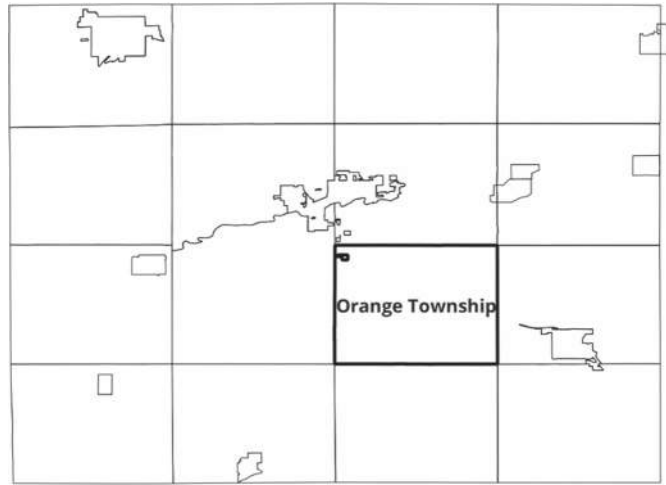
*North Plains Township had a population of 1,191 in 2020 and borders Clinton and Montcalm Counties. The township is primarily a farming community, with 67% of its land being used for farming.*





Sebewa Township had a population of 1,124 in 2020 and borders Eaton County to the south. The township is primarily a farming community, with 82% of its land being used for farming.

*Orange Township had a population of 1,012 in 2020. The township is primarily a farming community, with 83% of its land being used for farming.*



# Part 3: Hazard Identification and Assessment

## Chapter 3.1: Overview and Identification

Emergency management officials are challenged with managing threats posed by natural hazard events to protect life and property. To be effective at mitigating, preparing for, responding to, and recovering from all hazards, the types of hazards facing a county should be identified and understood. Hazard identification provides communities with a realistic base to plan for mitigation, preparedness, response, and recovery activities.

The process of hazard identification was based on evaluation of the State of Michigan's Hazard Mitigation Plan and the Region 6 Threat and Hazard Identification and Risk Assessment (R6THIRA) along with analyses of historical storm and disaster data. These efforts culminated in the following list of natural hazards that affect or have the potential to affect Ionia County (individually detailed in Chapter 3.2), ordered by Risk Assessment Value (calculated as described in Chapter 3.3):

- Floods
- Severe Winds
- Ice/Sleet Storms
- Hail
- Tornadoes
- Winter Storms/Heavy Snow Events/Blizzards
- Drought
- Thunderstorms/Lightning
- Dam Failures
- Extreme Cold
- Extreme Heat
- Public Health Emergencies
- Fog
- Subsidence
- Invasive Species
- Wildfires
- Earthquakes
- Space Weather
- Impacting Objects (Celestial)

While Ionia County is vulnerable to a wide range of natural hazards, the expected impacts associated with such events are considered by FEMA's National Risk Index to be Relatively Low, with a high level of community resilience and low social vulnerability to adverse impacts of natural hazards when compared to the rest of the US. In general, communities in Michigan face below-average expected losses from hazard events, have a below-average social vulnerability to their impacts, and have an above-average level of community resilience in withstanding and recovering from their disruptions compared to the United States as a whole, with Ionia County faring averagely for Michigan in these areas. FEMA's calculated Expected Annual Loss (which considers losses to crops and livestock; human life, where the value of a human life is considered as \$11.6 million; and, building value) for Ionia County from natural hazard events is approximately \$7.27 million as of March 2023, nearly two-thirds of this amount pertaining to structural damage; given the population of 66,764 provided in this dataset, this works out to an individual yearly loss of just under \$109, higher than the Michigan average of \$74 (as Ionia County is more vulnerable to strong winds and tornados than the state average) but significantly lower than the American average (including territories) of \$335.

## Chapter 3.2: Natural Hazards

### Section 3.2.1: Severe Winter Weather

The weather-related natural hazards listed in the previous chapter can broadly be divided into winter and summer categories. The Region 6 Threat and Hazard Identification and Risk Assessment lists extreme cold, ice storms, heavy snow events, and blizzards under the blanket of severe winter weather. As a northern location, Ionia County is vulnerable to all of these winter hazards; all regions of the county are considered equally vulnerable to these hazards due to relative climate uniformity. Additionally, as signs of climate change continue to become apparent within Ionia County, often in the form of more extreme weather events and increased average temperatures, these hazards will continue to pose a serious hazard risk to the county and its residents. Hazards such as ice storms and winter storms are likely to become more severe as climate change continues; ice storms increase in frequency as temperatures cycle across the freezing mark more often, and winter storms are often fed by interactions between warm southern air and cold Arctic air, intensifying as the temperature differential between these fronts increases. However, the risks associated with extreme cold are likely to decrease as the observed warming effects of climate change continue.

#### Item 3.2.1.1: Extreme Cold

Ionia County has a warm-summer humid continental climate under the Köppen climate classification, featuring warm summers and very cold winters. According to historical data provided by NOAA, between 1982 and 2010, the county saw a yearly average of 49 days with a high temperature below freezing, and a yearly average of 7 days with a low temperature below zero degrees Fahrenheit.

FEMA's calculated Annualized Frequency of Cold Waves for Ionia County is approximately 0.43, meaning a local extreme cold hazard event is expected slightly less than once every two years. The National Risk Index considers the entirety of Ionia County's population to be vulnerable to this hazard, and the total calculated Expected Annual Loss for Ionia County from this hazard is approximately \$296,745; this produces a loss of approximately \$4.45, per person in Ionia County from extreme cold weather.

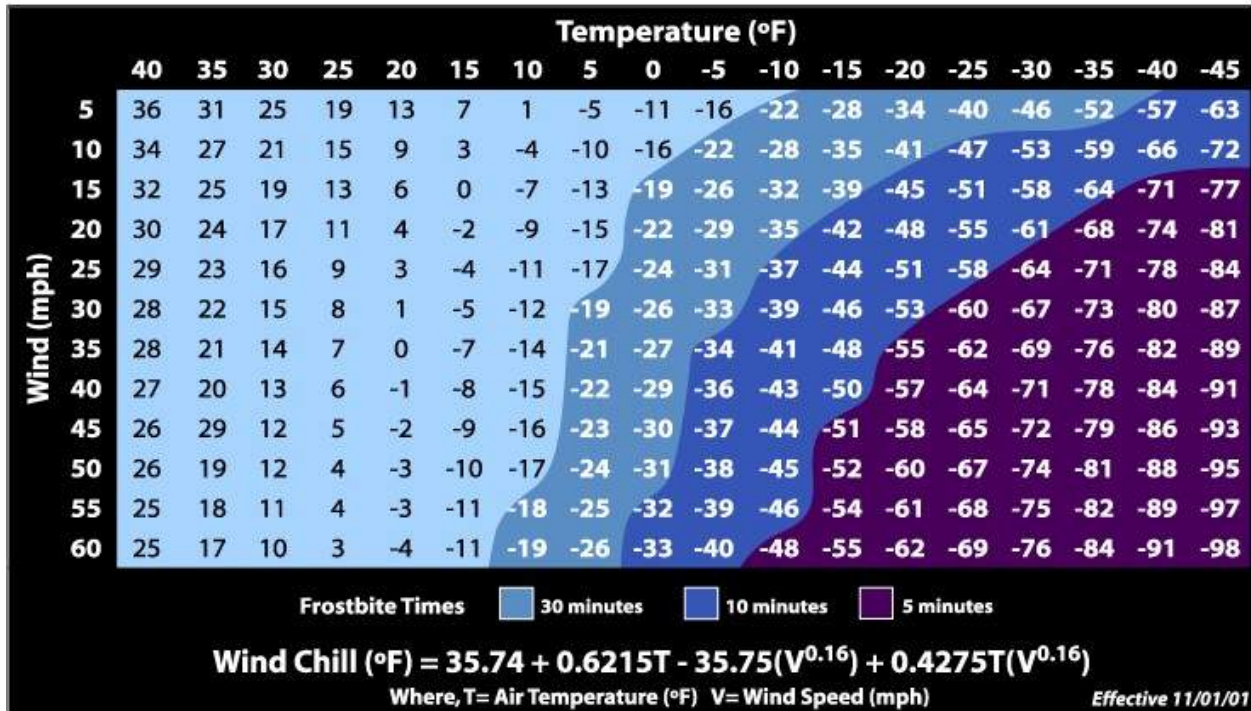
Periods of extreme cold can, like heat waves, result in a significant number of temperature-related deaths. Each year in the United States, approximately 700 people die as a result of severe cold temperature-related causes, substantially higher than the yearly average of 175 heat-related deaths. It should be noted that a significant number of cold-related deaths are not the direct result of "freezing" conditions. Rather, many deaths are the result of illnesses and diseases that are negatively impacted by severe cold weather, such as stroke, heart disease, and pneumonia.

Hypothermia (the unintentional lowering of core body temperature), and frostbite (damage from tissue being frozen) are probably the two conditions most closely associated with cold temperature-related injury and death. Hypothermia is usually the result of over-exposure to the cold and is generally thought to be clinically significant when core body temperature reaches 95 degrees or less. As body temperature drops, the victim may slip in and out of consciousness, and appear disoriented. Treatment normally involves warming the victim, but frostbitten areas should not be rubbed. Although frostbite damage itself rarely results in death, in extreme cases it can result in the amputation of the affected body tissue.

An important factor to consider when discussing extreme cold is wind chill, which is the term used for the combined effect of temperature and wind, and the combination of these two factors results in a lower apparent temperature than a thermometer reads. In the wind chill chart below, extremely low apparent temperatures can also be associated with an amount of exposure time that it takes to cause frostbite. Cells of the table that have darker shadings denote wind chill temperatures that can produce frostbite in 10 minutes or less. Cells with lighter shadings are associated with frostbite times of 30 minutes or less. Unshaded cells in the table should require longer exposure times to cause frostbite.



# Wind Chill Chart



Periods of extreme cold are risky for those in both rural and in urban areas. Frostbite and hypothermia are common in rural areas where people are trapped outdoors and do not adjust properly to the temperatures. Even indoors, hypothermia is a concern for individuals living in inadequately heated apartments or rooms. Loss of life can occur with either of these situations. Damage to buildings and pipelines can also occur in bitter cold conditions, resulting in expensive repairs and potential days of business and school shutdowns.

It is known that every winter season, the Ionia County area is exposed to prolonged periods of below-freezing temperatures that may cause frostbite, hypothermia, and other health effects. Ionia County temperatures even go below zero degrees Fahrenheit several times per year on average. Frozen pipes, broken pipes, and other freeze damages are counted among the physical impacts on this hazard.

To mitigate the effects of the unfavorable cold temperatures, communities within Ionia County should make sure that housing codes are appropriate and that adequate furnaces are in place in apartment dwellings. Inspections of vulnerable and outdated infrastructure should be made in the fall season, before winter sets in. In addition, proper insulation of piped areas can prevent water main breaks.

While cold temperatures are a yearly occurrence in Ionia County, NOAA's Storm Events Database does not list any cold/wind chill events for Ionia County since January 1<sup>st</sup>, 2000.

### Item 3.2.1.2: Ice/Sleet Storms

Ice storms are Michigan's most damaging winter hazard, frequently resulting in infrastructure and transportation breakdowns. They are the result of cold rain that freezes on contact with a surface, coating the ground, trees, buildings, overhead wires, cars, and other exposed objects with ice and sometimes causing extensive damage. These ice storms often result in over half an inch of ice cover over affected

areas. Oftentimes, ice storms are accompanied by snowfall, in which the ice is camouflaged and covered up by snow, creating treacherous transportation conditions.

Sleet is a different but similar phenomenon and has been combined in this chapter with ice storms for convenience. Sleet consists of small, already-frozen rain drops (ice pellets) that bounce when hitting the ground or other objects. These small pellets of ice then accumulate on surfaces, causing potential harm to transportation and electrical systems. Sleet does not stick to trees and wires like freezing rain does, but sleet in sufficient depth does cause hazardous driving conditions.

FEMA's calculated Annualized Frequency of Ice Storms for Ionia County is approximately 1.62, meaning a local ice storm is expected once or twice per year. The National Risk Index considers the entirety of Ionia County's population to be vulnerable to this hazard, and the total calculated Expected Annual Loss for Ionia County from this hazard is approximately \$305,925; this produces a loss of approximately \$4.58 per year, per person in Ionia County from ice storms.

Ice and sleet storms tend to cause power or other infrastructure failures that interfere with residents' activities, comfort, and safety (often through the impact of infrastructure failures on needed medical and emergency response capabilities). Direct physical effects may include frostbite, hypothermia, and other medical conditions, and thus require some citizens to be provided with warm clothing and shelter. Certain types of building designs are susceptible to structural failure from the accumulation of ice or snow on their roofs. Traffic efficiency and road capacity tends to be impeded by these weather events, which cause a large increase in the risks involved in all modes of travel. Injurious accidents may include simple pedestrian falls (due to the difficulty of balancing and walking on ice-coated surfaces), or large-scale transportation accidents (such as multi-car interstate pileups).

By observing winter storm watches and warnings, adequate preparations can usually be made to reduce the impacts of ice and sleet conditions on communities within Ionia County. Providing for the mass care and sheltering of residents left without heat or electricity and mobilizing sufficient resources to clear broken tree limbs from roadways, are the primary challenges facing community officials. Ice storms usually have a regional effect and groups of communities are usually affected instead of just one community. Therefore, every community should plan and prepare for these emergencies. Planning and preparedness efforts should include the identification of mass care facilities and necessary resources such as cots, blankets, food supplies and generators, as well as debris removal equipment and services. In addition, communities should develop debris management procedures (to include the identification of multiple debris storage, processing, and disposal sites) so that the tree and other storm-related debris can be handled in the most expedient, efficient, and environmentally safe manner possible.

NOAA's Storm Events Database lists the following ice/sleet storm events for Ionia County that have occurred since January 1<sup>st</sup>, 2000:

4/3/2003: A major ice storm affected much of southern lower Michigan, causing hundreds of thousands of people to lose power. When all was said and done with, most counties across central and southern lower Michigan ended up receiving a total of at least a half an inch of ice, with reports of total ice accumulation of an inch quite common, and even up to near an inch and a half of ice in some locations.

2/16/2006: A major ice storm developed across much of central lower Michigan producing around a quarter to half inch of ice accumulation between Route 10 and I-96.

12/1/2006: A strong early winter season low pressure system brought snow and freezing rain to southwestern and west central lower Michigan. A third of an inch of ice was reported across most of Ionia County.

12/24/2009: A mix of snow, sleet and freezing rain moved in from south to north on December 24 eventually transitioning to moderate freezing rain as predominant precipitation type. Reports from across the area indicated that many locations received between one and two tenths of an inch of ice

accumulation. A few reports near a quarter of an inch of icing were also received. Road conditions were primarily wet during the morning and afternoon but became icy on Christmas Eve due to all the freezing rain that had fallen in combination with falling surface temperatures after sunset. Several accidents were reported.

3/22/2011: A winter storm impacted most of Southwest Lower Michigan from near Interstate 96 northward from late afternoon of March 22nd into the early afternoon hours of March 23rd. A tenth to nearly a quarter of an inch of ice accumulation was reported across northern Ionia county primarily north of I-96, resulting in numerous school closings and several power outages.

12/21/2013: An ice storm affected portions of southern lower Michigan from December 21-22. Up to one-half an inch of ice accumulation occurred across southern Ionia county, causing numerous power outages and downed trees, tree limbs and lines. Thousands of people did not have power restored until 3 to 5 days after the storm hit.

12/29/2015: Low pressure tracked north through the western Great Lakes, producing a significant winter storm for much of the region. Lower Michigan received a combination of snow, sleet, and freezing rain. Up to two inches of sleet was reported.

4/14/2018: A significant late season winter storm brought a mix of high winds, heavy rain, sleet and freezing rain. The highest wind gusts occurred on the 14th and heavy sleet and freezing rain developed during the early morning hours of the 15th through the early to midafternoon hours of the 15th. An inch to two inches of sleet was reported. The combination of heavy sleet and strong winds caused power outages.

2/5/2019: A half to three quarters of an inch of freezing rain resulted in numerous downed trees, limbs, power lines and widespread power outages.

### Item 3.2.1.3: Winter Storms/Heavy Snow Events/Blizzards

Winter storm hazards plague Ionia County annually from November to March. No part of the region is immune to severe winter conditions that can clog or paralyze the transportation network, cause widespread power outages, and slow normal daily activities to a standstill.

A snowstorm is a period of rapid accumulation of snow often accompanied by high winds, cold temperatures, and low visibility. Blizzards are the most dramatic and perilous of all snowstorms, characterized by strong sustained winds that cause blowing snow and resulting low visibility.

FEMA's calculated Annualized Frequency of Winter Weather hazard events for Ionia County is approximately 3.72, meaning a particularly bad winter storm is expected several times per year. The National Risk Index considers the entirety of Ionia County's population to be vulnerable to this hazard, and the total calculated Expected Annual Loss for Ionia County from this hazard is approximately \$142,096; this produces a loss of approximately \$2.13 per year, per person in Ionia County from winter storms.

The western half of the Lower Peninsula (including Ionia County) experiences heavy snowfall and a relatively large number of snowstorms. One reason for this is the "lake effect," a process by which cold winter air moving across Lakes Michigan picks up moisture from the warmer lake waters, resulting in larger snowfall amounts in the western part of the state. In general, the snowstorm season of Ionia County runs from November to April each year. (Although snow occasionally does fall outside of this "season," such snowfall would be comparatively light, rather than the sort of snowstorm event that is here being considered as a hazard.) This does not mean that all of these months necessarily receive significant snowfall each year. Instead, the "season" denotes the part of each year when a significant snowstorm may occur. A significant snowstorm is here defined as at least several inches of snow accumulation in a single event.

By observing winter storm watches and warnings, adequate preparation can usually be made to reduce the impact of snowstorms on Ionia County communities. Providing for the mass care and sheltering of residents left without heat or electricity, and mobilizing sufficient resources to clear blocked roads, are the primary challenges facing community officials. Therefore, every community should plan and prepare for severe snowstorm emergencies. That planning and preparedness effort should include the identification of mass care facilities and necessary resources such as cots, blankets, food supplies and generators, as well as snow clearance and removal equipment and services. Pre-planning for snow storage areas will be helpful. In addition, communities should develop debris management procedures (to include the identification of multiple debris storage, processing and disposal sites) so that the tree and other storm-related debris can be handled in the most expedient, efficient, and environmentally safe manner possible.

Michigan sees a major regional or statewide snowstorm approximately every 5 years. Local events are much more frequent. Casualties are difficult to assess because many deaths are caused by automobile accidents, heart attacks from overexertion, and other secondary impacts that may be difficult to distinguish as weather-related.

Heavy snows can shut down towns and cities for a period of a few days if snow is persistent and cannot be cleared in a timely fashion. Roof failures may occur as the weight and volume of snow cause damage to homes and buildings. Urban areas are especially susceptible to outages and problems with snow removal, while rural areas may have inaccessible roads for some time but have residents that are more prepared to handle power outages and temporary isolation. Motorists and passengers in cars can be stranded in rural areas and die of exposure because of inadequate preparation for conditions.

NOAA's Storm Events Database lists the following snow event occurrences for Ionia County since January 1<sup>st</sup>, 2000:

12/13/2000: An area of low pressure moved northeast through the Ohio Valley region and produced a swath of moderate to heavy snow across southern lower Michigan. Ionia County received 4-6 inches of snow from 2 p.m. on the 13th through 2 a.m. on the 14th.

12/16/2000: A low pressure system developed over Kentucky during the afternoon hours of the 16th, and moved north across western Ohio late on the 16th, and to London, Ontario by 7 a.m. on the 17th. It produced a narrow band of moderate to heavy snow from Kalamazoo and Battle Creek north northeast to just east of Grand Rapids. Ionia County received 7-11 inches of snow from 10 p.m. on the 16th and 10 a.m. on the 17th.

3/4/2003: Low pressure moved from the panhandle of Texas northeast to Nebraska and eventually to near Toledo Ohio, producing heavy snow across central and southern lower Michigan. Most of the area between I-96 and I-94 received anywhere from 6 to 7 inches of snow in less than 12 hours.

1/21/2005: A potent Alberta clipper system in combination with a strong upper air system produced heavy snow across central and southern lower Michigan. 10 to 12 inches of snow was reported across most of the area across the region from Interstate 96 south.

2/27/2005: Six to 11 inches of snow fell across central lower Michigan, primarily north of I-96.

12/8/2005: A synoptic snow event resulted in total snow accumulations of six to eight inches across much of southern lower Michigan.

1/20/2006: A synoptic scale snowstorm brought a large swath of six to ten inches of snow across most of north central and central lower Michigan as well as the lakeshore counties of western Michigan.

2/2/2007: The combination of lake effect snow and snow already on the ground in combination with very strong winds resulted in blizzard conditions across western lower Michigan on February 3rd. Up to four inches of snow fell along with sustained winds of 20 to 30 m.p.h. with gusts to 40 m.p.h. which resulted in visibility at or below a quarter of a mile during the late morning and afternoon hours of the 3rd.

12/15/2007: A significant snow event occurred across much of lower Michigan, with snowfall totals generally ranging anywhere from around four to ten inches. Around six to eight inches of snow fell in many spots near the I-96 corridor.

2/9/2010: A low pressure system formed over the Tennessee Valley region and moved to the north northeast to just east of Toledo Ohio, bringing heavy snow to southern lower Michigan. The snow fell from the morning hours of February 9th through the mid-morning hours of February 10th. Seven to ten inches of snow fell across Ionia County.

2/1/2011: Blizzard conditions began during the evening hours Tuesday, February 1st and continued into the early morning hours on Wednesday. Winds gusts up to 50 mph accompanied 1-to-2-inch hourly snowfall rates. Snow drifts of 3 to 5 feet occurred in open areas.

2/23/2012: A low pressure system brought heavy wet snow to portions of west central and southwestern lower Michigan. The snow began during the evening hours on February 23rd, continuing through the morning of Friday February 24th before ending from west northwest to east southeast during the late morning and early afternoon hours of the 24th. Six inches of snow was reported across portions of Ionia County

1/4/2014: Arctic low pressure dropped southeast from Canada during the night of the fourth into the 5th. More than one foot of snow across most of southern Ionia County plus wind chills thirty below zero.

11/17/2014: The cold air and a favorable atmospheric setup for lake-effect snow led to a prolonged and record-breaking early season snowfall across much of the Great Lakes. Due to strong winds, the greatest snow amounts were recorded further inland. Up to two feet of snow fell across portions of western Ionia County from November 17-21, resulting in very hazardous travel conditions.

2/1/2015: A low pressure system strengthened as it tracked east to near Indianapolis during the evening of February 1st, spreading a large swath of moderate to heavy snow into southern Michigan. Around a foot of snow fell across southern Ionia County, with slightly lower snowfall totals across northern Ionia county. The combination of heavy snow and blowing and drifting snow resulted in very hazardous travel conditions.

2/24/2016: A major winter storm moved into Lower Michigan on February 24 producing heavy wet snow. This snow continued into the morning hours of February 25 before ending. A trained observer reported 11 inches of snow in Saranac.

3/1/2016: A winter storm strengthened as it tracked east northeastward just south of Lower Michigan on March 1. A swath of 8-12 inches of snow, with localized amounts over a foot, fell from southwest lower Michigan into the thumb region. Over ten inches of snow was reported in parts of Ionia county, which resulted in very hazardous travel conditions.

12/11/2016: A low pressure system brought widespread snowfall to much of southern lower Michigan, causing numerous traffic accidents and travel delays. Trained spotters reported 8 to 10 inches of snow across Ionia County.

1/28/2019: A strong low-pressure system reached Lower Michigan on January 28th. Blizzard conditions were common from North Dakota to southern Wisconsin, with snow falling heavily in Lower Michigan on the 28th. Seven to eleven inches of snowfall was reported.

2/2/2022: A winter storm brought 6 to 14 inches of snow to southern Michigan. Trained spotters reported up to six to eight inches of snow across southeastern Ionia County.

#### Item 3.2.1.4: Fog

While fog is not a winter-exclusive weather condition, freezing fog during the winter is generally considered to pose a greater hazard than warm-weather fog, even if fog does not normally have direct

property damage associated with it. Freezing fog occasionally causes treacherously icy road conditions but is typically not associated with direct property damage. The vision limitations associated with fog in general, however, can certainly pose a hazard, particularly to motorists.














NOAA’s Storm Events Database does not list any fog events for Ionia County since January 1<sup>st</sup>, 2000.

### Section 3.2.2: Severe Summer Weather

The Region 6 Threat and Hazard Identification and Risk Assessment lists high winds, thunderstorms, lightning, tornados, hail, floods, extreme heat, and drought under the blanket of severe summer weather. All parts of the county are considered equally vulnerable to these hazards, with the exception of flooding – while floods can occur throughout the County, the greatest negative impacts are associated with particular locations along the lower Grand River, such as around the fairgrounds in Ionia and parts of downtown Portland. As signs of climate change continue to become apparent within Ionia County, these hazards are likely to pose an increased hazard risk to the county and its residents over time.

#### Item 3.2.2.1: Severe Winds

Severe winds are non-tornadic winds classified as exceeding 58 mph. These occur with regularity in Michigan, and they often cause considerable damage to buildings, trees, and the electrical infrastructure. Severe winds spawned by thunderstorms or other storm events have had devastating effects on Ionia County, resulting in deaths, injuries, and millions of dollars in damage to public and private property and agricultural crops since 1970. Existing measures designed to minimize or eliminate the effects of severe winds, such as enforcement of building codes, strengthening electrical transmission lines and equipment, and urban forestry programs, are effective as mitigation measures when implemented in a concerted and consistent manner.

Beaufort number	Wind Speed (mph)	Seaman's term		Effects on Land
0	Under 1	Calm		Calm; smoke rises vertically.
1	1-3	Light Air		Smoke drift indicates wind direction; vanes do not move.
2	4-7	Light Breeze		Wind felt on face; leaves rustle; vanes begin to move.
3	8-12	Gentle Breeze		Leaves, small twigs in constant motion; light flags extended.
4	13-18	Moderate Breeze		Dust, leaves and loose paper raised up; small branches move.
5	19-24	Fresh Breeze		Small trees begin to sway.
6	25-31	Strong Breeze		Large branches of trees in motion; whistling heard in wires.
7	32-38	Moderate Gale		Whole trees in motion; resistance felt in walking against the wind.
8	39-46	Fresh Gale		Twigs and small branches broken off trees.
9	47-54	Strong Gale		Slight structural damage occurs; slate blown from roofs.
10	55-63	Whole Gale		Seldom experienced on land; trees broken; structural damage occurs.
11	64-72	Storm		Very rarely experienced on land; usually with widespread damage.
12	73 or higher	Hurricane Force		Violence and destruction.

Source: IKO

FEMA's calculated Annualized Frequency of Strong Winds for Ionia County is approximately 3.96, meaning a local severe wind event is expected several times per year. The National Risk Index considers the entirety of Ionia County's population to be vulnerable to this hazard, and the total calculated Expected Annual Loss for Ionia County from this hazard is approximately \$2,115,573; this produces a loss of approximately \$31.69 per year, per person in Ionia County from severe winds.

The property damage from straight line winds can be just as extreme as that of a tornado since the damage from straight line winds is more widespread and usually affects multiple counties. Street trees not properly pruned and maintained will incur damage in severe winds. Electrical transmission lines and equipment that is old, inadequate, or vulnerable to damage from trees and tree limbs is much more likely to fail in a storm. Above-ground electrical lines are more vulnerable to wind damage than below-ground lines are, but most of the electrical infrastructure is above ground. Building roofs that are properly and securely anchored to the wall structure are not as likely to be damaged by the uplifting force of winds.

Implementation is the key to all these measures. Over time, these techniques have proven to be sound and cost-effective. However, unless the measures are implemented on a widespread and consistent basis, their effectiveness is greatly reduced.

While historical wind speed data and consequently related predictions are limited, NOAA data from 7/31/2014 to 7/31/2023 shows no hourly wind speeds exceeding 58mph. However, strong winds of a lesser magnitude were observed during this period. The National Weather Service issues high wind warnings for sustained winds between 40mph and 73mph or any wind gusts of 58mph or higher, both still strong enough to cause some damage to trees and structures – these conditions were met on ten separate days during the nine-year period.

NOAA's Storm Events Database lists the following high/strong wind event occurrences for Ionia County since January 2000:

3/9/2002: A very strong area of low pressure produced numerous reports of wind gusts over 60 m.p.h. across southern lower Michigan, with sustained winds of 30 to 40 m.p.h. High wind damage across the area ranged from downed trees and power lines to property damage.

10/30/2004: Law enforcement from all the counties in our area reported scattered downed trees and power lines due to gusty winds. Wind gusts of around 58 to 60 m.p.h. were estimated across our area based on all the reports.

12/28/2008: A strong low-pressure system produced very windy conditions across southwestern lower Michigan on December the 28th. The highest wind gusts occurred mainly before sunrise; however very gusty conditions persisted well into the afternoon. Hundreds of thousands of people across the state lost power at least temporarily due to high winds. Wind gusts up to 60 mph brought down several trees and power lines.

10/27/2010: A line of showers and thunderstorms brought isolated wind damage with tree limbs and signs blown down in Allegan county. After those storms moved east, low pressure over northern Minnesota intensified and brought high winds across lower Michigan. A 60-mph wind gust was recorded at the Ionia airport during the mid-afternoon hours.

4/16/2012: A strong low-pressure system moved across the northern Great Lakes region on April 16th. The public reported that strong winds tore the roof off a barn and knocked over three of the four walls of the barn. Wind gusts at the time were estimated in the 50 to 55 mph range.

11/17/2013: A very strong low-pressure system continued to intensify as it moved northeast across the Great Lakes region November 17th and 18th. The system brought a round of severe thunderstorms during the afternoon hours of Sunday the 17th, followed by very strong winds Sunday evening and Sunday night. Wind gusts of 60 to 70 mph caused widespread power outages in Ionia County.

3/8/2017: A 62 mph peak wind gust was measured at the Ionia airport. Peak wind gusts in the 60 to 70 mph range resulted in numerous downed trees and limbs and power lines and widespread power outages.

2/24/2019: Wind gusts up to around 60 mph downed tree limbs and power lines and resulted in widespread power outages.

NOAA's Storm Events Database also lists the following separately classified thunderstorm wind event occurrences, which will be included in this section as the impacts pertain primarily to wind:

5/19/2019: A power pole was uprooted, and tree limbs were blown down west of Clarksville.

7/20/2019: Several trees were blown down.

7/29/2019: Several trees and power lines were blown down.

8/29/2019: Several trees and power lines were blown down (listing for Ionia).

9/11/2019: The public reported that a large barn was blown off its foundation and there was minor damage to a small barn in the same area near Woodbury. Scattered wind damage was also noted from southeast of Lowell to Lake Odessa in the form of scattered downed trees and limbs.

6/2/2020: Trained spotters reported multiple large trees down across parts of the county.

8/28/2020: A few trees and tree limbs were blown down.

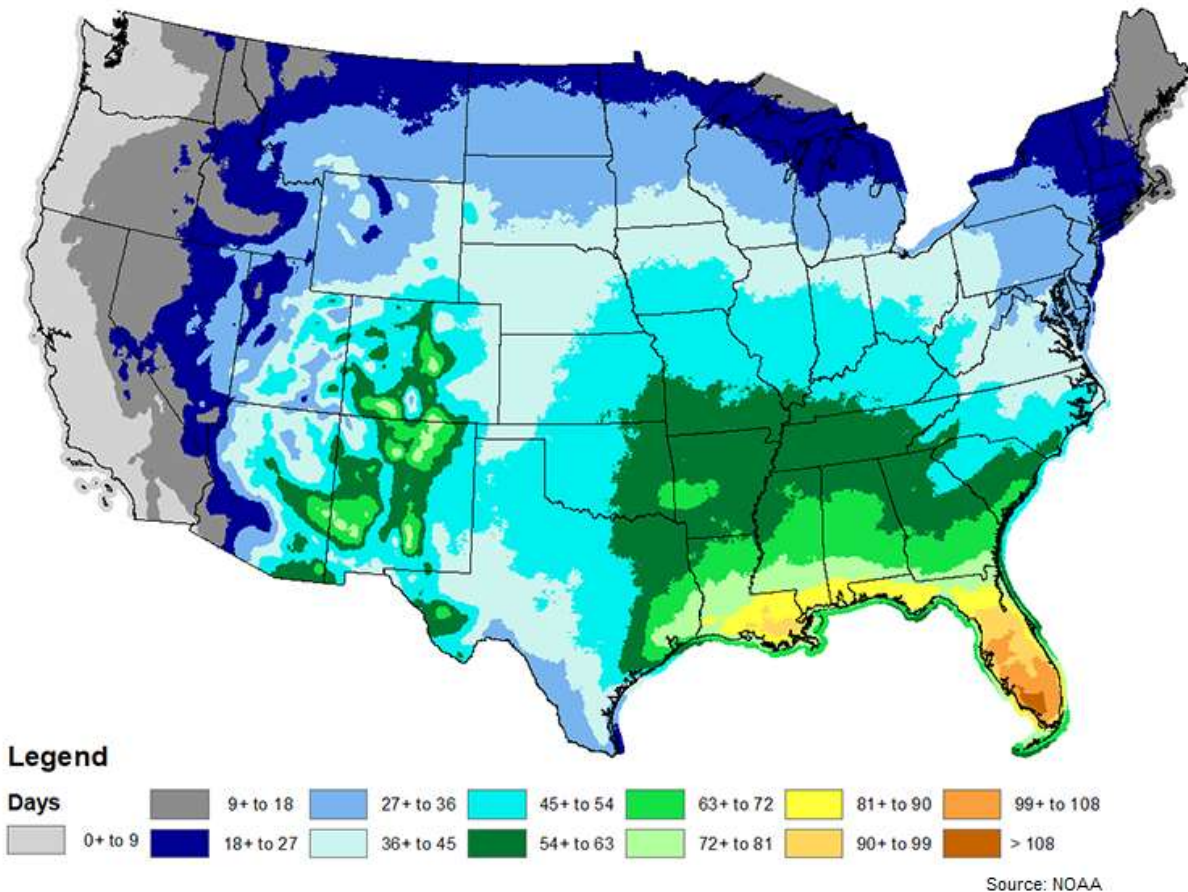
6/11/2021: The public reported that several trees were blown down in and near Muir.

8/10/2021: There were numerous reports of severe thunderstorm wind gusts in the 60 to 75 mph range that brought down numerous trees, tree limbs and power lines across southwestern lower Michigan. A 58 mph peak wind gust was measured at AWOS station KY70 Ionia County Airport.

#### Item 3.2.2.2: Thunderstorms/Lightning

Severe thunderstorms are weather systems accompanied by strong winds, lightning, heavy rain, and possibly hail and tornadoes. Severe thunderstorms can occur at any time in Ionia County, although they are most frequent during the warm spring and summer months from May through September. The potential thunderstorm threat is often measured by the number of "thunderstorm days" - defined as days in which thunderstorms are observed. Between 1993 and 2018, Ionia County (along with a wide swath of central Michigan) experienced between 27 and 36 yearly thunderstorm days.

## Annual Mean Thunderstorm Days (1993-2018)



FEMA's calculated Annualized Frequency of Lightning for Ionia County is approximately 41.29, meaning a local lightning hazard event is expected slightly more often than once per nine days (averaged throughout the year). The National Risk Index considers the entirety of Ionia County's population to be vulnerable to this hazard, and the total calculated Expected Annual Loss for Ionia County from this hazard is approximately \$65,610; this produces a loss of approximately \$0.98 per year, per person in Ionia County from lightning events.

Thunderstorms form when a shallow layer of warm, moist air is overrun by a deeper layer of cool, dry air. Cumulonimbus clouds, frequently called "thunderheads," are formed in these conditions. These clouds are often enormous (up to six miles or more across and 40,000 to 50,000 feet high) and may contain tremendous amounts of water and energy. That energy is often released in the form of high winds, excessive rains, lightning, and possibly hail and tornadoes.

Thunderstorms are typically short-lived (often lasting no more than 30-40 minutes) and fast moving (30-50 miles per hour). Strong frontal systems, however, may spawn one squall line after another, composed of many individual thunderstorm cells. Severe thunderstorms may also cause severe flood problems because of the torrential rains that they may bring to an area. Thunderstorms sometimes move very slowly and can thus dump a tremendous amount of precipitation onto a location. Flooding can result, including flash floods, "urban flooding," and riverine flooding.

Lightning is the discharge of electricity from within a thunderstorm. Lightning is a random and unpredictable product of a thunderstorm's tremendous energy. The energy in the storm produces an

intense electrical field like a giant battery, with the positive charge concentrated at one end and the opposite charge concentrated at the other. Lightning strikes when a thunderstorm's electrical potential (the difference between its positive and negative charges) becomes great enough to overcome the resistance of the surrounding air. Bridging that difference, lightning can jump from cloud to cloud, cloud to ground, ground to cloud, or even from the cloud to the air surrounding the thunderstorm. Lightning strikes can generate current levels of 30,000 to 40,000 amperes, with air temperatures often superheated to higher than 50,000 degrees Fahrenheit (hotter than the surface of the sun) and speeds approaching one-third the speed of light.

Globally, there are about 2,000 thunderstorms occurring at any given time, and those thunderstorms cause approximately 100 lightning strikes upon the ground each second. In the United States, approximately 100,000 thunderstorms occur each year, and every one of those storms generates lightning. It is not uncommon for a single thunderstorm to produce hundreds or even thousands of lightning strikes. However, to the majority of the general public, lightning is perceived as a minor hazard. That perception lingers despite the fact that lightning damages many structures and kills and injures more people in the United States per year, on average, than tornadoes or hurricanes. Many lightning deaths and injuries could be avoided if people would have more respect for the threat lightning presents to their safety.

Lightning deaths are usually caused by the electrical force shocking the heart into cardiac arrest or throwing the heartbeat out of its usual rhythm. Lightning can also cut off breathing by paralyzing the chest muscles or damaging the respiratory center in the brain stem. It takes only about one-hundredth of an ampere of electric current to stop the human heartbeat or send it into ventricular fibrillation. Lightning can also cause severe skin burns that can lead to death if complications from infection set in.

As an indicator of the circumstances involving lightning fatalities, injuries and damage in the United States, consider the following statistics compiled by the National Oceanic and Atmospheric Administration (NOAA) and the National Lightning Safety Institute (NLSI) for the period of 1959-1994:

#### Location of Lightning Strikes

- 40% are at unspecified locations.
- 27% occur in open fields and recreation areas (not including golf courses)
- 14% occur to someone under a tree (not including golf courses)
- 8% are water-related (boating, fishing, swimming, etc.)
- 5% are golf-related (on golf course or under tree on golf course)
- 3% are related to heavy equipment and machinery.
- 2.4% are telephone related.
- 0.7% are radio, transmitter and antenna-related

#### Gender of Victims

- 84% are male; 16% are female.

#### Months of Most Strikes

- July (30%); August (22%); June (21%)

#### Most Likely Time Period of Reported Strikes

- 2:00 PM – 6:00 PM

#### Number of Victims

- One victim (91%); two or more victims (9%)

The NLSI has estimated that 85% of lightning victims are children and young men (ages 10-35) engaged in recreation or work-related activities. Approximately 20% of lightning strike victims die, and 70% of survivors suffer serious long-term after-effects such as memory and attention deficits, sleep disturbance, fatigue, dizziness, and numbness.

Lightning can be especially damaging for electrical infrastructure, causing localized power outages and damage to phone lines and communication systems. Computers are also especially vulnerable to lightning strikes. In terms of property losses from lightning, statistics vary widely according to source. The Insurance Information Institute estimates that lightning damage amounts to nearly 5% of all paid insurance claims, with residential claims alone exceeding \$1 billion. Information from insurance companies shows one homeowner's damage claim for every 57 lightning strikes. The NLSI has estimated that lightning causes more than 26,000 fires annually, with damage to property exceeding \$5-6 billion. Electric utility companies across the country estimate as much as \$1 billion per year in damaged equipment and lost revenue from lightning. The Federal Aviation Administration (FAA) reports approximately \$2 billion per year in airline industry operating costs and passenger delays from lightning. Because lightning-related damage information is compiled by so many different sources, using widely varying collection methods and criteria, it is difficult to determine a collective damage figure for the U.S. from lightning. However, annual lightning-related property damages are conservatively estimated at several billion dollars per year, and those losses are expected to continue to grow as the use of computers and other lightning-sensitive electronic components becomes more prevalent.

Because it is virtually impossible to provide complete protection to individuals and structures from lightning, this hazard will continue to be a problem for Ionia County's residents and communities. However, lightning deaths, injuries, and property damage can be reduced through a combination of public education, human vigilance, technology, proper building safety provisions, and simple common sense. Large outdoor gatherings (e.g., sporting events, concerts, campgrounds, fairs, festivals, etc.) are particularly vulnerable to lightning strikes that could result in many deaths and injuries. This vulnerability underscores the importance of developing site-specific emergency procedures for these types of events, with particular emphasis on adequate early detection, monitoring, and warning of approaching thunderstorms. Early detection, monitoring, and warning of lightning hazards, combined with prudent protective actions, can greatly reduce the likelihood of lightning injuries and deaths. In addition, close coordination between event organizers, local emergency management officials, and response agencies (i.e., police, fire, emergency medical care) can help prevent unnecessary (and often tragic) delays and mistakes in rendering care should a lightning incident occur.

While lightning is a common occurrence during local thunderstorms, NOAA's Storm Events Database does not list any lightning events (i.e. devastating or harmful strikes) for Ionia County since January 1<sup>st</sup>, 2000.

### Item 3.2.2.3: Tornadoes

A tornado is an intense rotating column of wind that extends from the base of a severe thunderstorm to the ground. Tornadoes in Ionia County are most frequent in the spring and early summer when warm, moist air from the Gulf of Mexico collides with cold air from the polar regions to generate severe thunderstorms. These thunderstorms often produce the violently rotating columns of wind known as funnel clouds. Michigan lies at the northeastern edge of the nation's primary tornado belt, which extends from Texas and Oklahoma through Missouri, Illinois, Indiana, and Ohio. Most of a tornado's destructive force is exerted by the powerful winds that knock down walls and lift roofs from buildings in the storm's path. The violently rotating winds then carry debris aloft that can be blown through the air as dangerous missiles.

A tornado can have winds over 200 miles per hour. The typical length of a tornado path is approximately 16 miles, but tracks much longer than that - even up to 200 miles — have been reported. Tornado path widths are generally less than one-quarter mile wide. Typically, tornadoes last only a few minutes on the

ground, but those few minutes can result in tremendous damage and devastation. Historically, tornadoes have resulted in tremendous loss of life, with the mean national annual death toll being 87 persons. Property damage from tornadoes is in the hundreds of millions of dollars every year.

# Enhanced Fujita Scale for Tornadoes

The Enhanced Fujita Scale (EF), introduced in 2007, provides estimates of tornado strength based on damage surveys. The original scale was developed by Dr. Theodore Fujita and implemented in 1971.

Wind Speed	EF Scale	Typical Damage
65-85 mph	0	Peels surface off some roofs, some damage to gutters or siding
86-110 mph	1	Roof severely stripped, mobile homes overturned or badly damaged, loss of exterior doors, windows and other glass broken
111-135 mph	2	Roofs torn off well-constructed homes; foundations of frame homes shifted; mobile homes completely destroyed
136-165 mph	3	Entire stories of well-constructed homes destroyed; severe damage to large buildings such as shopping malls
166-200 mph	4	Well-constructed houses and whole-frame homes completely leveled
200+ mph	5	Strong frame houses leveled off foundations and swept away; high-rise buildings have significant structural deformation

Source: Weather Underground ([www.wunderground.com/resources/severe/fujita\\_scale.asp](http://www.wunderground.com/resources/severe/fujita_scale.asp))



FEMA's calculated Annualized Frequency of Tornadoes for Ionia County is approximately 0.25, meaning a local tornado is expected once every four years. The National Risk Index considers the entirety of Ionia County's population to be vulnerable to this hazard, and the total calculated Expected Annual Loss for Ionia County from this hazard is approximately \$3,236,641; this produces a loss of approximately \$48.48 per year, per person in Ionia County from tornadoes, the greatest yearly loss in Ionia County for hazards where the entire county population is vulnerable to occurrences.

NOAA's Storm Events Database lists the following tornado occurrences for Ionia County since January 2000:

5/21/2001: A tornado that passed 2 miles northwest of Clarksville cut a silo in half and lifted the roofs off of two barns. Several trees were also damaged. It was a F0 tornado with a length of one mile and width of 50 yards.

9/23/2006: An F0 tornado touched down very briefly, producing top winds estimated at only 40 to 50 m.p.h. and no reports of any significant damage or any injuries.

7/6/2014: An NWS storm survey confirmed that an EF-0 tornado touched down near Reeder Rd. between south Sunfield highway and south Keefer highway. Five farm buildings were damaged, and one home lost roofing material and numerous trees were blown down.

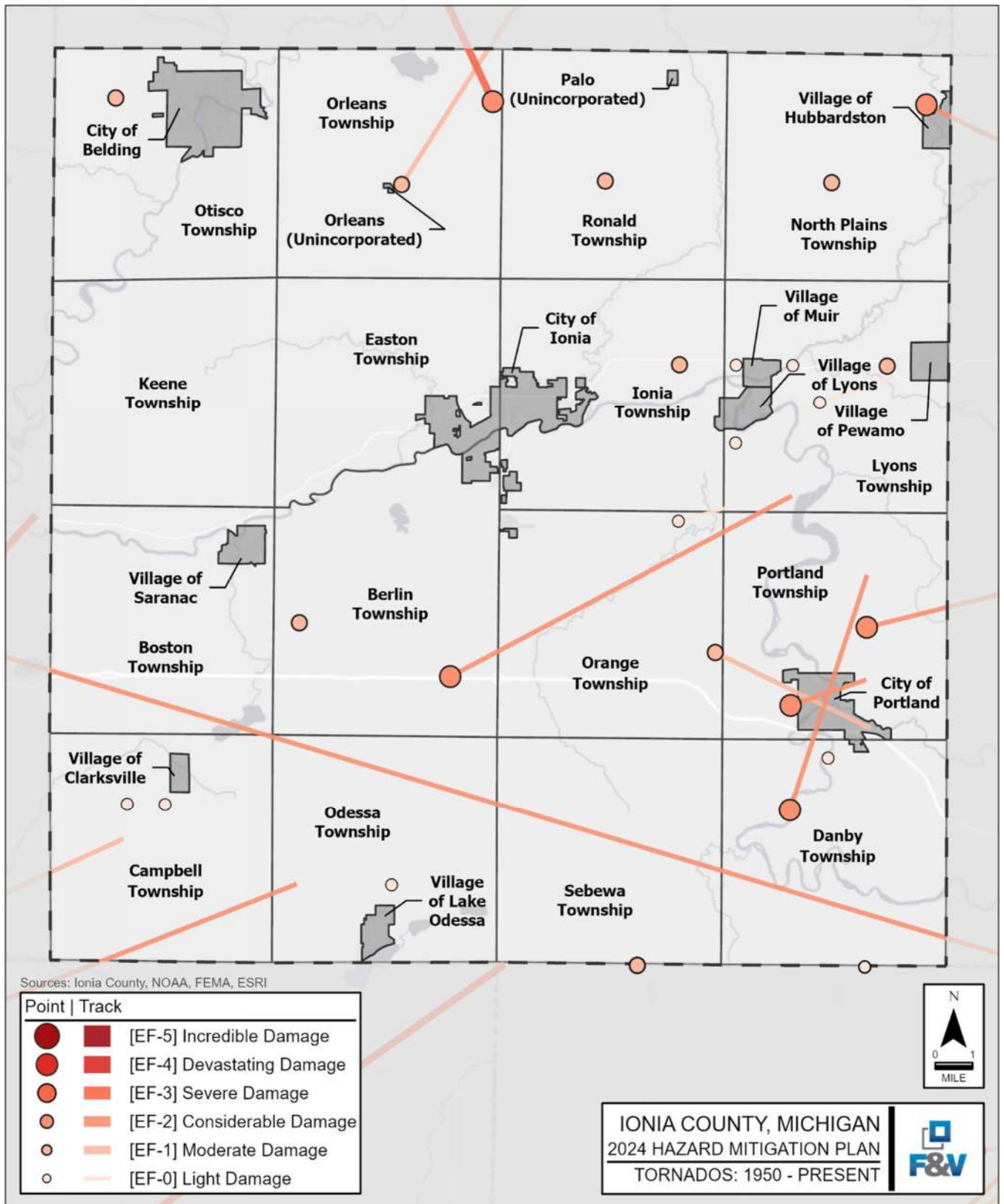
6/22/2015: An NWS storm survey confirmed that an EF-1 tornado struck Portland in Ionia county between 1:30 pm and 1:36 pm. It had peak winds of 110 mph with a path length a little over 4 miles. The path width was 50 to 100 yards. Three churches incurred heavy damage and dozens of trees were uprooted and snapped. There were 5 minor injuries and no fatalities. Multiple homes had significant roof damage and a baseball field was heavily damaged. It was estimated that the tornado caused 3.2 million dollars in damage. Severe thunderstorms also produced several reports of damaging wind gusts.

8/20/2016: An EF-1 tornado touched down just east of Orleans and moved northeast where it crossed M-44, bringing several large trees down, one of which fell on a house. The tornado then crossed West Long Lake Road where the concrete block wall of a garage was blown out and the wind peeled shingles off the roof of a house.

A path of tree damage about a hundred yards wide continued to the northeast and narrowed. The last damage noted was a few downed trees on East Boyer Road about 3.5 miles southeast of Sheridan.

4/10/2017: An EF1 tornado over extreme southeastern Kent county continued to move east northeast into far southwestern Ionia county. It took down several tree limbs before dissipating.

6/26/2021: An NWS storm survey determined that an EF-1 tornado occurred north of Lake Odessa. Multiple homes and barns were damaged at the following locations: Bippley/Jordan Lake Road, Ainsworth Road, and Harwood Road. Convergent tracks were observed through corn and wheat fields. Trees were blown down or snapped. Wood power poles were snapped on Clarksville Road near the end point of the tornado.



### Item 3.2.2.4: Hail

Hail is a form of precipitation consisting of solid ice that forms inside thunderstorm updrafts. It can damage aircraft, homes, and cars, and can be deadly to livestock and people. Hailstones are formed when raindrops are carried upward by thunderstorm updrafts into extremely cold areas of the atmosphere and freeze. Hailstones then grow by colliding with liquid water drops that freeze onto the hailstone's surface. As a hail-forming thunderstorm passes over Ionia County, hail usually falls near the center of the storm, along with the heaviest rain. Sometimes, strong winds occurring at high altitudes in the thunderstorm can blow the hailstones away from the storm center, causing an unexpected hazard at places that otherwise might not appear threatened.



FEMA's calculated Annualized Frequency of Hail events for Ionia County is approximately 2.26, meaning a local hail event is expected a couple times per year. The National Risk Index considers the entirety of Ionia County's population to be vulnerable to this hazard, and the total calculated Expected Annual Loss for Ionia County from this hazard is approximately \$459,108; this produces a loss of approximately \$6.88 per year, per person in Ionia County from hail.

The National Weather Service began recording hail activity in Michigan in 1967. Statistics since that time indicate that approximately 50% of the severe thunderstorms that produce hail have occurred during the months of June and July, and nearly 80% have occurred during the prime growing season of May through August. As a result, the damage to crops from hail is often extensive. The National Weather Service forecasts of severe thunderstorms usually give sufficient warning time to allow residents to take appropriate action to reduce the effects of hail damage on vehicles and some property. However, little can be done to prevent damage to crops.

NOAA's Storm Events Database lists the following hail event occurrences for Ionia County since January 2000:

3/20/2003: Three quarters inch hail was reported in both Clarksville and Saranac.

5/11/2003: A severe thunderstorm produced three quarters inch hail two miles east of Ionia.

6/8/2003: Three quarters inch diameter hail was reported five miles northwest of Ionia. An isolated report from the same location indicated that a lone tree had been blown down.

7/21/2003: One inch diameter hail was reported in Clarksville. One tree was blown down two miles south of Saranac.

5/21/2004: Broadcast media reported three quarters inch hail in Lake Odessa.

6/14/2004: A trained spotter in Portland reported one inch diameter hail.

7/6/2004: Two-inch diameter hail was reported by broadcast media one mile northeast of Portland.

6/8/2005: Hail broke a window on a home in Belding.

9/6/2006: The broadcast media reported three quarters inch diameter hail in Ionia.

10/18/2007: A late season severe weather outbreak occurred on October 18th. There were a tremendous amount of reports of wind damage with trees and power lines blown down, as well as several reports of three quarters to one inch diameter hail.

4/26/2011: Severe thunderstorms developed during the late afternoon and evening hours of April 26 as an upper-level trough and cold front approached our region. Trained spotters reported that a severe thunderstorm produced hail up to 1.5 inches in diameter on the northeast side of Belding. The swath was up to one mile wide and was part of the swath that began in extreme northeast Ottawa County based on correlation with spotter reports and radar hail products.

11/17/2013: Severe thunderstorms developed during the afternoon hours of November 17th in advance of a strong cold front. A trained spotter reported three quarters inch hail near Clarksville.

4/10/2015: A trained spotter reported that hail up to an inch and a half in diameter fell three miles north northeast of Saranac.

### Item 3.2.2.5: Floods

A flood is an overflow of water that submerges land that is usually dry. According to the WHO, floods are the most frequent type of natural disaster worldwide. In Ionia County, the most common type of flooding is riverine flooding, which is the overflowing of rivers, streams, drains, and lakes due to excessive rainfall, rapid snowmelt or ice. Floods can damage or destroy public and private property, disable utilities, make roads and bridges impassable, destroy crops and agricultural lands, cause disruption to emergency services, and result in fatalities. Long-term collateral dangers include the outbreak of disease, widespread animal death, broken sewer lines causing water supply pollution, downed power lines, broken gas lines, fires, and the release of hazardous materials.

FEMA's calculated Annualized Frequency of Riverine Flooding for Ionia County is approximately 0.33, meaning a local riverine flood event is expected approximately once every three years. The total calculated Expected Annual Loss for Ionia County from this hazard is approximately \$150,520, although the National Risk Index only considers 1,155 county residents as vulnerable to this hazard (as only residents near a river would be considered); this produces a loss of \$130.32 per year, per vulnerable resident in Ionia County from riverine flooding, by far the greatest hazard-related loss on an individual level.

The flooding of land adjoining the normal course of a stream or river has been a natural occurrence since the beginning of recorded history. If these floodplain areas were left in their natural state, floods would not cause significant damage. Development has increased the potential for serious flooding because rainfall that used to soak into the ground or take several days to reach a river or stream via a natural drainage basin now quickly runs off streets, parking lots, and rooftops, and through man-made channels and pipes. Some developments have also encroached into flood plain areas and thus impeded the carry capacity of the drainage area.

Flood prone areas are found throughout the county, as every lake, river, stream, and open drain has a floodplain. The type of development that exists within the floodplain will determine whether flooding will cause damage. Most riverine flooding occurs in early spring and is the result of excessive rainfall and/or the combination of rainfall and snowmelt. Ice jams are also a cause of flooding in winter and early spring. Log jams can also cause streams and rivers to be clogged up, and the backed-up waters to overflow the stream's banks. Either ice jams or logjams can cause dangerous flash flooding to occur if the makeshift dam-effect caused by the ice or logs suddenly gives way. Severe thunderstorms may cause flooding during the summer or fall, although these are normally localized and have more impact on watercourses with smaller drainage areas.

It is widely known that controlling floodplain development is the key to reducing flood-related damages. Although there are state and local programs to regulate new development or substantial improvements in flood-prone areas, floodplain development in many communities continues to increase, resulting in corresponding increases in potential future flood-related damages. The opportunity to mitigate flood hazards rests primarily with local government, as it controls the regulation or direction of land development. Proper land use management and strict enforcement of building codes can make communities safer from flood hazards and help reduce the high costs of flood losses.

The National Flood Insurance Program (NFIP) is a key component of American flood hazard mitigation. Instituted in 1968 to make available flood insurance in communities that agree to regulate future floodplain development, participating communities must adopt regulations that: 1) require any new residential construction within the 100-year floodplain to have the lowest floor, including the basement, elevated above the 100-year flood elevation; 2) require non-residential structures to be elevated or dry floodproofed (the floodproofing must be certified by a registered professional engineer or architect); and 3) require anchoring of manufactured homes in flood-prone areas. The community must also maintain a record of all lowest floor elevations or the elevations to which buildings in flood hazard areas have been floodproofed. The majority of jurisdictions in Ionia County are participants in the NFIP:

	Community Name	NFIP Participant	No. Policies	No. Rep. Losses	Total Premium	Total Coverage	Total Claims since 1978	Total Paid since 1978	FIRM Date
Ionia County HMP Participants	Ionia County	N/A	88	6	\$96,585	\$15,909,000	34	\$238,668	N/A
	City of Ionia	Yes	12	4	\$19,372	\$3,071,000	14	\$97,306	1/16/2015
	City of Belding	Yes	6	0	\$5,999	\$462,000	2	\$203	1/16/2015
	City of Portland	Yes	12	0	\$14,095	\$2,054,000	7	\$115,948	1/16/2015
	Clarksville Village	Yes	0	0	\$0	\$0	0	\$0	1/16/2015
	Lake Odessa Village	Yes	13	0	\$9,085	\$3,314,000	3	\$9,553	1/16/2015
	Muir Village	Yes	1	0	\$2,070	\$89,000	1	\$0	1/16/2015
	Pewamo Village	No	0	0	\$0	\$0	0	\$0	1/16/2015
	Saranac Village	Yes	0	0	\$0	\$0	0	\$0	1/16/2015
	Berlin Township	No (1/16/2016)	0	0	\$0	\$0	0	\$0	1/16/2015
	Boston Township	Yes	12	0	\$10,812	\$2,203,000	0	\$0	1/16/2015
	Campbell Township	Yes	3	0	\$1,420	\$693,000	0	\$0	1/16/2015
	Easton Township	Yes	3	0	\$1,886	\$331,000	0	\$0	1/16/2015
	Lyons Township	Yes	1	0	\$499	\$210,000	0	\$0	1/16/2015
	Odessa Township	Yes	6	0	\$3,477	\$726,000	0	\$0	1/16/2015
	Sebewa Township	No	0	0	\$0	\$0	0	\$0	1/16/2015
Ionia County HMP Non-Participants	Hubbardston Village	No (5/9/2011)	0	0	\$0	\$0	0	\$0	1/16/2015
	Lyons Village	Yes	0	0	\$0	\$0	0	\$0	1/16/2015
	Danby Township	Yes	0	0	\$0	\$0	0	\$0	1/16/2015
	Ionia Township	Yes	8	0	\$8,393	\$676,000	1	\$8,093	1/16/2015
	Keene Township	No (1/16/2016)	0	0	\$0	\$0	0	\$0	1/16/2015
	North Plains Township	No (6/17/1978)	0	0	\$0	\$0	0	\$0	1/16/2015
	Orange Township	No	0	0	\$0	\$0	0	\$0	1/16/2015
	Orleans Township	No	0	0	\$0	\$0	0	\$0	1/16/2015
	Otisco Township	No (1/16/2016)	0	0	\$0	\$0	0	\$0	1/16/2015
	Portland Township	Yes	11	2	\$19,477	\$2,080,000	6	\$7,565	1/16/2015
	Ronald Township	No	0	0	\$0	\$0	0	\$0	N/A

Yes  
No SFHA  
No (sanction date)

Communities not participating in the NFIP or which have allowed their NFIP coverage to lapse have primarily made this determination based on perceived necessity along with limitations to administrative capacity. All communities with lapsed coverage have never submitted an NFIP claim during their participation periods. Additionally, not all local flooding concerns pertain to riverine flooding; following an extreme rainfall event in 2021 (characterized locally as a 200-year rain event) that overwhelmed existing drainage systems and caused basement flooding in residential areas, village officials partnered with the Ionia County Drain Commissioner to implement drainage system improvements to the sediment-clogged Dutton Drain and explore water retention solutions. Future Plan updates should continue to evaluate whether the flood insurance priorities of non-participating communities are adequately met.

NOAA's Storm Events Database lists the following flood/flash flood occurrences for Ionia County since January 2000:

5/18/2000: Flash flooding occurred during the morning hours of the 18th across Ottawa and Kent Counties as a result of as much as 5 inches of rain between 9 p.m. EST on the 17th and 2 a.m. EST on the 18th. Law enforcement in Rockford (Kent County) reported that 10 to 15 homes were completely flooded at 5:15 a.m. EST. The Rogue River and Buck Creeks were forced out of their banks through the day, and numerous roads between Grand Haven and Belding were reported as being under water. Soybean fields near the west side of Wabasis Lake in northeast Kent County were completely flooded.

2/9/2001: Extensive flooding began on the 9th as a result of the combination of heavy rain and melting snow. Numerous roads were closed across all of southwestern and south-central lower Michigan.

2/24/2001: Minor flooding began during the evening hours of the 24th and continued through the rest of February. The event was primarily a river flood event, and an urban and small stream flood advisory was issued at 9:45 p.m. the 24th. Several regional rivers crested slightly above flood stage, but there were no fatalities, and no significant property damage was reported.

5/21/2004: The biggest and longest duration flooding even in the past ten to twenty years occurred across southwestern and south-central lower Michigan from May 20th through the third of June. Total rainfall over the Grand River basin over this time period varied from four to as much as seven inches. On May 24th, Ionia County declared a state of emergency, as water levels along the Grand River were at their

highest levels in 44 years. The Grand River at Ionia crested at 23.41 feet at 10 a.m. on 5/25. Flood stage is 21 feet. It was the 8th highest historical crest. The Flat River in Smyrna crested at 6 feet at 2 pm. on 5/25, which is also at flood stage. It was the 22nd highest crest in history. By May 27th, estimated damages had reached \$350,000.

6/19/2009: Thunderstorms developed and moved across Lake Michigan during the evening hours on June 19th. Several hours of intense rainfall occurred starting around 7:00 PM EST. The ground was already saturated from early morning thunderstorms that produced very heavy rainfall. In addition to the heavy rain, severe thunderstorms and tornadoes accompanied the thunderstorms. There was a report of twelve to fifteen inches of water covering Grand River Avenue.

4/17/2013: Record flooding occurred during the month of April and record crests occurred on the lower portions of the Grand River at Ionia, Lowell, Ada, Comstock Park, and Grand Rapids, Michigan. Due to the severity of the flooding, Michigan's Governor Rick Snyder declared a state of disaster for 19 counties (including Ionia County) and two cities, Grand Rapids and Ionia. Heavy rainfall caused significant flooding on rivers and streams across Ionia County.

2/6/2019: On February 6, 2019, an ice jam formed on the Grand River in Portland. Approximately 50 residents were evacuated from their homes along Water Street in downtown Portland. 2 days later, on February 8, the ice jam shifted and thickened, causing additional flooding. Many businesses along Kent Street were flooded, and residents along Canal and Market streets were evacuated. The ice jam held for more than 3 weeks before finally melting and shifting downstream. Some homes on Water Street experienced continuous flooding for most of this 3-week period. The flooding caused approximately \$200,000 damage to public facilities alone. This total does not include the damage to private homes and businesses from the flood.

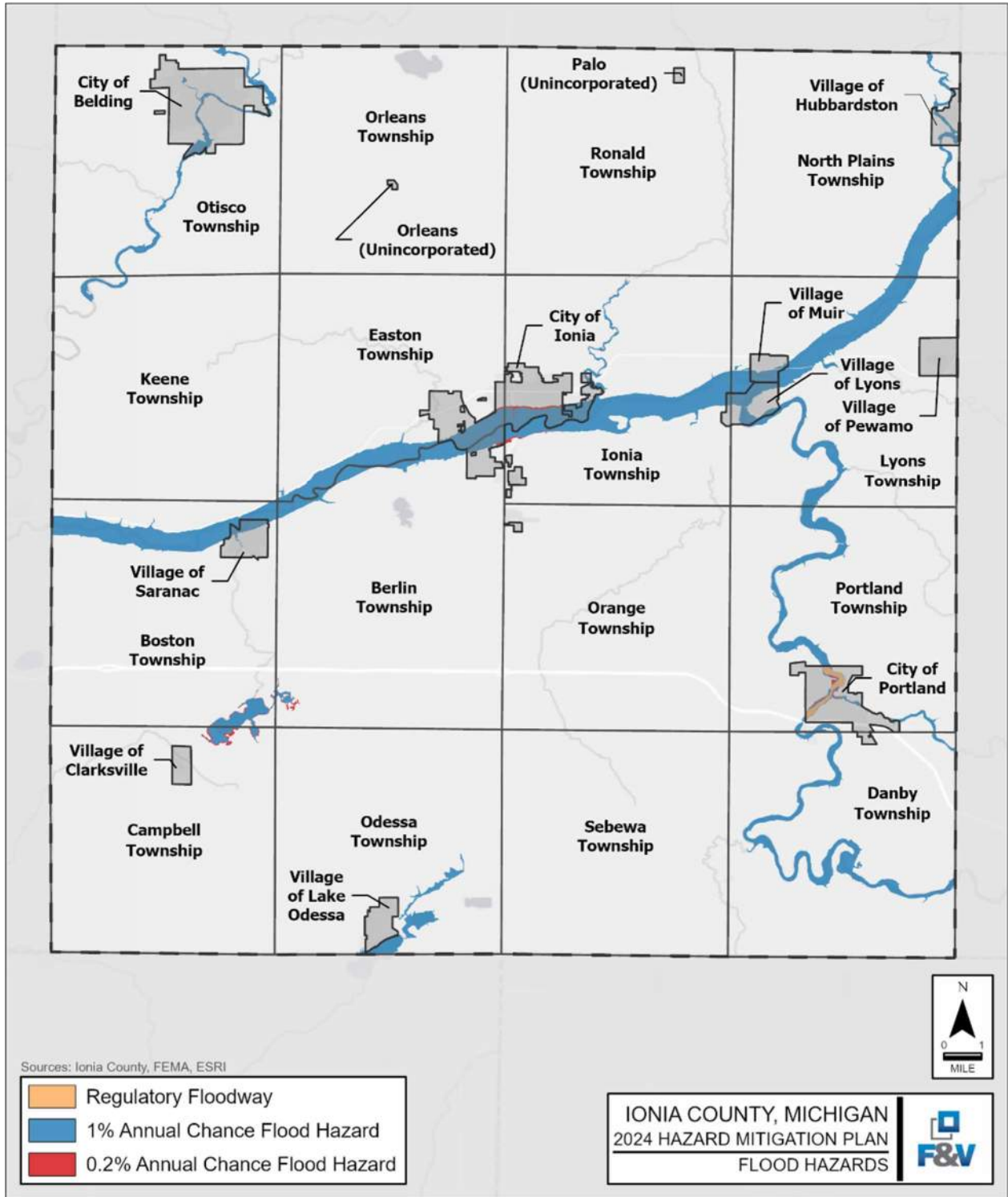
5/18/2020: Significant rainfall fell across all of Lower Michigan on May 17 and 18 with many locations in Southwest Lower Michigan reporting over 3 inches of rain. This was the culmination of an already wet week that had experienced three separate episodes of heavy rain. As a result, soil was already saturated, and this additional rain immediately became runoff instead of soaking into the ground. Numerous roads were closed due to flooding in and near Ionia.

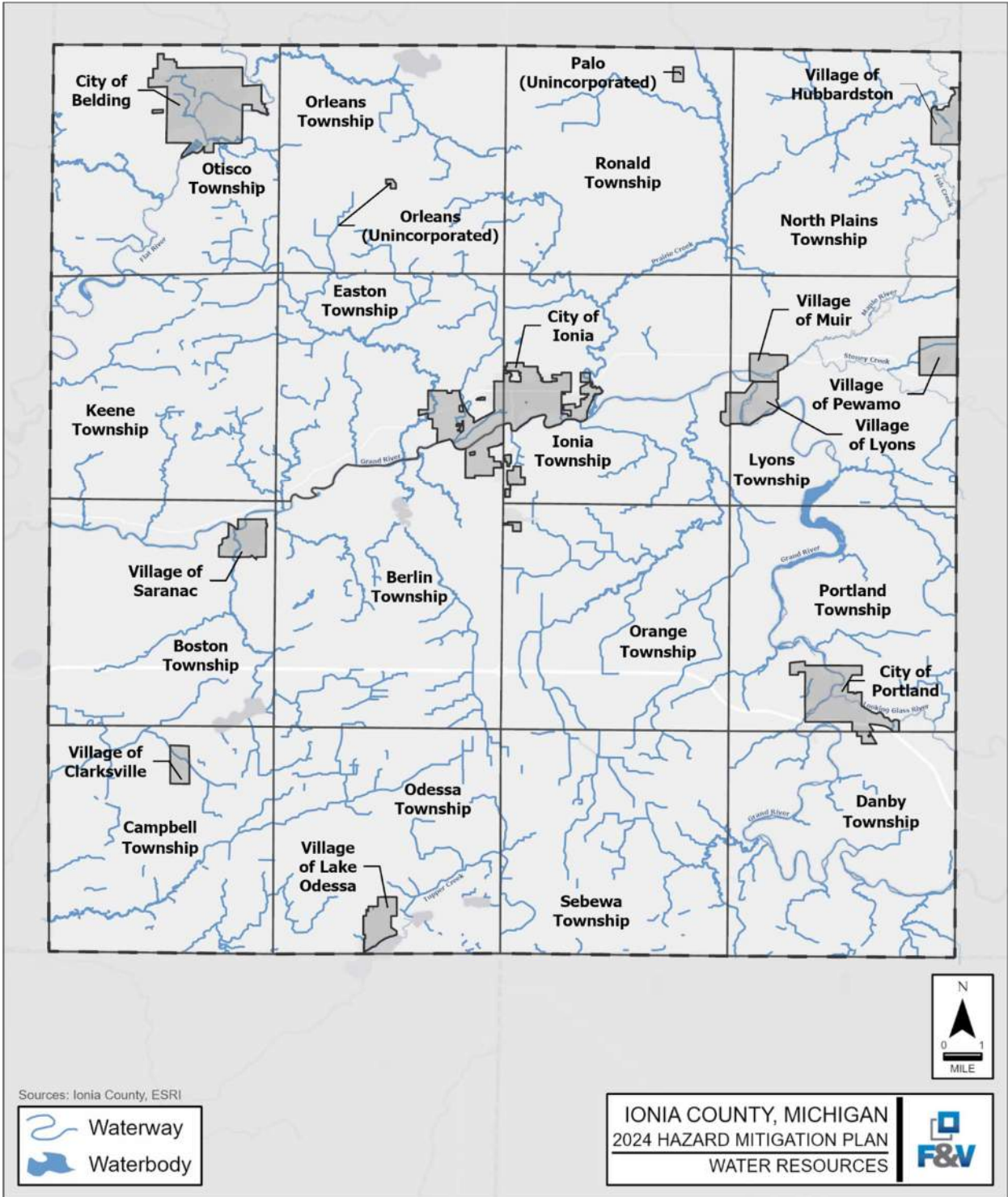
## Grand River at Ionia, MI - 04116000

October 1, 2017 - October 1, 2023

Gage height, feet







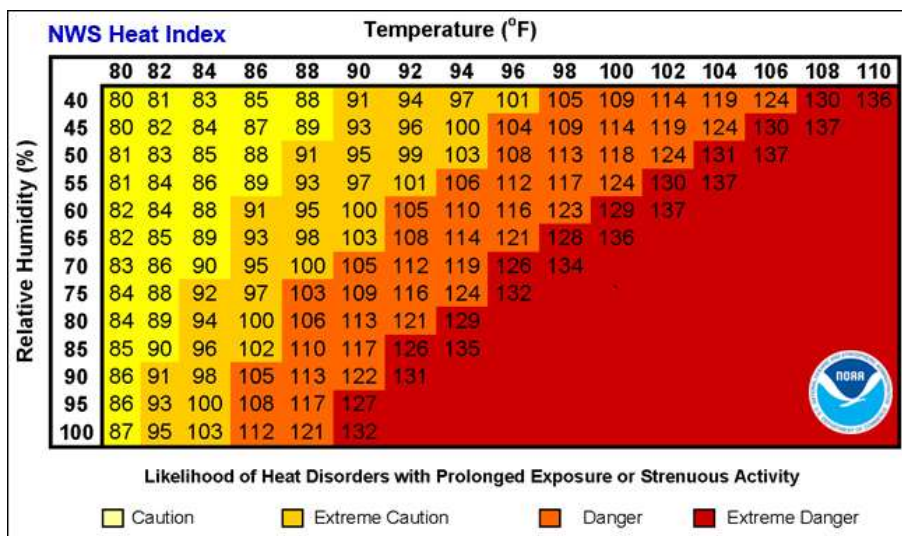
### Item 3.2.2.6: Extreme Heat

Extreme summer heat is characterized by a combination of very high temperatures and humid conditions. When persisting over a long period of time, this phenomenon is commonly called a heat wave.

FEMA’s calculated Annualized Frequency of Heat Waves for Ionia County is approximately 0.80, meaning a local extreme heat hazard event is expected once per year or slightly less. The National Risk Index considers the entirety of Ionia County’s population to be vulnerable to this hazard, and the total calculated Expected Annual Loss for Ionia County from this hazard is approximately \$321,977; this produces an annual loss of approximately \$4.83 per year, per person in Ionia County from extreme hot weather.

The major threats of extreme summer heat are heat exhaustion and heatstroke. Heat exhaustion is a less severe condition than heatstroke, but it causes problems involving dizziness, weakness, and fatigue. Heat exhaustion is often the result of fluid imbalance due to increased perspiration in response to the intense heat. Treatment generally consists of restoring fluids and staying indoors in a cooler environment until the body returns to normal. If heat exhaustion is not addressed and treated, it can advance to heatstroke, so medical attention should be sought immediately. Heatstroke symptoms include a high body temperature, dry skin, inadequate perspiration, paleness or reddening, confusion or irritability, and seizures. The victim may become delirious, unconscious, or even comatose. Cooling is essential to preventing permanent neurological damage or death. Other, less serious risks associated with extreme summer heat are often exercise-related and include heat cramps (an imbalance of fluids that occurs when people unaccustomed to heat exercise outdoors) and heat syncope (a loss of consciousness by persons not acclimated to hot weather). Periods of hot weather also entail risks of dehydration, even for those who are not engaged in demanding physical activities.

Excessive heat warnings are issued for an area by NOAA when the heat index is calculated to exceed 105 degrees for a period of at least 3 hours in duration. It should be noted, however, that the temperature inside of vehicles without air conditioning can be dozens of degrees hotter than the outdoor temperature—an outdoor temperature might be “only” 100 degrees Fahrenheit, but people may then get into a car that exceeds 130 degrees. Extreme summer heat is also hazardous to livestock and agricultural crops, and it can cause water shortages, exacerbate fire hazards, and prompt excessive demands for energy. Roads, bridges, railroad tracks and other infrastructure are susceptible to damage from extreme heat. Scorching weather also puts a strain on the energy demands for an area, as the use of air conditioning increases greatly. Possible shutdowns of schools, colleges, and industries can occur during these times.



Air conditioning is probably the most effective measure for mitigating the effects of extreme summer heat on people. Unfortunately, many of those most vulnerable to this hazard do not live or work in air-conditioned environments. The use of fans to move air may help some persons feel more comfortable, but when the temperature reaches the high 90s, fans will not prevent heat-related illness. Bathing with cool water is more effective but moving to a cooler environment (a basement or air-conditioned location) is most effective – even if only for a few hours per day.

To mitigate the extreme heat of summer, communities within Ionia County should have a contingency plan in place to protect those people who are most vulnerable to the heat. These contingency plans should include setting up “cooling stations” where people can go to get out of the heat; a hierarchy of closings for industries, businesses, and schools during shutdown periods; and a means of explaining the dangers of heat conditions, such as pamphlets and local broadcast and print media. Monitoring of dangerous conditions can also be done through the National Weather Service website. A risk assessment should calculate the likelihood of such incidents and the number of days of extreme temperatures likely to be experienced in the community each year. It should also take account of past losses and harm caused by such events and determine who or what is still vulnerable to such conditions today.

Because of its geographic location in relation to the Great Lakes, Ionia County is somewhat less susceptible to prolonged periods of extreme hot temperatures than are many other locations; NOAA records reflect zero excessive heat events officially reported in Ionia County. However, the Upper Midwest, in which Ionia County is located, is definitely vulnerable to extreme temperature events. As a result, Ionia County communities must always be prepared to respond to heat events in an organized, coordinated and expedient manner. Approximately once or twice per decade, extreme temperature waves tend to cause human and infrastructure impacts across the county (including power failures). Their frequency may be increasing, due to climate change.

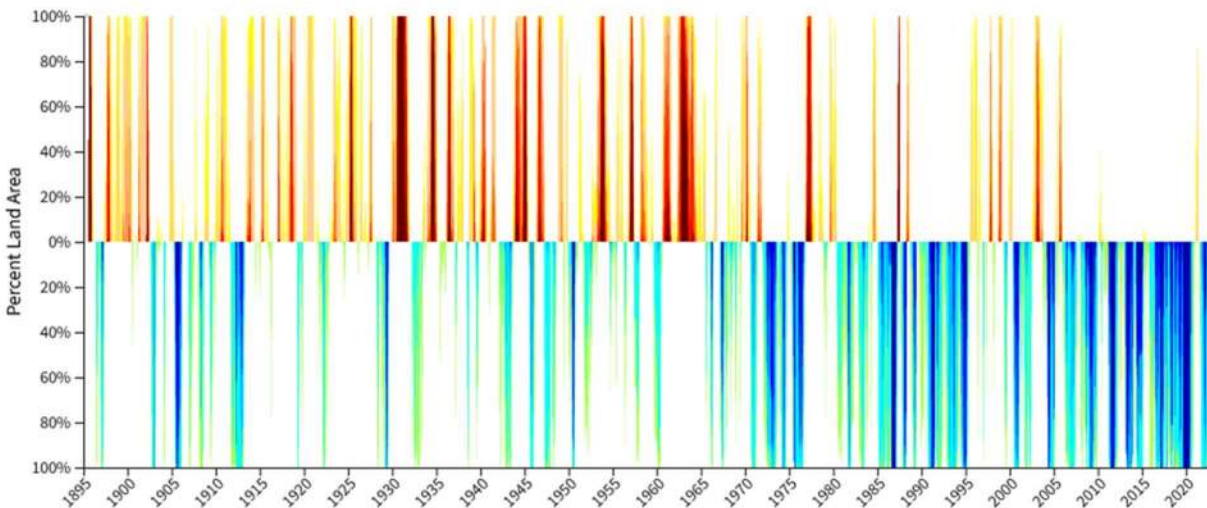
### Item 3.2.2.7: Drought

A drought is a water shortage caused by a deficiency of rainfall, generally lasting for an extended period of time. Drought is the consequence of a natural reduction in the amount of precipitation received over an extended period of time, usually a season or more in length. Drought is a normal part of the climate of Ionia County and of virtually all other climates around the world - including areas with high and low average rainfall. In low rainfall areas, drought differs from normal arid conditions in that the extent of aridity exceeds even that which is usual for the climate. The severity of a drought depends not only on its location, duration, and geographical extent, but also on the area’s water supply needs for human activities and vegetation. This local variation of drought standards makes the hazard difficult to refer to and makes it difficult to assess when and where one is likely to occur.

According to Michigan's Hazard Analysis, Ionia County is located in Climate Division 9, which has experienced approximately 120 months of drought conditions between 1900-2018. Most significant drought periods occurred before 1980, with decreasing frequency in recent decades. This decreasing trend is further supported by FEMA's National Risk Index data, which records zero drought events for Ionia County in recent years, resulting in no calculated expected annual losses to county residents from drought. While drought conditions have become less frequent, the county's agricultural sector remains vulnerable to periodic dry conditions, though this vulnerability is somewhat tempered by Ionia County's location in the southern Lower Peninsula, which historically experiences fewer drought events than northern portions of the state.

The Standardized Precipitation Index (SPI) is an index based on the probability of precipitation for any given time scale, capturing how observed precipitation (rain, hail, snow) deviates from the climatological average over a given time period, typically 1 to 12 months – in other words, a 9-month SPI at the end of September would compare the precipitation total for the past nine months (January through September) to the historical average for this same time period, returning a negative value for drought conditions and a

positive value for moist conditions. Below is a graph showing the 9-month SPI for Ionia County from 1895 through 2022, sourced from drought.gov. Drought conditions are shown with red hues and moist conditions with blue hues, with deeper hues indicating more severe conditions and the length of the lines indicating the land area percentage of Ionia County affected:



A trend towards decreased incidence of drought conditions and increased incidence of moist conditions in Ionia County, particularly apparent beginning in the 1970s, is clear. To describe these same data numerically, through the same time period of 1895 through 2022, approximately 26.5% of Ionia County's land area existed in any level of drought conditions, while approximately 36.5% of Ionia County's land area existed in any level of moist conditions (note that these percents do not represent the same region within Ionia County over time). From 1980 through 2022, approximately 9.8% of Ionia County's land area existed in any level of drought conditions, while approximately 61.1% of Ionia County's land area existed in any level of moist conditions. While drought remains a hazard of concern for Ionia County and particularly its agricultural interests, both its relative probability of occurrence and the decrease of this probability over recent decades are notable.

Droughts can cause many severe impacts on communities and regions, including: 1) water shortages for human consumption, industrial, business and agricultural uses, power generation, recreation and navigation; 2) a drop in the quantity and quality of agricultural crops; 3) decline of water quality in lakes, streams and other natural bodies of water; 4) malnourishment of wildlife and livestock; 5) increase in wildfires and wildfire-related losses to timber, homes and other property; 6) declines in tourism in areas with water-related attractions and amenities; 7) declines in land values due to physical damage from the drought conditions and/or decreased economic or functional use of the property; 8) reduced tax revenue due to income losses in agriculture, retail, tourism and other economic sectors; 9) increases in insect infestations, plant disease, and wind erosion; and 10) possible loss of human life due to food shortages, extreme heat, fire, and other health-related problems such as diminished sewage flows and increased pollutant concentrations in surface water.

Drought impacts may include limited or restricted access to water, and higher prices for water and agricultural goods. There is a threat to public health and safety, as water shortages and decreased water quality raise threats of illness, land subsidence, and wildfires. Conflicts between water users can arise, especially when a river or lake has competing uses among municipal, agricultural, industrial, and recreational users. Water restrictions and limitations among residents can also change daily lifestyle patterns and create social unrest in severe cases. There is also the possibility of a substantial economic impact on an area's agricultural sector, both in terms of the local area's economics (export value) as well as its employment (proportion of the labor force). Drought may also cause erosion of topsoil (with an

associated loss of productivity and land value) and exacerbate other types of erosion, involving associated costs for property owners.

A drought can have serious consequences for the environment if the length and severity of the event is great enough. The hydrological effects of drought can include a loss of wetlands, and lower water levels in lakes, ponds and rivers that are used for irrigating agricultural crops. Additionally, a deficit in rain for an extended period of time may cause ground water depletion and a reduction in the water quality. Drought may also impact plant and animal life by a reduction in drinking water and loss of biodiversity. Drought is also the cause of many wildfires, which destroy wildlife habitats and alter an area's ecosystem. Air quality is reduced by an increase of dust and pollutants in the air. Soil quality and quantity is also diminished due to enhanced erosion, especially around freshly exposed areas near lowered lakes and streams.

NOAA's Storm Events Database does not list any drought events for Ionia County since January 1<sup>st</sup>, 2000.

### Section 3.2.3: Other Natural Hazards

As discussed previously in this chapter, jurisdictions throughout Ionia County broadly face the same risks related to natural hazard events, due primarily to the flat, non-coastal, and relatively small planning area and consequent relative climatic and topographic homogeneity. The primary exceptions to this trend are dam failures, whose theoretical event occurrence most directly impacts Lyons Township due to the presence of Webber Dam; riverine flooding, which affects all jurisdictions containing river frontage, but has the largest impact on the cities of Portland and Ionia due to the amount of resources bordering the Grand River in these jurisdictions; and wildfires, which pose a greater risk in the more forested northern parts of the county.

To add, while reasonable predictions can be made on weather-related (especially seasonal) hazards regarding their likely future changes in probability of occurrence, hazards in this section cannot be evaluated for future event frequency and severity in such a straightforward way. For example, a climate-centric prediction for the future of dam failure frequencies may anticipate an increase due to the increased precipitation and resulting higher water levels of surface water bodies expected in Michigan, but this discounts continuing improvements in material sciences and maintenance plans, as well as a general trend in Michigan towards removing large dams instead of constructing new ones – indeed, Consumers Energy began publicly considering the future of its 13 dams in Michigan in 2022, including Webber Dam on the Grand River in Ionia County, in a process that will likely see the majority of them ultimately removed – which may outweigh environmental factors and result in an overall decreased future frequency of dam failure.

#### Item 3.2.3.1: Dam Failures

A dam failure is the collapse or failure of an impoundment that results in downstream flooding. A dam failure can result in loss of life, and in extensive property or natural resource damage for miles downstream from the dam. Dam failures occur not only during flood events, which may cause overtopping of a dam, but also as a result of poor operation, lack of maintenance and repair, and vandalism. Such failures can be catastrophic because they occur unexpectedly, with no time for evacuation. The Michigan Department of Environmental Quality (MDEQ) has documented approximately 302 dam failures in Michigan between 1888 and 2019. While dam failure is not typically considered as a natural hazard for emergency planning purposes, it has been considered as such for this Plan due to the presence of dams in Ionia County, a recent public interest in the Webber Dam in particular as its future is determined, and the fallout from a dam failure most closely resembling a natural hazard occurrence.

Information on dams with low hazard potential may be available from the National Inventory of Dams. The most recent information counted 1048 dams in Michigan, with only 169 classified as “high hazard” (meaning there was at least some development downstream, in the dam’s “hydraulic shadow”) and 148 as “significant.” In terms of Ionia County, there is only one dam classified as being “significant”, and one dam being classified as “high hazard”. Development should be discouraged in areas that would increase

the risks from potential dam failures. Effects from dam failures can be more severe than those from riverine flooding, due to the possibility of the extra effects of flash flooding and wave action from a catastrophic dam failure.

Dams are important components of the county's infrastructure and provide benefits to all citizens. However, as history has demonstrated, dams can fail with disastrous consequences, causing unfortunate loss of life and property and natural resources. Existing dams continue to age, and new dams are sometimes built in developed areas; as a result, continued loss of property can be expected to occur. The challenges facing local emergency management officials are: 1) minimize loss of life and property by working closely with dam owners in the development of the EAPs to ensure consistency with the Emergency Operations Plan (EOP) for the jurisdiction; 2) developing procedures in the EOP for responding to a dam failure (including a site-specific standard operating procedure for each dam site); 3) participating in dam site exercises; and 4) increasing public awareness of dam safety procedures.

The risk of dam failures should be calculated, where possible, from past occurrences. If a community has had no history of dam failures, the community may wish to examine the histories of similar types of dams (based on size, construction, ownership, maintenance schedules) and use that information to estimate the annual chance of a failure. Remember that not all failures result in damaging floods—many failures are caught in time to prevent flood damages, but still have costs associated with emergency response and repairs. It makes sense to calculate costs from different types of events. In most years, there will be no incident. If there is an incident, it may be relatively minor in its impact. The worst-case scenario would involve catastrophic dam failure.

In recent history, there are no known dam failures affecting Ionia County.

#### Item 3.2.3.2: Wildfires

A wildfire is an uncontrolled fire in grasslands, brushlands, or forested areas. The majority of Ionia County's landscape is rural with thousands of acres of agricultural land across the County's 580 square miles. That vast agricultural land is a long tradition of the areas industry and the local economy. The county is located among rolling hills and various tributaries leading to more miles of the Grand River than any other county in Michigan. Besides the Grand River, other major rivers include the Maple River, Flat River, Looking Glass River, and Coldwater River. Ionia County has many small lakes with the largest being the Webber Impoundment, Long Lake, and Morrison Lake.

FEMA's calculated Annualized Frequency of Wildfires for Ionia County is approximately  $1E-5$ , or 0.00001, meaning a local wildfire is expected approximately once per hundred thousand years. The National Risk Index considers approximately 36% of Ionia County's population to be vulnerable to this hazard, and the total calculated Expected Annual Loss for Ionia County from this hazard is approximately \$19,945; this produces an annual loss of approximately \$0.82 per year, per affected resident in Ionia County from wildfires.

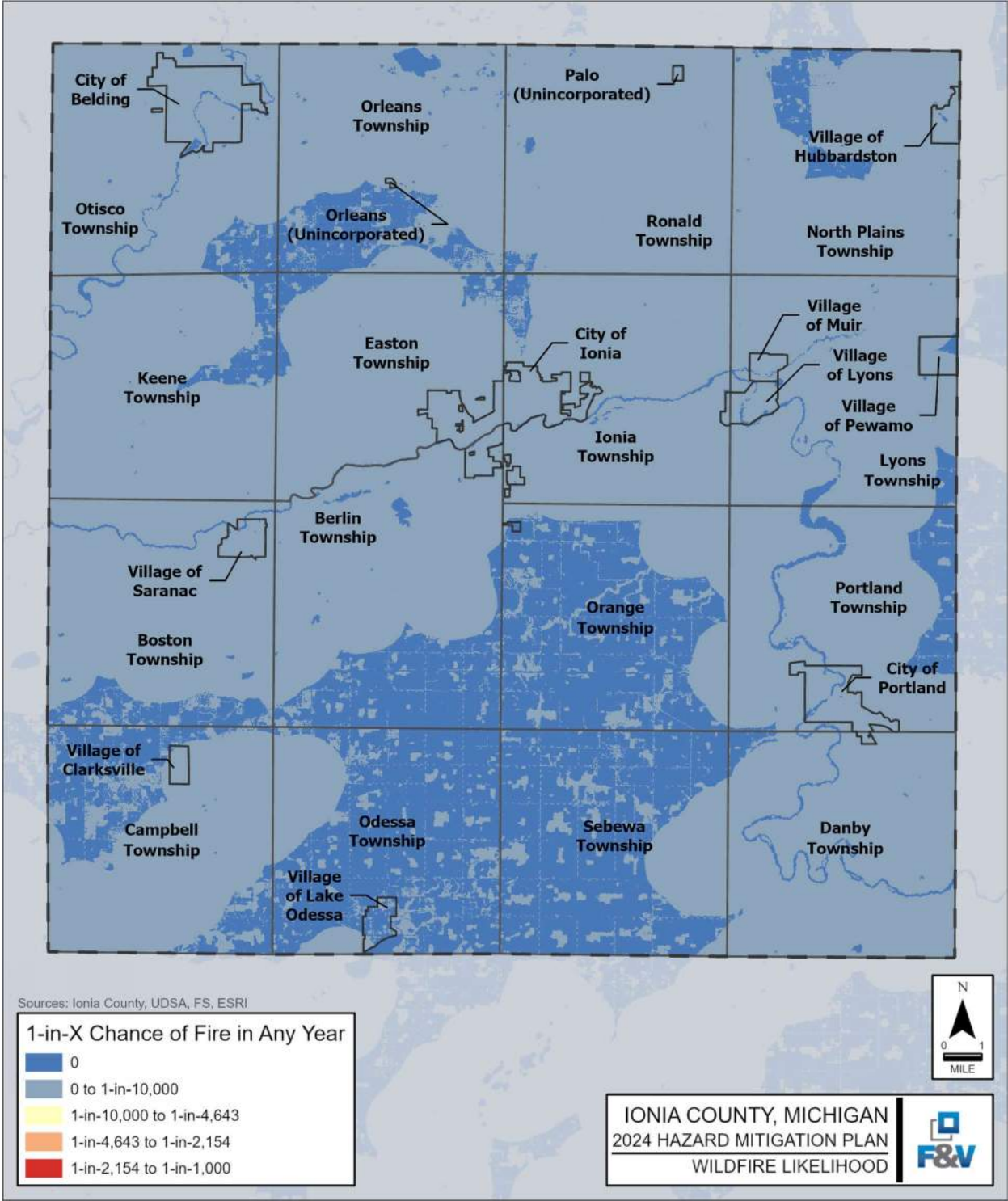
Contrary to popular belief, lightning strikes are not the primary cause of wildfires in Ionia County. Recently, only about 7% of all wildfires in all of Michigan were caused by lightning strikes, and most other causes have been attributed to human activity. Outdoor debris burning is the leading cause of wildfires in the State of Michigan. Most wildfires occur close to where people live and recreate, which puts both people and property at risk. The immediate danger from wildfires is the destruction of property, timber, wildlife, and injury or loss of life to persons who live in the affected area or who are using recreational facilities in the area.

According to MDNR information, the causes of wildfires in Michigan in 2021 were:

1. Debris burning (34%)
2. Miscellaneous/unknown (24%)
3. Campfire (10%)
4. Power line (9%)
5. Equipment (8%)
6. Arson (4%)
7. Children (3%)
8. Lightning (3%)
9. Structure (2%)
10. Fireworks (1%)
11. Railroad (1%)
12. Smoking (1%)

Even though many fires occur close to where human residences are located, they are a normal ecological phenomenon and serve long-term functions for vegetation and the natural environment. Wildfires burn excess brush, maintain large savannah-like openings, and restore wetlands by forcing out various unwanted brush and plants. The natural function of fires within the environment can be considered a renewal or “cleansing process” as long as the fire is not too severe.

NOAA’s Storm Events Database does not list any wildfire events for Ionia County since January 1<sup>st</sup>, 2000.



### Item 3.2.3.3: Invasive Species

An invasive species is defined as a species that is both non-native (alien) to the ecosystem under consideration, and whose introduction causes or is likely to cause economic or environmental harm, or harm to human health. Invasive species can be plants, animals, and other organisms (e.g., microbes). Invasive species typically fall into two broad categories: terrestrial (lives on land) and aquatic (lives in water).

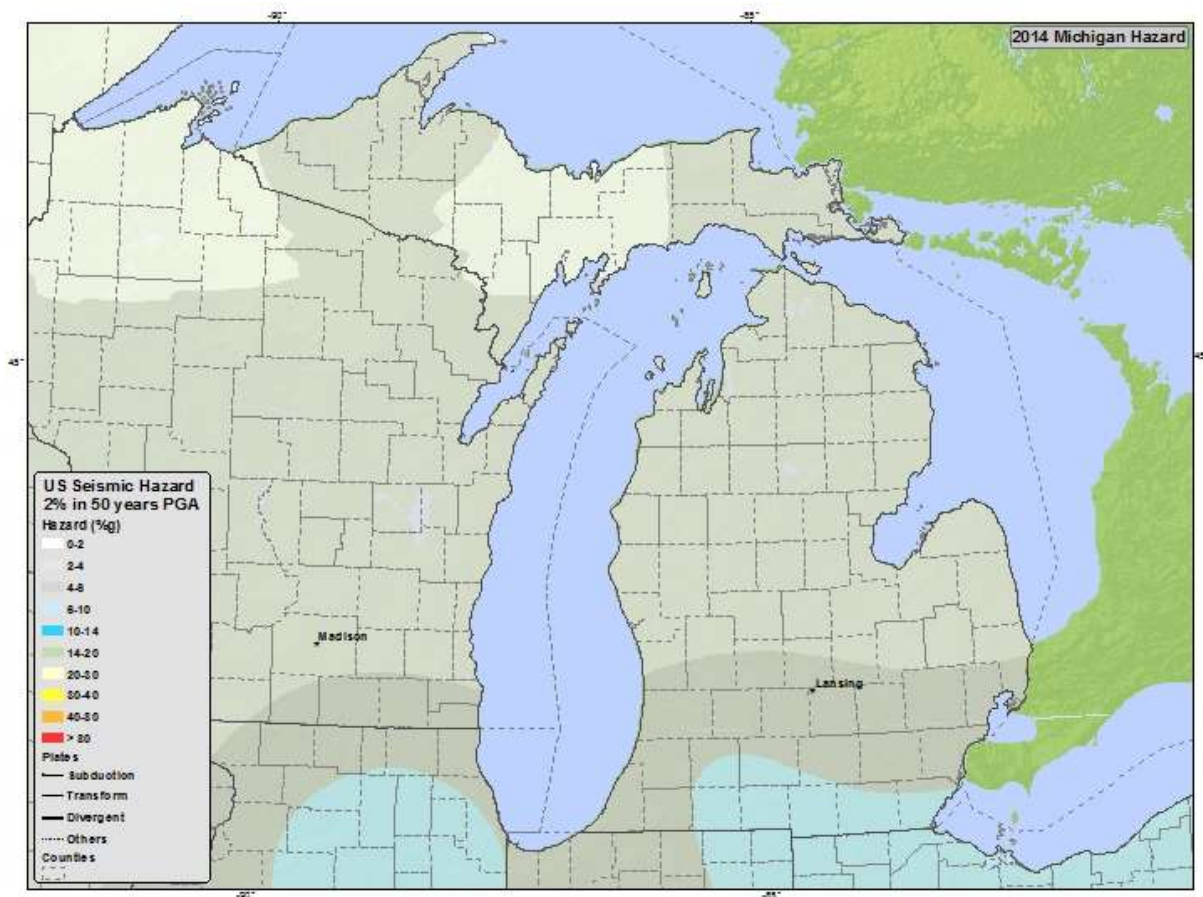
Invasive species can be transported in many ways, such as on animals, vehicles, ships, commercial goods, produce, and clothing. Although non-native species are the foundation of U.S. agriculture, and also are used to prevent erosion, to provide fishing and hunting opportunities, and as ornamental plants and pets, occasionally a non-native organism flourishes too well and causes unwanted economic, ecological, or human health impacts. The terms “invasive” or “nuisance” are used to describe such species. After its arrival, an invasive species becomes capable of establishing a breeding population in its new location and becomes a pest by threatening local biodiversity and causing or threatening human health impacts, significant economic costs, and/or harmful ecological effects to an extent that outweighs its known benefits. New environments may affect rates of reproduction, susceptibility to disease, and other features that affect a species’ success. Consequently, a plant or animal that causes little damage to agriculture or natural ecosystems in one area may cause significant problems in another. Certain non-native species are very successful in their new habitats because they out-compete native plants or animals and have no natural controls (predators, diseases, etc.) in the new area. At least 200 well-known, high-impact, non-native species presently occur in the United States. They range from the European gypsy moth and emerald ash borer to crabgrass, dandelions, and German cockroaches, annually costing well over a billion dollars to control. Some even pose human health risks. Others, like the zebra mussel, threaten widespread disruption of ecosystems and the displacement or loss of native plants and animals.

While quantifying the economic impact of invasive species is a difficult and multifaceted undertaking, especially on the local level, some recent studies have produced estimates that paint an unfortunate picture of the impacts on a wider scale. A 2011 report published by Aukema et al. estimated that wood- and phloem-boring insects cost American local governments \$1.7 billion per year, with an additional \$830 million yearly loss in residential property values; a 2012 study commissioned by The Nature Conservancy and published by the Anderson Economic Group found that Great Lakes industries suffer \$50 million in yearly losses and reduced demand due to aquatic invasive species, with the Great Lakes Fishery Commission spending approximately \$34 million per year on research and control of aquatic invasive species; a 2021 report published by Crystal-Ornelas et al. concluded that invasive species have cost the North American economy at least \$1.26 trillion between 1960 and 2017, with economic losses averaging \$2 billion per year in the early 1960s and over \$26 billion per year in the 2010s. While the economic impact of invasive species in Ionia County has not been evaluated, the county is generally understood to have similar non-Great Lake invasive species concerns as the rest of the state, such as the presence of the emerald ash borer, brown marmorated stink bug, and invasive phragmites. Even as the count of invasive species and their associated ecological damages in Ionia County continues to grow, negative human impacts are overall *currently* more of a nuisance than a hazard.

### Item 3.2.3.4: Earthquakes

An earthquake is the shaking or trembling of the ground caused by tectonic activity or other seismic forces. Earthquakes range in intensity from slight tremors to great shocks. Their duration may range from a brief instant to several minutes, or they may come as a series of tremors over a longer period of days or weeks. The energy of an earthquake is released in multiple types of seismic waves. Earthquakes usually occur without warning. In some instances, advance warnings of unusual geophysical events may be issued. However, scientists cannot yet predict exactly when or where an earthquake will occur. Earthquakes tend to strike repeatedly along faults, which are formed where tectonic forces in the earth's crust cause the movement of rock bodies against each other. National earthquake risk maps have been produced, showing areas where different levels of earthquake are more likely to occur. Earthquake monitoring is conducted by the U.S. Geological Survey, the National Oceanic and Atmospheric Administration, and universities throughout the country.

The following map shows peak ground accelerations with a 2% chance of being exceeded on hard rock over a 50-year period, with these accelerations represented as a percentage of *g*, gravity:



In essence, over the next 50 years, there's a 98% chance that any earthquake occurring in Ionia County *won't* cause an area of exposed bedrock to experience an acceleration stronger than approximately 0.04g. An earthquake that produces such a peak ground acceleration would have a Modified Mercalli Intensity of V, powerful enough to sway plants or leaves and break dishes, but unlikely to cause any significant structural damage.

Modified Mercalli Scale		Richter Magnitude Scale
I	Detected only by sensitive instruments	1.5
II	Felt by few persons at rest, especially on upper floors; delicately suspended objects may swing	2
III	Felt noticeably indoors, but not always recognized as earthquake; standing autos rock slightly, vibration like passing truck	2.5
IV	Felt indoors by many, outdoors by few, at night some may awaken; dishes, windows, doors disturbed; autos rock noticeably	3
V	Felt by most people; some breakage of dishes, windows, and plaster; disturbance of tall objects	3.5
VI	Felt by all, many frightened and run outdoors; falling plaster and chimneys, damage small	4
VII	Everybody runs outdoors; damage to buildings varies depending on quality of construction; noticed by drivers of autos	4.5
VIII	Panel walls thrown out of frames; fall of walls, monuments, chimneys; sand and mud ejected; drivers of autos disturbed	5
IX	Buildings shifted off foundations, cracked, thrown out of plumb; ground cracked; underground pipes broken	5.5
X	Most masonry and frame structures destroyed; ground cracked, rails bent, landslides	6
XI	Few structures remain standing; bridges destroyed, fissures in ground, pipes broken, landslides, rails bent	6.5
XII	Damage total; waves seen on ground surface, lines of sight and level distorted, objects thrown up in air	7
		7.5
		8

Source: Missouri DNR

Earthquake Intensity Scale Modified Mercalli Intensity (MMI)		
INTENSITY	SHAKING	DESCRIPTION
I	Not Felt	Not felt except by a very few under especially favorable conditions.
II	Weak	Felt only by a few persons at rest, especially on upper floors of buildings.
III	Weak	Felt quite noticeable by persons indoors. Many people do not recognize it as an earthquake. Standing cars may rock slightly, vibrations are similar to a passing truck.
IV	Light	Felt indoors by many, outdoors by few. At night, some are awakened. Dishes, windows, and doors are disturbed. Sensation like a heavy truck striking a building. Standing cars rock noticeably.
V	Moderate	Felt by nearly everyone; many awakened. Dishes and windows are broken. Unstable objects are overturned. Pendulum clocks may stop.
VI	Strong	Felt by all; many frightened. Some heavy furniture moved. A few instances of fallen plaster. Damage is slight.
VII	Very Strong	Negligible damage to buildings of good design/construction. Slight to moderate damage in well-built/ordinary construction. Considerable damage in poorly built/ordinary structures. Some chimneys broken.
VIII	Severe	Slight damage to specially designed structures. Considerable damage to ordinary construction, including partial collapse. Damage is great in poorly built structures. Fall of chimneys, columns, monuments, and walls. Heavy furniture overturned.
IX	Violent	Considerable damage to specially designed structures; well-designed frame structures are thrown out of plumb. Damage is great in substantial buildings, with partial collapse. Buildings shifted off foundations.
X+	Extrema	Some well-built wooden structures destroyed; most masonry and frame structures with foundations are destroyed. Rails are bent.

Source: USGS

It is assumed the hazard risk associated with earthquakes in Ionia County will remain constant over the five-year planning period.

FEMA's calculated Annualized Frequency of Earthquakes for Ionia County is approximately 0.0002, meaning a local earthquake is expected once per five thousand years. The National Risk Index considers the entirety of Ionia County's population to be vulnerable to this hazard, and the total calculated Expected Annual Loss for Ionia County from this hazard is approximately \$61,766; this produces an annual loss of approximately \$0.93 per year, per person in Ionia County from earthquakes. An earthquake with its epicenter in Ionia County has never been recorded.

### Item 3.2.3.5: Subsidence

Subsidence is the lowering or collapse of a land surface, caused by natural or human-induced activities that erode or remove subsurface support. It can be caused by a variety of natural or human-induced activities. Natural subsidence occurs when the ground collapses into underground cavities produced by the solution of limestone or other soluble materials by groundwater. Human-induced subsidence is caused principally by groundwater withdrawal, drainage of organic soils, and underground mining. In the United States, these activities have caused more than 17,000 square miles of surface subsidence, with groundwater withdrawal (10,000 square miles of subsidence) being the primary culprit. In addition, approximately 18% of the United States land surface is underlain by cavernous limestone, gypsum, salt, or marble, making the surface of these areas susceptible to collapse into sinkholes.

Mine subsidence is a geologic hazard that can strike with little or no warning and can result in very costly damage. Mine subsidence occurs when the ground surface collapses into underground mined areas. In addition, the collapse of improperly stabilized mine openings is also a form of subsidence. About the only good thing about mine subsidence is that it generally affects very few people, unlike other natural hazards that may impact a large number of people. Mine subsidence can cause damage to buildings, disrupt underground utilities, and be a potential threat to human life. In extreme cases, mine subsidence can literally swallow whole buildings or sections of ground into sinkholes, endangering anyone that may be present at that site. Mine subsidence may take years to manifest. Examples of collapses occurring decades after mines were abandoned have been documented in several areas of the country.

Ionia County and much of the central Lower Peninsula of Michigan once supported a thriving coal mining industry. Records indicate that over 165 different coal mines operated in Michigan's coal-bearing region, which includes 31 counties in the south-central portion of the Lower Peninsula, including Ionia County (except for the southwestern corner of the county). Coal was first discovered in Michigan in 1835 in Jackson County. From that discovery, several small underground and surface coal mines were opened in that area of the state. In 1861, coal was discovered near Bay City, and in 1897 commercial coal mining began in Bay County. That led to the establishment of numerous additional mines in Saginaw, Tuscola and Genesee counties, which tended to be larger, deeper and more extensive mines. That was the start of Michigan's coal mining industry.

The state's underground coal mines were an average of 110 feet deep and were worked by the "room and pillar" method. Michigan had continuous coal mining from 1897 to 1952, when the last underground coal mine near St. Charles, Saginaw County, closed. From 1860 (the year mine records were first kept) until 1975 (the year the last surface coal mine closed), the 165 commercial coal mines produced a total output of over 46 million tons of coal. The maximum coal output was achieved in 1907, when Michigan's 37 operating coal mines produced two million tons per year - enough to supply 16% of Michigan's then total demand for coal.

Compaction of soils in some aquifer systems can accompany excessive groundwater pumping and cause subsidence. Excessive pumping of such aquifer systems has resulted in permanent subsidence and related ground failures. In some systems, when large amounts of water are pumped, the subsoil compacts, thus reducing in size and number the open pore spaces in the soil that previously held water. This can result in a permanent reduction in the total storage capacity of the aquifer system. More than 80% of the identified subsidence in the United States is a consequence of human impact on subsurface water. Three distinct processes account for most of the water-related subsidence: compaction of aquifer systems, drainage and subsequent oxidation of organic soils, and dissolution and collapse of susceptible rocks.

Groundwater in the pore spaces of an aquifer supports some of the weight of the overlying materials. When groundwater is depressurized or even removed from aquifers, where the materials are very compressible and pore pressures can be high, compaction may occur. This subsidence may be partially

recoverable if pressures rebound, but much of it is not. Thus, the aquifer is permanently reduced in capacity, and the surface of the ground may also subside.

In the past there has been pressure for the Great Lakes states to export bulk quantities of water to various locations in the United States. If these plans to withdraw large amounts of water from the Great Lakes ever took place, it may have a major effect on the level of the ground water tables in Michigan, which may possibly make subsidence a more common occurrence. Currently, broken water pipes and the improper discharge of rainwater are the most common causes of water-related subsidence in Michigan. It most commonly occurs on sandy or silty ground when the water from the leak washes out the fine particles beneath the foundation, causing voids that result in collapse or subsidence.

Overall, subsidence is not a very well-known hazard in most parts of Ionia County. The impacts of subsidence in Ionia County tend to be limited in scope to individual sites and structures. Unlike some other areas in the country, such as Illinois, Ohio, Kentucky, West Virginia, Florida, Louisiana, and Pennsylvania, where subsidence is a serious concern, Ionia County does not devote a great deal of resources to the problem. Subsidence simply does not have the widespread impact potential of other natural and technological hazards that are prevalent in the county.

Because subsidence tends to be a more sporadic hazard, and because it poses a greater hazard to property than to life, it does not receive much attention from government agencies or the public. Other natural hazards, such as tornadoes, floods and severe storms receive much more attention because of their more widespread and severe impacts. However, subsidence will continue to be a hazard that a segment of the Ionia County population will have to deal with in the future. Major incidents that lead to catastrophic damage are nearly unknown, but smaller incidents occur with some regularity in old mining areas.

#### Item 3.2.3.6: Space Weather

Space weather is a term that describes the patterns of emissions from our Sun. Ordinary radiation emissions can be considered calm “weather,” but there are periodic flare-ups and blasts of much greater energies that send charged particles that impact upon the Earth’s atmosphere and magnetosphere. These *solar geomagnetic storms* can cause widespread failures of important satellite, electronic, communication, navigation, guidance, and electric power systems. On the ground, disrupted power systems can result in widespread power failures, and the movement of the mass of charged particles in geomagnetic storms can cause induced currents to flow within pipelines, unless special design features have inhibited such currents.

#### Item 3.2.3.7: Impacting Objects (Celestial)

This section concerns impacts or threatened impacts from a meteorite, asteroid, comet, satellite, space vehicle, space debris, or similar objects that may cause physical damages or other disruptions. Most such impacts are extraterrestrial in origin – meteors or meteorites that were originally asteroids or comets from elsewhere in the solar system – but consideration also needs to be given to the crashing of human space vehicles and artificial satellites.

*Meteors* burn up in the atmosphere, but in the process may cause strong winds and explosive blast forces to then strike the Earth’s surface; even in cases where a large meteor does not actually strike the planet’s surface, the explosive energies from its impact upon the many layers of atmosphere can create an intense heat and blast area, along with very strong winds, and can release more energy than even the largest nuclear bombs. *Meteorites* actually strike the ground or sea at the Earth’s surface, partially or fully surviving their plunge through the atmosphere. Any massive, fast-moving objects that impact upon either the ground, the oceans, or the atmosphere can cause widespread destruction and disruption of both human and natural systems, including secondary hazards such as earthquakes, shoreline floods, severe winds, and infrastructure failures.

Space vehicles and satellites occasionally fall to Earth, causing a state of heightened alert as information about its decaying orbit is gathered and tracked to see whether the crash is likely to occur in an inhabited area. This event occurred most recently in April 2018, in which the Chinese Space Station Tiangong-1 was falling to Earth; Michigan's State Emergency Operation Center monitored its descent so that any risk to Michigan could be perceived in advance to allow the preparation of appropriate response activities.

Although it has been estimated that a serious impact from a physical body upon the Earth occurs approximately once every 50 to 100 years, the fact that much more of the Earth has been covered by human developments within the recent past has caused increasing concern over this hazard. When Earth's population was much smaller, events had tended to occur in areas with few if any inhabitants, so that it was very difficult to find any confirmed cases of an injury directly caused by a meteorite. However, the well-known theoretical risk of impacts became reality across the Chelyabinsk metropolitan area in Russia on February 15, 2013, in which the force of the blast wave from a meteor caused shattered windows, and more than 1,500 injuries. One of the lessons learned from Chelyabinsk is that even though the type of damage was mostly minor (since windows are easy to replace), many of the injuries might have been prevented if there had been a greater public awareness of the concept of a blast wave. Upon seeing a huge flash of light in the sky, an informed observer could potentially recognize that the observed light may really be an initial warning indicator of the full event. Light travels faster than any massive objects, and so a flash of light from a distant explosion will necessarily be seen before the arrival of the impact forces of a blast wave and its accompanying strong winds.

#### Item 3.2.3.7: Public Health Emergencies

A public health emergency is a widespread and/or severe epidemic, incident of contamination, or other situation that presents a danger to or otherwise negatively impacts the general health and well-being of the public. Public health emergencies can take many forms—disease epidemics, large-scale incidents of food or water contamination, extended periods without adequate water and sewer services, harmful exposure to chemical, radiological or biological agents, and large-scale infestations of disease-carrying insects or rodents, to name just a few. Public health emergencies can occur as primary events by themselves, or they may be secondary events to another disaster or emergency such as a flood, tornado, or hazardous material incident. The common characteristic of most public health emergencies is that they adversely impact, or have the potential to adversely impact, a large number of people.

Perhaps the greatest emerging public health threat would be the intentional release of a radiological, chemical, or biological agent. Such a release would most likely be an act of sabotage aimed at the government or at a specific organization or segment of the population. Fortunately, Ionia County has not yet experienced such a release aimed at mass destruction. If it does, the public health implications—under the right set of circumstances—could be staggering. Although no area in Ionia County is immune to public health emergencies, areas with high population concentrations will always be more vulnerable to the threat. In addition, the more vulnerable members of society—the elderly, children, impoverished individuals, and persons in poor health—are also more at risk than the general population.

The primary types of public health impacts involve the threat or presence of either disease, contamination, or sanitation problems. Disease epidemics or pandemics have the potential to cause widespread debilitation or loss of life, associated medical expenditures, and decreases in productivity and quality of life. Contamination can at least temporarily lower property values, as well. Sanitation problems require effort and expense to resolve. Contamination and sanitation issues increase the probability and variety of diseases that may affect the population. Facilities may be shut down, as a means of preventing disease transmission or of containing contamination, and thus cause a loss of the services being provided to the public (by schools, for example). Medical resources may become overwhelmed and unable to deal with any additional needs. As traditional medical services become increasingly difficult to access (or if their quality declines due to overwork or understaffing) then increasing numbers may turn to less responsible and effective alternative means of treatment (or may forego treatment entirely).

## Chapter 3.3: Risk Assessment

After identifying and qualifying which hazards pose a risk in Ionia County, the HMPC ranked the hazards for mitigation prioritization using criteria as chosen and weighted based on a thorough review of the community profile, balanced against a careful consideration of local priorities and considerations. The ranking method utilizes a formula developed by the HMPC which produces a final Risk Assessment Value (RAV), summarizing a given hazard's impact specifically to Ionia County and with possible (unmodified) values ranging between -0.025 and 8.85. The formula is structured as:

$$\text{RAV} = \text{Occurrence Probability} * (0.65 * \text{Impacts} + 0.30 * \text{Mitigation Capacity} + 0.05 * \text{Expected Future})$$

Impacts is further divided into three categories: impact to the population, impacts to property/land, and impacts to the economy, and is calculated as:

$$\text{Impacts} = (0.50 * \text{Population} + 0.30 * \text{Property} + 0.20 * \text{Economy})$$

A table showing a full breakdown of RAV components per hazard is included in Chapter 3.4.

### ***Occurrence Probability***

This criterion considers the historical frequency of a given hazard, and its value is based on an analysis of this historical data. This criterion has the greatest impact on the RAV because of its importance to the concept of hazard mitigation: the most pertinent hazards to address via mitigation activities are generally those which pose the most frequent risk, and conversely, hazards with an exceptionally low probability of occurrence are of less day-to-day or year-to-year concern for mitigation regardless of their relative severity. The RAV is thus structured such that the probability of occurrence is a multiplier of all other components. Its value as part of the RAV ranges as an integer between 0.5 and 3.

- 0.5: Less than 1% annual probability of occurrence
- 1: 1% to <10% annual probability of occurrence
- 2: 10% to <100% annual probability of occurrence
- 3: 100% annual probability of occurrence

### ***Impacts***

Impact rankings were determined based on an analysis of historical data, with a particular focus on past hazard event frequency, and an understanding of the nature of each ranked hazard, such as its extent of impact and typical severity. As stated previously, this criterion is divided into three independently calculated components, which are detailed below. This value contributes a weight of 0.65 to the final (unmodified) RAV.

### **Impacts to Population**

This component considers the extent of the population affected or likely to be affected by a given hazard and contributes a weight of 0.5 to the final Impacts value. In this context, "impacted" means the hazard has some direct and significant negative effect on the population – for example, an earthquake is likely to be felt across the county but is very unlikely to disrupt any human activity given the history of earthquakes in Ionia County. Its value ranges as an integer between 0 and 3.

- 0: Zero population impact
- 1: 0% to <5% impacted
- 2: 5% to <30% impacted
- 3: Over 30% impacted

### **Impacts to Property**

This component considers the extent of land that is directly and negatively impacted by a given hazard and contributes a weight of 0.3 to the final Impacts value. In this context, "impacted" means the hazard somehow interacts directly and significantly with the land or the structures upon it – for example, most of

the area of the county is likely to experience foggy conditions on a foggy day, but fog has little impact on land save for increased condensation. Its value ranges as an integer between 0 and 3.

- 0: No effects
- 1: Isolated location
- 2: Multiple locations
- 3: Widespread

### Impacts to Economy

This component considers the extent to which the local economy is impacted by a given hazard and contributes a weight of 0.2 to the final Impacts value. These impacts may concern a specific sector of the economy, such as the potential impact of invasive species on local farmers, but this component generally concerns how human behavior is affected by the hazard in question, such as a reduced local interest in shopping on snowy days, or strict capacity restrictions or functional business restrictions in the midst of a public health emergency. Its value ranges as an integer between 0 and 3.

- 0: No effects
- 1: Inconvenience
- 2: Notable effects
- 3: Significant effects

### Mitigation Capacity

Capacity for mitigation is quantified in numerous ways, with the primary metric being the existence of departments or bureaus to achieve specific hazard mitigation actions, such as a well-developed Department of Public Works that can mitigate winter hazards by salting and plowing local roads. Secondary metrics include the presence of laws or regulations intended to enshrine hazard mitigation on an institutional level, such as building codes that require tornado-resistant construction, or the ability to add hazard mitigation capacity through means such as access to funding or presence of political will. While the extent and severity of impacts from hazard events are the most important consideration when prioritizing hazard mitigation actions, it's also important to identify weaknesses in mitigation ability and to understand when mitigation actions are infeasible or even impossible. This value contributes a weight of 0.30 to the final (unmodified) RAV, and its value ranges as an integer between 0 and 3.

- 0: Great capacity
- 1: Good capacity
- 2: Some capacity
- 3: No capacity

### Expected Future Impacts

This component measures how the extent and severity of impacts from hazard events may change over time. In the context of natural hazards, this change is almost entirely a function of expected climate change and the inherent consequences associated with such. In general, regions with continental climates, such as Ionia County, are likely to become wetter and warmer as climate change worsens and its effects continue to become more pronounced. The proximity of Ionia County to Lake Michigan, while distant enough for the county to avoid the bulk of lake-effect weather but near enough for observable effects, is likely to contribute to wetter weather while slightly inhibiting a temperature increase compared to more-inland counties as the climate changes over time. However, especially on the county level, this consideration is more something to “keep in mind” than anything else – as the effects of climate change becomes more and more pronounced, ambitious and substantial mitigation actions will, by necessity, need to be driven by federal and state action for improvement of any real significance. This value thus contributes the least weight to the final (unmodified) RAV, at a weight of 0.05, and the value ranges as an integer between -1 and 2, with a negative value possible to accommodate for hazards whose extent and severity are likely to decrease over time.

- 1: Decreased risk
- 0: Same risk/no data
- 1: Slightly increased risk
- 2: Increased risk

### **Modifiers**

The goal of hazard analysis and risk assessment, using this sort of mathematical, formulaic approach, is to produce a ranking of hazards based on criteria with a high level of objectivity, which is used to guide prioritization of mitigation actions and projects. The criteria and weights constituting a risk assessment calculation are carefully chosen to reflect objective severity and levels of risk associated with natural hazards while balancing local conditions and characteristics; these local considerations could be contributing factors that worsen the impact of hazard events, community resources that can address the fallout from hazard events, or even local experience in dealing with these hazard events on both a municipal and individual level. Factoring in these local considerations can be accomplished in multiple ways, and it was accomplished here by the addition of three multiplicative modifiers that are applied after all other RAV calculations:

#### **Out of Earthly Control: RAV\*0**

This modifier causes the adjusted RAV for a hazard to equal zero and is applied to the RAVs for space weather and celestial impacting objects. This modifier was implemented due to the reality that Ionia County is unable to put any effort into mitigating these hazards and thus relegates them to the very bottom of the list, while still acknowledging the danger these hazards could potentially pose.

#### **Disproportionate Impact: RAV\*5**

This modifier is solely applied to the RAV for the condition of a dam failure. With modern construction techniques, a dam failure is highly unlikely, and there's an excellent capacity for mitigation of this hazard (due in no small part to strict requirements for dam monitoring); additionally, such an event would directly impact only a small percentage of the population and the county's total land area. These factors result in a particularly low RAV for a dam failure, which underscores the practical severity of an occurrence – a dam failure would be a traumatic event for the entire community, likely to spur fierce debates on topics such as the adequacy of infrastructure maintenance and safety practices and emergency preparedness and public policy, and liability investigations and lawsuits would potentially drag on in court for years while the public perception of any implicated or associated parties is dragged through the mud. This discrepancy between dam failure RAV and real-life consequences is addressed by this modifier, increasing the RAV by five times for this hazard.

#### **Seasonal: RAV\*0.5**

This modifier is applied to hazards that are explicitly caused by seasonal variations in weather and decreases their RAV by half. The hazards modified here are ice storms, hail, blizzards, and extreme heat/cold. Hazards such as thunderstorms or flooding, while having a seasonal component, are not exclusive to a single season or period of time and are not affected by this modifier. This modifier was implemented for two reasons: since these events are frequent and generally impact the entire County population and area, their unmodified RAVs are relatively high, meaning these hazards would dominate the top of the ranking list; this ties into the second reason for the modifier, being that these seasonal hazards are mitigated by the community without external influence (such as County regulations) to a greater extent than other hazards on the list. Mitigation actions for these hazards are much more common on the individual level, such as the use of winter tires and modification of driving behavior as appropriate to mitigate the effects of severe winter weather, the installation of an air conditioning system in one's home to combat extreme heat or a generator to prepare for power outages caused by severe storms, or pre-emptively pruning branches from trees on one's property that may be likely to break off during a severe snowstorm.

**Chapter 3.4: Risk Assessment Table**

Hazard	Risk Assessment Value	Occurrence Probability	Impacts (65%)	Mitigation Capacity (30%)	Expected Future (5%)	Population (50%)	Property (30%)	Economy (20%)
Floods	3.74	3	1.3	1	2	1	2	1
Severe Winds	3.66	3	1.8	0	1	2	2	1
Ice/Sleet Storms	3.33	3	2.8	1	2	3	3	2
Hail	3.33	3	2.8	1	2	3	3	2
Tornadoes	3.25	2	1.5	2	1	1	2	2
Winter Storms/Heavy Snow Events/Blizzards	2.88	3	2.8	0	2	3	3	2
Drought	2.45	2	1.5	1	-1	1	2	2
Thunderstorms/ Lightning	2.10	3	1	0	1	1	1	1
Dam Failures	1.95	0.5	1.2	0	0	1	1	2
Extreme Cold	1.88	3	2	0	-1	3	1	1
Extreme Heat	1.81	3	1.7	0	2	3	0	1
Public Health Emergencies	1.67	1	2.1	1	0	3	0	3
Fog	1.28	3	0.5	0	2	1	0	0
Subsidence	0.95	1	1	1	0	1	1	1
Invasive Species	0.79	0.5	1.5	2	0	1	2	2
Wildfires	0.57	0.5	1.3	1	0	1	2	1
Earthquakes	0.15	0.5	0	1	0	0	0	0
Space Weather	0.00	0.5	3	3	0	3	3	3
Impacting Objects (Celestial)	0.00	0.5	0.8	3	0	1	1	0

**KEY**

0.5 <1% annual probability  
 1 1%-<10% annual probability  
 2 10%-<100% annual probability  
 3 100% annual probability

0 Great capacity  
 1 Good capacity  
 2 Some capacity  
 3 No capacity

-1 Decreased risk  
 0 Same risk/no data  
 1 Slightly increased risk  
 2 Increased risk

0 0% impacted  
 1 0%-<5% impacted  
 2 5%-<30% impacted  
 3 >30% impacted

0 No effects  
 1 Isolated location  
 2 Multiple locations  
 3 Widespread

0 No effects  
 1 Inconvenience  
 2 Notable effects  
 3 Significant effects

**Multiplier Special modifiers:**

- 0 Out of Earthly control
- 5 Disproportionate Impact
- 0.5 Seasonal

**RAV = Occurrence Probability \* (0.65\*Impacts + 0.30\*Mitigation Capacity + 0.05\*Expected Future)**

**Impacts = (0.50\*Population + 0.30\*Property + 0.20\*Economy)**

# Part 4: Mitigation Strategies

## Chapter 4.1: Goals and Objectives

The overarching purpose of hazard mitigation planning is to reduce or eliminate long-term risk to life and property from the occurrence of hazard events. To effectively consider this purpose, the Ionia County HMPC identified categorical goals necessary for its realization, along with objectives to guide the development of mitigation strategies that achieve these goals.

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**Goal:** Minimize injuries and deaths caused by or related to hazard events.

- Improve emergency notification systems to effectively warn the public of hazard events in high-risk areas
- Conduct public education and outreach campaigns to raise awareness of potential hazards and to inform residents of actions to take before, during, and after hazard events
- Ensure effective coordination and communication between different levels of government, as well as private organizations, in responding to hazard events

**Goal:** Minimize the loss or damage of public and private property from hazard events.

- Develop and enforce building codes and related standards that account for potential hazards and mitigation of such
- Identify and prioritize infrastructure improvements and upgrades that reduce vulnerability and increase resilience to hazard events
- Encourage and incentivize private property owners to voluntarily implement hazard mitigation measures on their properties

**Goal:** Promote community awareness, understanding, cooperation, and participation in hazard mitigation actions.

- Conduct community outreach campaigns to educate and engage residents in hazard mitigation planning and implementation efforts
- Provide accessible and accurate information on hazard risk and mitigation strategy to residents
- Highlight the inclusion and consideration of hazard mitigation principles as they appear in new development and local projects

**Goal:** Promote local growth and development through a lens of hazard mitigation.

- Integrate hazard mitigation principles and consideration into local comprehensive plans, land use planes, zoning ordinances, etc. to ensure new developments effectively account for hazard events
  - Explore funding options for mitigation activities to increase their viability and likelihood of implementation
  - Evaluate and improve upon current hazard mitigation activities and efforts
- 

The core mechanism of achieving these goals is through the development, planning, implementation, and maintenance of mitigation strategies, as prioritized by local needs, the hazards a strategy addresses, and the availability of resources necessary for action. With these goals serving as guidance, we begin this exploration and discussion of mitigation strategies with an overview of mitigation actions already in place

within Ionia County and its constituent jurisdictions. While the following list of strategies is not exhaustive, it is illustrative of current efforts to achieve these goals and creates a backdrop upon which to build.

## Chapter 4.2: Current Mitigation Strategies

### Section 4.2.1: Ionia County Emergency Management

Ionia County's Emergency Management Program coordinates and integrates all activities necessary to build, sustain, and improve the capability to prepare for, protect against, respond to, recover from, or mitigate against threatened or actual natural disasters, acts of terrorism, or other man-made disasters within the County. The Emergency Management Manager is responsible for developing, and coordinating programs that protect the public's health and safety from large scale natural and technological hazards. The department serves the entire Ionia County area and coordinates with respective municipal, state, and federal agencies.

### Section 4.2.2: Ionia County Drain Commissioner

Effective storm water conveyance is a crucial part of limiting flood hazards, both from heavy storms and from riverine sources. Ionia County's Drain Commissioner's office oversees and maintains 375 drains, consisting of 366 miles of open ditches and 188 miles of tiled drains that serve a combined 431,030 acres of drainage districts. The Drain Commissioner's Guidelines for storm water management establish the County's framework for which detention and/or retention measures will be implemented and details the process for gaining approval for drainage systems in new developments or redeveloped areas. The Guidelines are designed to accomplish the following stated objectives:

- To reduce artificially induced flood damage
- To minimize increase in storm water runoff rates and volumes from identified new land development
- To minimize the deterioration of existing watercourses, culverts and bridges, and other structures
- To encourage water recharge into the ground where geologically favorable conditions exist
- To prevent an increase in non-point source pollution
- To maintain the integrity of stream channels for their biological functions, as well as for drainage and other purposes
- To minimize the impact of development upon stream bank and stream bed stability
- To reduce erosion from development or construction projects
- To preserve and protect water supply facilities and water resources by means of controlling increased flood discharges, stream erosion, and runoff pollution
- To reduce storm water runoff rates and volumes, soil erosion, and non-point source pollution, wherever practicable, from lands that were developed without storm water management controls meeting the purposes and standards of these Guidelines
- To reduce the adverse impact of changing land use on water bodies by establishing minimum standards to protect water bodies from degradation resulting from changing land use

The Guidelines thus include:

- A summary of the procedures including requirements, review procedures, inspection requirements, fee schedule and other agency requirements
- A description of design requirements and other agency requirements
- A description of minimum design criteria and rules to be followed for design of new drainage systems within Ionia County

The Drain Commissioner's Guidelines also control storm water conveyance by setting standards for maximum allowable discharge requirements, which go hand in hand with its requirements for storm water detention and retention. These requirements, in line with those required by the state of Michigan, help to achieve flood hazard mitigation by controlling the flow of storm water.

The Drain Commissioner's office is also responsible for issuing and enforcing Soil Erosion and Sedimentation Control (SESC) permits. A permit is required for any earth change activity which disturbs one or more acres of land, or which is within 500 feet of a lake or stream. These SESC permit requirements ensure that developers must identify and implement controls, such as sediment basins and control fences, to limit the effects of uncontrolled erosion on the lakes, streams, and wetlands of Ionia County. As construction is one of the major causes of erosion in Michigan, these permitting requirements serve to limit the filling of lakes and streams by eroded soil, helping to reduce the severity of flooding events over a long-term scale.

### Section 4.2.3: Ionia County Health Department

The Ionia County Health Department is responsible for protecting and improving the health and well-being of Ionia County's residents. The department's work includes a focus on environmental health, communicable disease control and reporting, maternal and child health, and promotion of and education about health-related information. The Health Department is a key part of the County's capacity for hazard mitigation activities, ensuring the community is prepared for, and can respond to, emergencies and disasters. This role includes working with other agencies and organizations such as Ionia County's Local Planning Team and Local Emergency Planning Committee to develop emergency response plans, coordinating public health services during emergencies, and providing education and outreach to the public on emergency preparedness.

The Health Department maintains a web page with a collection of emergency preparedness information, with a focus on public health, drawing from local, regional, state, and federal resources. This page serves the residents of Ionia County as an excellent introduction to the basics of emergency preparedness and how agencies on multiple levels of government approach the concept, and can be found at the following address: <https://ioniacounty.org/health/emergency/>

### Section 4.2.4: Ionia County Commission on Aging

Ionia County's Commission on Aging is committed to providing essential services to the county's senior citizens, who locally comprise the most populous vulnerable population. These commitments are enshrined within their mission statement, which pledges to "empower residents to live long and healthy lives by protecting the environment, providing health services, and educating the public to achieve positive health outcomes." Their many programs include providing transportation, in-home services, and nutrition services, including Meals on Wheels, and they play a vital role in ensuring seniors have access to these services to the greatest extent possible during emergency situations, such as those caused by severe weather events.

A key strategy employed to reduce severe weather hazard risks to their served population is ensuring continuity of food availability during such events via pre-emptive distribution of shelf-stable meal kits for consumption upon instruction when regular delivery service is impossible. These contingency measures and related instructive phone calls also ensure that regular contact and a human "check-in" is still made with those accustomed to and reliant on this food delivery service. The Commission also played a large part in public health emergency mitigation efforts for its served population by maintaining these delivery services to the greatest extent possible during the height of lockdown measures at the beginning of the COVID pandemic era, along with offering transportation to and even assistance in setting up appointments for COVID vaccinations.

The Commission has effectively devised and implemented preparedness and mitigation strategies such as their Emergency Action Plan, Continuity of Operations Plan, and policies for inclement weather, which all contribute to their ability to respond to crises and redirect efforts as necessary. Outside collaborations, such as relationships with external kitchens to ensure continued food preparation abilities in the event their own is unable to do so, further bolster these response abilities. The Commission is able to draw on a variety of funding sources for their activities besides resident private pay, including organizations such as the Area Agency on Aging of Western Michigan and Meals on Wheels America, taxation-based sources

such as a County-wide senior millage, and qualification-based resources such as Medicaid waiver agreements and funding from the Indian Health Service.

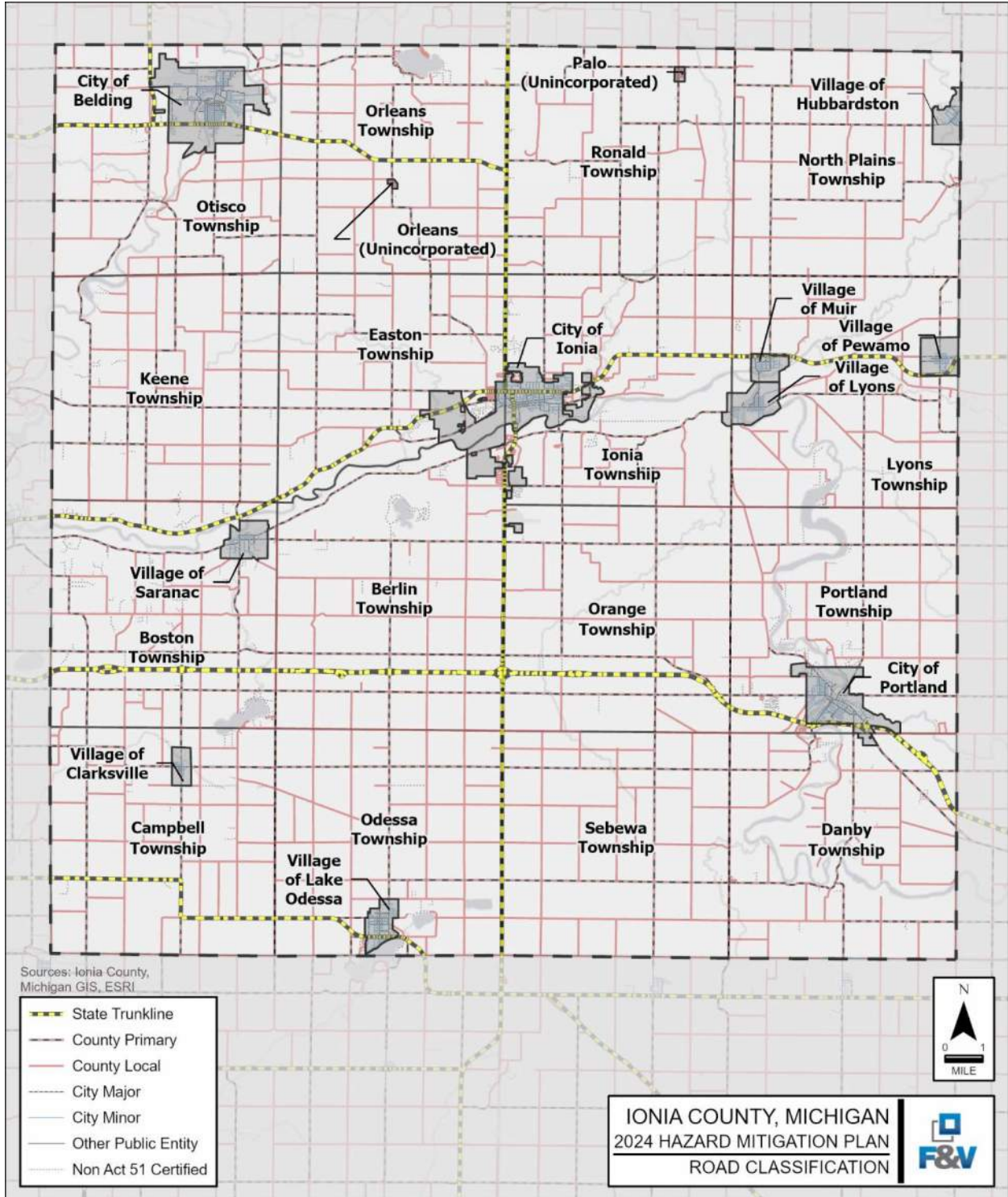
#### Section 4.2.5: Ionia County Road Department

In October of 2019, the Ionia County Board of Commissioners voted to dissolve the Ionia County Road Commission and to assume the responsibilities. The operations necessary to maintain the roads continued on as carried out by the same staff previously employed under the Ionia County Road Commission. This reformed Ionia County Road Department maintains 1,381 miles of road and 66 bridges throughout the 576 square mile county. This breaks down to 390 miles of County Primary, 684 miles of County Local, and 309 lane miles of State Trunkline. While the Road Department establishes the improvement priorities for primary road system, Township government establishes the priorities and their level of funding for improvements on the local road system, lending to a high level of cooperation between these levels of government.

The Ionia County Road Department has a diverse variety of responsibilities that include:

- Building and maintaining everything from single-lane gravel roads to multi-lane divided highways
- Road and bridge construction, repair, and maintenance
- Winter maintenance, including snow removal and salting
- Preventive, roadside, and gravel-road maintenance
- Ensuring safe and steady traffic patterns

The condition of County roads has been on an upwards trajectory over recent years. For 2011-2012, data from Michigan's Transportation Asset Management Council (TAMC) reveals that nearly 78% of Federal Aid road lane miles under the jurisdiction of the County were rated as being in "Poor" condition, with over 15% additionally rated as being in "Fair" condition. Through a combination of increased funding and additional staffing, conditions improved such that in 2021 (representing the latest data currently available), under 15% of Federal Aid road lane miles under County jurisdiction were in "Poor" condition, with under 33% in "Fair" condition. Well-maintained roads help to improve emergency response times during winter storms, prevent flooding by ensuring proper drainage, and increase overall safety for motorists during severe weather conditions.



#### Section 4.2.6: Ionia Conservation District

The Ionia Conservation District is a non-profit organization who aims to protect Ionia County's natural resources while promoting responsible land use and conservation to its residents. The District provides a range of services and programs that help farmers, landowners, and the public conserve natural resources and protect the environment. While many of its offerings do not directly pertain to the pursuit of hazard mitigation, its aims of environmental protection and natural resource conservation lend heavily to long-term mitigation efforts, such as reducing the impact of invasive species through surveillance and mitigating the worst of flooding events through planted shoreline protection.

As part of the Mid-Michigan Cooperative Invasive Species Management Area (MM CISMA), the District takes aim at invasive species, facilitating a reporting mechanism for residents to sound the alarm of their presence, and connecting residents to educational resources about invasive species and their identification. The District also offers natural shoreline planning services to achieve erosion control via the planting of natural plants along shorelines in lieu of sea wall installation when appropriate. Its many other programs and services, such as hazardous waste collection events as part of its participation in the Clean Sweep Program, further outline its dedication to long-term mitigation of environmental harm through land and natural resource misuse.

#### Section 4.2.7: Other Programs and Policies, County and Local

Ionia County enforces State of Michigan Building Code, Mechanical Code, Plumbing Code, and Electrical Code, leveraging their relationship with Associated Government Services, Inc. of Richland, MI to cover such aspects as permit application review, responding to code questions, conducting inspections, and dealing with issues related to code enforcement. The City of Portland independently enforces the same set of codes; all other communities defer to the County in this regard. Effective code enforcement is a crucial part of ensuring that new developments and upgrades are constructed to an appropriate standard of hazard event resistance.

As the County continues to grow its ability to engage in activities that accomplish hazard mitigation goals and objectives, some of its constituent communities have independently followed suit. One example is the City of Belding, who submitted a participant response in May 2023 detailing ongoing efforts to improve emergency response procedures and capabilities, additionally submitting an update in August 2024 describing progress in that timeframe towards their implementation. Specific noted accomplishments included communications upgrades, police/fire response policy updates, and planning efforts towards establishment of a city emergency shelter.

All participating jurisdictions identified at least one hazard mitigation action or strategy they are implementing or working to implement. Additionally, participants discussed existing authorities/policies/programs/resources currently available to them for implementation of identified actions/strategies, how these may be improved upon for implementation, and how implementation progress will be tracked and reported. This information can be found with the participant responses included in Appendix B.

## Chapter 4.3: Potential County Hazard Mitigation Strategies

FEMA identifies four primary categories of mitigation actions in the 2023 *Local Mitigation Planning Handbook*:

1. **Local Planning and Regulations.** Actions in this category, such as adding hazard mitigation considerations to comprehensive plans or building codes, are aimed at including government authorities and policies that regulate land and building development and use.
2. **Structure and Infrastructure Projects.** These actions involve both retrofits of existing structures and infrastructure, such as underground reinstallation of existing utilities, as well as new construction, such as floodwalls and retaining walls.
3. **Natural Systems Protection.** This category includes actions such as wetland restoration and forest management, and such actions aim to minimize damage to, or restore functions of, natural systems.
4. **Education and Awareness Programs.** Actions in this category, such as delivering presentations to community groups and hosting informational web pages, aim to inform and educate residents and elected officials about hazard mitigation, especially as pertinent to actions on the individual level.

In collaboration with stakeholders and participating jurisdictions, the Ionia County HMPC identified a variety of potential hazard mitigation strategies tailored to mitigating the natural hazards described in Part 3 of this HMP and addressing the stated goals in Chapter 4.1, including actions in all four categories described above. While some of these strategies under consideration are aimed at addressing a single hazard (particularly floods), the majority are not hazard-specific, and focus primarily on improving regulatory capacity and expanding community informational outreach as a starting point on which to continue building.

To guide prioritization of the consideration and implementation of these strategies, the ICHMPC developed a formulaic ranking system which produces a Mitigation Prioritization Value (MPV) for each strategy; this formula and its variables are described in Chapter 4.4. While this approach produces an objective ranking value for the listed strategies based on criteria as determined and weighted for local priorities, it is not intended to provide a fixed sequencing of their consideration and implementation, but instead to serve as a flexible tool for County planning efforts. These efforts should also consider additional factors, such as evolving circumstances, community feedback, and the expertise of relevant stakeholders.

The list of mitigation strategies, sorted by MPV, follows in the table below. Additionally included in the table for each strategy is its category (from the four above), primary party responsible for its undertaking, potential funding sources, timeframe of implementation, key hazard(s) mitigated by the strategy, along with the variables considered for determination of the strategy's MPV.

Category	Primary Responsible Party	Potential Funding Sources	Implementation Timeframe	Key Hazard Mitigated	Hazard Score	Feasibility	Cost/Benefit	Magnitude	Prioritization Value
1. Maintain adequate road and debris clearing capabilities and assist local governments in doing the same.									
Structure and Infrastructure Projects	Road Department	Road Department, LM	Short-term	All (weather)	3.786	3	3	3	3.23581579
2. Ensure critical public buildings are outfitted with auxiliary sources of power, such as generators or battery systems, as necessary and assist local governments in doing the same.									
Structure and Infrastructure Projects	Emergency Management	BRIC, state grants, ICEM, LM	Medium-term	All (weather)	3.786	3	3	3	3.23581579
3. Increase availability of planning documents such as the Emergency Operations Plan that provide a framework and guidance to County and local government officials for emergency/disaster response and recovery.									
Education and Awareness Programs	Administration Office	ICEM, Admin office	Short-term	All (averaged)	1.893	3	4	3	2.967907895
4. Evaluate the need for expanding coverage of warning sirens and other warning systems, and assist local governments in doing the same, along with updating existing sirens to 800mhz.									
Structure and Infrastructure Projects	Central Dispatch Advisory Board	State grants, Central Dispatch, LM	Medium-term	All (averaged)	1.893	4	3	3	2.867907895
5. Evaluate and increase usage of snow fences to limit drifting along critical roadways.									
Structure and Infrastructure Projects	Road Department	MDOT grants, Road Department, LM	Short-term	Winter Storms/Heavy Snow Events/Blizzards	2.880	2	4	2	2.864
6. Continue to evaluate the sufficiency of existing drainage management (culverts, drains, etc.) and identify insufficiencies.									
Local Plans and Regulations	Drain Commissioner	Drain Commissioner	Long-term	Floods	3.735	3	3	1	2.8205
7. Encourage the burial of utility lines in new developments and in reconstruction of current development.									
Structure and Infrastructure Projects	Building Department, Local Planning Team	Building Department, Local Planning Team, local developers	Long-term	Severe Winds	3.660	0.5	4	2	2.798
8. Ensure that emergency plans continue to be maintained for Webber Dam.									
Local Plans and Regulations	Emergency Management	ICEM	Long-term	Dam Failures	1.950	4	3	2	2.685
9. Assist local governments in integrating hazard mitigation principles into local Master Plans.									
Local Plans and Regulations	Administration Office	Local Planning Team, LM, Admin office	Long-term	All (averaged)	1.893	3	3	3	2.667907895
10. Make available federal, state, and county emergency management, disaster preparedness, and other pertinent information on County website, ensure accessibility of information to speakers of Spanish, and assist local governments in doing the same.									
Education and Awareness Programs	Emergency Management	ICEM	Medium-term	All (averaged)	1.893	3	3	3	2.667907895
11. Explore the necessity and viability of expanding the Ionia County Building Department's capabilities such that the County can perform duties such as permit application review and building code enforcement with in-house resources.									
Local Plans and Regulations	Administration Office	Building Department	Long-term	All (averaged)	1.893	3	3	3	2.667907895
12. Evaluate the need to increase emergency/disaster response capabilities with alternative transportation vehicles (snowmobiles, ATVs, etc.)									
Local Plans and Regulations	Local Planning Team	HMGP, state grants, ICEM, Public Safety	Medium-term	All (averaged)	1.893	3	3	4	2.867907895
13. Continue to ensure that all current hazard mitigation actions are maintained or improved upon.									
Local Plans and Regulations	Emergency Management	ICEM	Long-term	All (averaged)	1.893	3	3	3	2.667907895
14. Adopt an ordinance requiring the anchoring of manufactured home installations located outside of a designated floodplain and/or encourage manufactured home owners to voluntarily anchor their units.									
Local Plans and Regulations	Administration Office	Building Department, Admin office, local residents	Medium-term	Floods	3.735	1	3	2	2.6205
15. Evaluate potential state and federal sources of funding that can be used for specific hazard mitigation initiatives and assist local governments in doing the same.									
Local Plans and Regulations	Local Planning Team	ICEM, LM	Medium-term	All (averaged)	1.893	2	4	2	2.567907895
16. Ensure the capacity for mobilization and operation of emergency shelters during an emergency or disaster event and assist local governments in doing the same.									
Structure and Infrastructure Projects	Emergency Management	HMGP, state grants, Building Department, ICEM	Long-term	All (weather)	3.786	2	2	2	2.53581579

Category	Primary Responsible Party	Potential Funding Sources	Implementation Timeframe	Key Hazard Mitigated	Hazard Score	Feasibility	Cost/Benefit	Magnitude	Prioritization Value
17. Evaluate the need for a revision of FEMA flood maps and local government participation in the National Flood Insurance Program.									
Local Plans and Regulations	Emergency Management	ICEM, Admin office, FMA/state grants	Medium-term	Floods	3.735	2	2	2	2.5205
18. Evaluate and ensure that enforcement of building/electrical/mechanical/plumbing codes is sufficient to ensure development adequately addresses hazard mitigation principles.									
Local Plans and Regulations	Building Department, Local Planning Team	Building Department	Medium-term	All (averaged)	1.893	2	3	3	2.467907895
19. Identify potential projects to strengthen the County's infrastructure and increase its hazard resistance and encourage local governments to do the same.									
Structure and Infrastructure Projects	Local Planning Team	Local Planning Team, LM, ICEM	Long-term	All (averaged)	1.893	3	3	2	2.467907895
20. Disseminate disaster planning and response information to community groups and critical facilities.									
Education and Awareness Programs	Emergency Management	ICEM, Admin office	Medium-term	All (averaged)	1.893	3	3	2	2.467907895
21. Incorporate hazard mitigation principles and priorities into the County land use plan upon its next review.									
Local Plans and Regulations	Administration Office	Administration Office	Medium-term	All (averaged)	1.893	3	3	2	2.467907895
22. Work with critical facilities to develop/strengthen emergency plans that take into account the unique factors of each facility (ex. evacuation needs for nursing homes or hospitals).									
Local Plans and Regulations	Emergency Management	ICEM, local facilities	Medium-term	All (averaged)	1.893	3	3	2	2.467907895
23. Encourage individuals and families to develop their own disaster preparedness plans using resources such as the American Red Cross and County hazard mitigation information.									
Education and Awareness Programs	Emergency Management	ICEM, local residents	Medium-term	All (averaged)	1.893	3	3	2	2.467907895
24. Provide NOAA weather radios to local public buildings, schools, hospitals, campgrounds, etc. for free or at a subsidized price by use of grant funding.									
Education and Awareness Programs	Emergency Management	HMGP/state grants	Medium-term	All (weather)	3.786	3	2	0.5	2.43581579
25. Incorporate hazard mitigation principles into the County's next Capital Improvement Plan update.									
Local Plans and Regulations	Local Planning Team	Local Planning Team, Admin office	Medium-term	All (averaged)	1.893	2	3	2	2.267907895
26. Encourage local governments to adopt, implement, and maintain floodplain management practices that go beyond NFIP requirements.									
Local Plans and Regulations	Administration Office	LM, Admin office	Long-term	Floods	3.735	0.5	2	2	2.2205
27. Promote low-impact development techniques in development that reduce stormwater runoff and resultant flooding.									
Natural Systems Protection	Administration Office	LM, local developers	Long-term	Floods	3.735	0.5	2	2	2.2205
28. Encourage non-participating local governments to meet requirements and become members of Tree City USA.									
Natural Systems Protection	Administration Office	LM	Long-term	Severe Winds	3.660	2	2	0.5	2.198
29. Expand the library and increase availability of hazard mitigation GIS maps, databases, locations of critical infrastructure such as fire hydrants and curb stops, etc.									
Education and Awareness Programs	County GIS	ICEM, County GIS, Admin office	Long-term	All (averaged)	1.893	3	2	2	2.167907895
30. Evaluate municipal wells for capacity to continue to meet projected growth and resultant demand and assist local governments in doing the same.									
Structure and Infrastructure Projects	Local Planning Team	State grants, Local Planning Team, LM	Long-term	All (averaged)	1.893	3	2	2	2.167907895
31. Explore the necessity and viability of establishing a Transfer of Development Rights program to limit development in high-risk areas such as floodplains.									
Local Plans and Regulations	Administration Office	Admin office, Building Department	Long-term	Floods	3.735	0	2	2	2.1205
32. Meet requirements and become a participating member of the National Weather Service's StormReady program.									
Education and Awareness Programs	Local Planning Team	Local Planning Team, LM	Medium-term	All (weather)	3.786	2	1	1	2.03581579
33. Conduct a full evaluation of County hazard mitigation actions to ensure they are sufficiently meeting resident needs and assist local governments in doing the same.									
Local Plans and Regulations	Emergency Management	ICEM, LM	Long-term	All (averaged)	1.893	2	2	2	1.967907895

Category	Primary Responsible Party	Potential Funding Sources	Implementation Timeframe	Key Hazard Mitigated	Hazard Score	Feasibility	Cost/Benefit	Magnitude	Prioritization Value
34. Assist local governments in evaluating the need for construction of new local facilities or departments, or the expansion of existing facilities and departments, such as WTPs, WWTPs, and DPWs, to meet community growth.									
Structure and Infrastructure Projects	Administration Office	Building Department, Local Planning Team, Admin office	Long-term	All (averaged)	1.893	2	2	2	1.967907895
35. Evaluate the necessity and viability of expanding Ionia County's Communicable Disease reporting program to allow for a wider range of citizens to make related reports.									
Education and Awareness Programs	Health Department	Health Department, HHS grants	Medium-term	Public Health Emergencies	1.665	2	2	2	1.8995
36. Assist local governments in enforcing requirements for burn permits, especially during sensitive times such as dry periods or high wind conditions.									
Local Plans and Regulations	Local Fire Departments	Local fire departments, Admin office	Long-term	Wildfires	0.573	2	3	2	1.87175
37. Establish public parks in identified local floodplains and assist local governments in doing the same.									
Natural Systems Protection	Local Planning Team	FMA/HUD/MDNR grants, Local Planning Team, LM	Long-term	Floods	3.735	2	0.5	0.5	1.7705
38. Become a participating member of the Michigan Emergency Management Assistance Compact (MEMAC).									
Education and Awareness Programs	Emergency Management	ICEM	Medium-term	All (averaged)	1.893	2	2	0.5	1.667907895
39. Implement a house numbering ordinance to improve emergency response and standardize number assignment throughout the county.									
Local Plans and Regulations	Administration Office	Admin office	Medium-term	All (averaged)	1.893	2	2	0.5	1.667907895
40. Evaluate the necessity and viability of implementing County-wide zoning ordinances.									
Local Plans and Regulations	Administration Office	Admin office, Building Department, Local Planning Team	Long-term	All (averaged)	1.893	0.5	2	2	1.667907895
41. Expand public education and awareness regarding activities (open burning, etc.) with the capacity to result in an uncontrolled wildfire.									
Education and Awareness Programs	Administration Office	ICEM, local fire departments, Admin office	Long-term	Wildfires	0.573	2	3	0.5	1.57175
42. Create and implement a feedback mechanism for County residents to provide input on hazard mitigation actions, as well as to report hazards and hazardous conditions to officials.									
Education and Awareness Programs	Administration Office	Admin office, ICEM	Long-term	All (averaged)	1.893	0.5	2	0.5	1.367907895
43. Apply structural hazard mitigation and sustainability concepts during construction or remodeling of government facilities and encourage local governments to do the same.									
Structure and Infrastructure Projects	Building Department	Admin office, Local Planning Team, Building Department	Long-term	All (averaged)	1.893	0.5	2	0.5	1.367907895
44. Form a public health, safety, and environmental review board to review land use permits, site plans, or any other applications that may pose significant impacts on the environment such as energy storage facilities.									
Natural Systems Protection	Administration Office	Admin office, Local Planning Team, Building Department	Long-term	All (averaged)	1.893	0	0.5	2	1.117907895

Key:	LM: Local municipalities	<b>Short-term:</b> <=2 years	0 - None
			0.5 - Low
			2 - Some
	ICEM: Ionia County Emergency Management	<b>Medium-term:</b> >2-<5 years	3 - Good
			4 - High
	<b>Primary source:</b> Budget Staff time	<b>Long-term:</b> 5+ years	<b>FEMA Hazard Mitigation Assistance Grant Programs</b>
			<b>BRIC</b> Building Resilient Infrastructure and Communities Funds projects enhancing disaster resilience.
			<b>FMA</b> Flood Mitigation Assistance Targets flood risk reduction for insured properties.
			<b>HMGP</b> Hazard Mitigation Grant Program Supports post-disaster mitigation efforts.

## Chapter 4.4: Prioritization of County Mitigation Strategies

Similar to the process used to rank natural hazards for mitigation prioritization in Part 3, the ICHMPC developed a formula to rank potential mitigation strategies for consideration and implementation using criteria as chosen and weighted for community needs and priorities. This formula produces a final Mitigation Prioritization Value (MPV) for each mitigation strategy to guide local planning efforts, with possible values ranging from 0 to 3.94. The formula is structured as:

$$\text{MPV} = 0.3 \times \text{Hazard Score} + 0.2 \times \text{Feasibility} + 0.3 \times \text{Cost/Benefit} + 0.2 \times \text{Magnitude}$$

The criteria used to calculate the MPV are described below.

### **Hazard Score**

This criterion is the Risk Assessment Value (RAV, as calculated in Part 3 of this HMP) corresponding to the key hazard mitigated by a given strategy. This value contributes a weight of 0.3 to the MPV.

For strategies that aim to address all natural hazards described in Part 3 (e.g., general planning strategies or those intended to build overall mitigation capacity), the averaged RAV for all hazards is used for the Hazard Score, rendering a lower score for this criterion than would be assessed for a strategy directly addressing the higher-ranking hazards such as flooding or tornadoes. This is to ensure targeted strategies addressing specific high-ranking hazards are not outweighed by a list of general strategies that “only” bolster overall mitigation capacity. For strategies that aim to address severe weather-related hazards as a group (e.g. backup generators for critical public buildings or distribution of weather radios), the Hazard Score is the averaged RAV multiplied by 2, recognizing the greater positive impact these still-more-generalized strategies would have on local safety and well-being.

### **Feasibility**

This criterion considers how actionable mitigation strategies are in practical terms, factoring in aspects such as political will, local attitudes, and availability of funding, and it contributes a weight of 0.2 to the MPV. Its possible values are 0 (strategy is not feasible), 0.5 (low feasibility), 2 (some feasibility), 3 (good feasibility), and 4 (high feasibility).

### **Cost/Benefit**

This criterion considers an estimated comparison of the cost of strategy implementation to the benefits it will produce on hazard mitigation capacity, contributing a weight of 0.3 to the MPV. Tying with the Hazard Score for weight contributed to the MPV, this criterion recognizes the reality of limited funding for new mitigation strategies, prioritizing those that are a “good value” to the County and its residents. Its possible values are 0 (no benefits for cost), 0.5 (low benefits for cost), 2 (some benefits for cost), 3 (good benefits for cost), and 4 (high benefits for cost).

### **Magnitude**

This criterion how encompassing a mitigation strategy is in its outcomes and effectiveness, with lower values assigned to strategies with a small impact or limited scope and higher values assigned to strategies with a large impact or scope. This value contributes a weight of 0.2 to the MPV. Its possible values are 0 (no magnitude of strategy outcomes), 0.5 (low magnitude), 2 (some magnitude), 3 (good magnitude), and 4 (high magnitude). No mitigation strategies considered as part of this Plan were deemed to have a magnitude value of either 0 or 4, as strategies with no magnitude of impact are not worth consideration, and strategies with a particularly high magnitude of impact would be prioritized with a separate urgency from hazard mitigation planning.

In addition to these quantitative criteria, the ICHMPC considers qualitative factors when implementing mitigation strategies, including equity considerations to ensure fair distribution of mitigation benefits across all populations and communities. Special attention is given to strategies that benefit vulnerable populations, such as residents of mobile homes, elderly individuals, and economically disadvantaged communities.

***Other Table Items/Columns***

Primary Responsible Party: While multiple County entities may be responsible for the implementation of a given mitigation strategy, this column identifies the chief entity who would be responsible for overseeing its progress and completion.

Potential Funding Sources: Items in this column are color-coded for type of funding, where blue cells represent funding primarily in the form of additional staff time for a given strategy, and green cells more explicitly represent monetary funds for a strategy, generally from federal or state resources.

Implementation Timeframe: This column identifies if a proposed mitigation strategy would likely be completed over a shorter period of time (defined here as two years or less), a medium period of time (defined here as between two and five years), or a longer period of time (defined here as taking longer than five years).

# Part 5: Adopting, Updating, and Tending to the Plan

## Chapter 5.1: Adoption and Implementation

This Hazard Mitigation Plan will be adopted as an official planning document of Ionia County upon its completion and determination of approvability pending adoption. All jurisdictions participating in development of this Plan have also agreed to adopt (or have already pre-emptively adopted, in the case of Berlin and Lyons Townships) the Plan as an official municipal plan upon its completion. Implementation of identified mitigation actions on the County level will be overseen by the Ionia County Office of Emergency Management (ICEM), with the Mitigation Prioritization Value for each mitigation action used to guide the order of action implementation. Mitigation actions may be reprioritized or reconsidered throughout the planning period due to an identified change in local priorities, community needs, and/or logistical feasibility of carrying out the action. Where significant use of local funding sources is required (e.g., capital improvement projects), ICEM will coordinate with local jurisdictions to identify appropriate additional sources of funding.

## Chapter 5.2: Review and Monitoring

The implementation of the actions and strategies detailed in this Plan will be monitored and evaluated by ICEM. Progress towards implementation of such will be outlined and reviewed as a periodic Ionia County Local Emergency Planning Committee meeting agenda item, with the results of these periodic reviews recorded for integration into discussion of outcomes for future updates to this Plan. ICEM will also assist local governments in overseeing of mitigation measure implementation and record keeping of such progress on local levels for integration into periodic progress reviews.

## Chapter 5.3: Update and Incorporation

As required by FEMA to maintain compliance with hazard mitigation protocols and regulations, this Hazard Mitigation Plan will be fully reviewed and updated within five years of its initial approval, with ICEM oversight of these review and update activities. ICEM will assist local governments with both adopting the finished Plan and implementing it into local planning document updates as necessary and appropriate.

## Chapter 5.4: Public Participation

Public participation will be solicited throughout the lifespan of the Plan and during its review and update. Public participation will continue to be invited during Local Emergency Planning Team meetings during update and review discussion of the Hazard Mitigation Plan. Outreach through social media and County websites will also be utilized for collection of public input as during the Plan development process.

**Appendix A**  
**Participant Response Summary**

Each constituent jurisdiction participating in the Ionia County Hazard Mitigation Plan development process was required to complete a comprehensive survey intended to standardize the collection of all necessary information and input. Below is a table summary of participant responses:

Jurisdiction Category	City	City	City	Township	Township	Township	Township	Township	Township	Township	Village	Village	Village	Village	Village
Jurisdiction Name	Belding	Ionia	Portland	Berlin	Boston	Campbell	Lyons	Odessa	Sebewa	Easton	Clarksville	Lake Odessa	Muir	Pewamo	Saranac
Will adopt plan? (blue: adopted)															
Will implement/update plan?															
Hazards comprehensive?															
Accepted hazard ranking?															
CAPABILITY - Planning/Regulatory	3	3	3	1	2	1	1	2	1	1	2	2	1	2	2
CAPABILITY - Admin/Technical	2.6667	3	2	1	1	1	1	2	1	1	1	2	1	2	3
CAPABILITY - Financial	2.5	3	2	1	2	1	1	2	1	1	1	2	1	1	3
CAPABILITY - Education/Outreach	2.5	3	2	1	3	1	1	1	1	1	2	2	1	2	3
No. mitigation actions identified	1	2	4	4	1	2	1	1	3	1	4	2	5	1	1
CATEGORY - Plans/Regulations	1	1	2	1	0	1	0	0	3	1	3	2	4	1	0
CATEGORY - (Infra)structure	0	1	2	1	0	1	1	1	0	0	1	0	1	0	1
CATEGORY - Enviro. Protection	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CATEGORY - Education/Awareness	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0
Discussion of implementation?															
Critical facilities identified?															

Note that the original survey requested a capability ranking of low/medium/high – these answers have been reproduced as 1/2/3 on the table to allow for averaging.

## Participant Representatives

Ionia County: Fredrick Straubel, County Emergency Manager; Jacob Sommer, Former County Emergency Manager; Jason Pattok, Former County Emergency Manager; William Hoskins, Sparrow Hospital Emergency Manager and Former County Emergency Manager; Alexis Jones, Health Department Emergency Preparedness Coordinator; John Niemiela, Road Department Director; Lance Langdon, Central Dispatch Director; Kevin Heinlein, Department of Public Safety Deputy Director; Charlie Noll, County Sheriff; Andrew Hayes, DHHS Supervisor; Patrick Jordan, County Administrator; Robert Rose, Drain Commissioner; Ethan Ebenstein, ISD Superintendent; Blaine Lowetz, Road Department Supervisor; Linda Pigue, Road Department Manager

City of Belding: Tim Lubitz, Fire Chief; Dion Sower, Police Chief

City of Ionia: Precia Garland, City Manager

City of Portland: Tutt Gorman, City Manager; Star Thomas, Police Chief

Village of Clarksville: Shari Clark, Village Clerk

Village of Lake Odessa: Ben Geiger, Village Manager

Village of Muir: Susan Craft, Muir Village Clerk

Village of Pewamo: Mike Scollon, DPW Supervisor; Sandy Wolniakowski, Village Clerk

Village of Saranac: Tony Koster, Fire Chief/DPW Director; Becky Straubel, Village Treasurer

Berlin Township: Rachael Alexander, Township Clerk; Matt Bennett, Berlin-Orange Fire Department Chief

Boston Township: Dennis Bowen, Township Supervisor

Campbell Township: Brian Thompson, Township Supervisor

Easton Township: William Patton, Township Supervisor

Lyons Township: Julie Heckman, Clerk

Odessa Township: Gary Secor, Township Supervisor; Sharon Rohrbacher, Treasurer

Sebewa Township: John Piercefield, Township Supervisor

## Neighboring County EMs

Upon completion of the Ionia County Hazard Mitigation Plan draft, copies were distributed to emergency managers from adjacent counties for comment and review. This included Gratiot, Montcalm, Clinton, Kent, Eaton, and Barry Counties. No comments or feedback were received.

## Local Hazard Prioritization

Jurisdictions participating in development of the Ionia County Hazard Mitigation Plan were tasked with analyzing the County hazard ranking and determining if the ranking also applied to their locality. Given the general level of climatic similarity and vulnerability to natural hazards throughout Ionia County, the majority of participants accepted the County hazard ranking as applicable to their own jurisdiction. Following are the hazard rankings for each participating jurisdiction, listed in order of mitigation priority from highest to lowest:

Floods  
Severe Winds  
Ice/Sleet Storms  
Hail  
Tornadoes  
Winter Storms/Heavy Snow Events/Blizzards  
Drought  
Thunderstorms/Lightning  
Dam Failures  
Extreme Cold  
Extreme Heat  
Public Health Emergencies  
Fog  
Subsidence  
Invasive Species  
Wildfires  
Earthquakes  
Space Weather  
Impacting Objects (Celestial)

Identified by: City of Belding, City of Ionia, City of Portland, Village of Clarksville, Village of Lake Odessa, Village of Muir, Village of Pewamo, Village of Saranac, Berlin Township, Boston Township, Campbell Township, Easton Township, Lyons Township

Tornadoes  
Winter Storms/Heavy Snow Events/Blizzards  
Thunderstorms/Lightning  
Drought  
Severe Winds  
Ice/Sleet Storms  
Hail  
Public Health Emergencies  
Floods  
Wildfires  
*[rest]*

Identified by: Sebewa Township

1. Severe Storms
2. Hail
3. Thunderstorms/lightning
4. Winter Storms/Heavy Snow/Blizzards
5. Tornados
6. Ice/Sleet Storms
7. Wild Fires
8. Extreme Heat
9. Extreme Cole
10. Public Health Emergencies
11. Impacting Objects
12. Space Weather
13. Earthquakes
14. Invasive Species
15. Subsidence
16. Fog
17. Dam Failures
18. Floods

Identified by: Odessa Township

## Critical Facilities

FEMA defines critical facilities as “structures and institutions necessary for a community’s response to and recovery from emergencies” who “must continue to operate during and following a disaster to reduce the severity of impacts and accelerate recovery”. Following is the list of local critical facilities identified by each participating jurisdiction:

### *City of Belding*

Law Enforcement: City of Belding Police Department

Fire Services: City of Belding Fire Department

Healthcare: Life EMS

Public Schools: Ellis Elementary School; Woodview Elementary School; Belding Middle School; Belding High School

Private Schools: Faith Community Christian School, St. Joseph Elementary School

Municipal Halls: Belding City Hall

Long-Term Living: Mission Point of Belding; Belding Housing Commission; Crosswinds Manor

Public Works: Belding Department of Public Works

WWTP: Belding WWTP

Transportation: Belding Dial-A-Ride

Post Offices: Belding Post Office

Public Libraries: Alvah N. Belding Memorial Library

Food/Agriculture: Mizkan America; Belding Fruit Storage

### *City of Ionia*

Law Enforcement: Ionia County Sheriff Department and Jail; City of Ionia Department of Public Safety; Bellamy Creek Correctional Facility; Ionia Correctional Facility; Richard A. Handlon Correctional Facility

Fire Services: City of Ionia Department of Public Safety, Fire Division

Healthcare: Sparrow Medical Group Ionia; Ionia Senior Center; Ionia County Health Department; Davita Ionia Dialysis

Public Schools: A.A. Rather Elementary School; Emerson Elementary School; Jefferson Elementary School; Ionia Middle School; Ionia High School; Ionia County Career Center

Private Schools: Ss. Peter & Paul Elementary School

Municipal Halls: Ionia City Hall

Long-Term Living: SKLD of Ionia

Public Works: Ionia Department of Public Works

WWTP: Ionia WWTP

Transportation: Ionia Dial-A-Ride

Post Offices: Ionia Post Office

Public Libraries: Ionia Community Library

### *City of Portland*

Law Enforcement: City of Portland Police Department

Fire Services: Portland Fire Department

Healthcare: Sparrow Group Portland; Portland Ambulance Service

Public Schools: Oakwood Elementary School, Westwood Elementary School, Portland Middle School, Portland High School, Portland Area Community Education

Private Schools: St. Patrick Catholic School

Municipal Halls: City of Portland Hall

Long-Term Living: The Brook of Portland, Country Living Assisted Living, Portland Assisted Living and Memory Center

Public Works: Portland Department of Public Works; Portland Board of Light and Power; Portland City Dam Hydroelectric; Portland Electric Substation N. Grant Street (to be built/in progress)

WWTP: Portland WWTP

Transportation: Portland West Park and Ride, Portland Northeast Park and Ride

Post Offices: Portland Post Office

Public Libraries: Portland District Library

### *Village of Clarksville*

Fire Services: Campbell Township Fire Department

Municipal Halls: Village of Clarksville Hall, Campbell Township Hall

Long-Term Living: Clarksville Area Senior Housing; Bear Creek Villa

WWTP: Clarksville – Morrison Lake WWTP

Transportation: CSX Railroad

Post Offices: Clarksville Post Office

Public Libraries: Clarksville – Saranac District Library

Food/Agriculture: MSU Clarksville Research Center – Fruit Trees and Fruit Bushes

### *Village of Lake Odessa*

Law Enforcement: Lake Odessa Police Department

Fire Services: Township of Odessa Fire Department

Public Schools: Lakewood Elementary School

Private Schools: Faith Christian School

Municipal Hall: Village of Lake Odessa Hall

WWTP: Lakewood Wastewater Authority

Transportation: Lake Odessa Park and Ride

Post Offices: Lake Odessa Post Office

Public Libraries: Lake Odessa Community Library

*Village of Muir*

Fire Services: Lyons – Muir Fire Department  
Public Schools: Twin Rivers Elementary School  
Municipal Hall: Village of Muir Hall  
Long-Term Living: Muir Apartments  
Public Works: Muir – Lyons Department of Public Works  
WWTP: Muir – Lyons Wastewater Service Lagoons  
Post Offices: Muir Post Office

*Village of Pewamo*

Fire Services: Pewamo Fire Department  
Public Schools: Pewamo Elementary School  
Private Schools: St. Joseph’s Elementary School  
Municipal Hall: Village of Pewamo Hall  
Long-Term Living: Good Vibes Adult Foster Care, LLC  
Post Offices: Pewamo Post Office

*Village of Saranac*

Fire Services: Saranac Fire Department  
Public Schools: Saranac Elementary School, Saranac Jr./Sr. High School, Saranac  
Municipal Hall: Village of Saranac Hall  
Long-Term Living: Saranac Housing Commission; Saranac Gardens Apartments  
Post Offices: Saranac Post Office  
Public Libraries: Saranac Public Library

*Township of Berlin*

Fire Service/Municipal Hall: Berlin – Orange Township Fire Department

*Township of Boston*

Municipal Hall: Boston Township Hall

*Township of Campbell*

Municipal Halls: Campbell Township Hall

*Township of Easton*

Municipal Halls: Easton Township Hall

*Township of Lyons*

Fire Services: Lyons – Muir Fire Department  
Municipal Halls: Lyons Township Hall  
Public Works: Muir DPW; DPW; Pewamo DPW  
Public Libraries: Lyons Township District Library

*Township of Odessa*

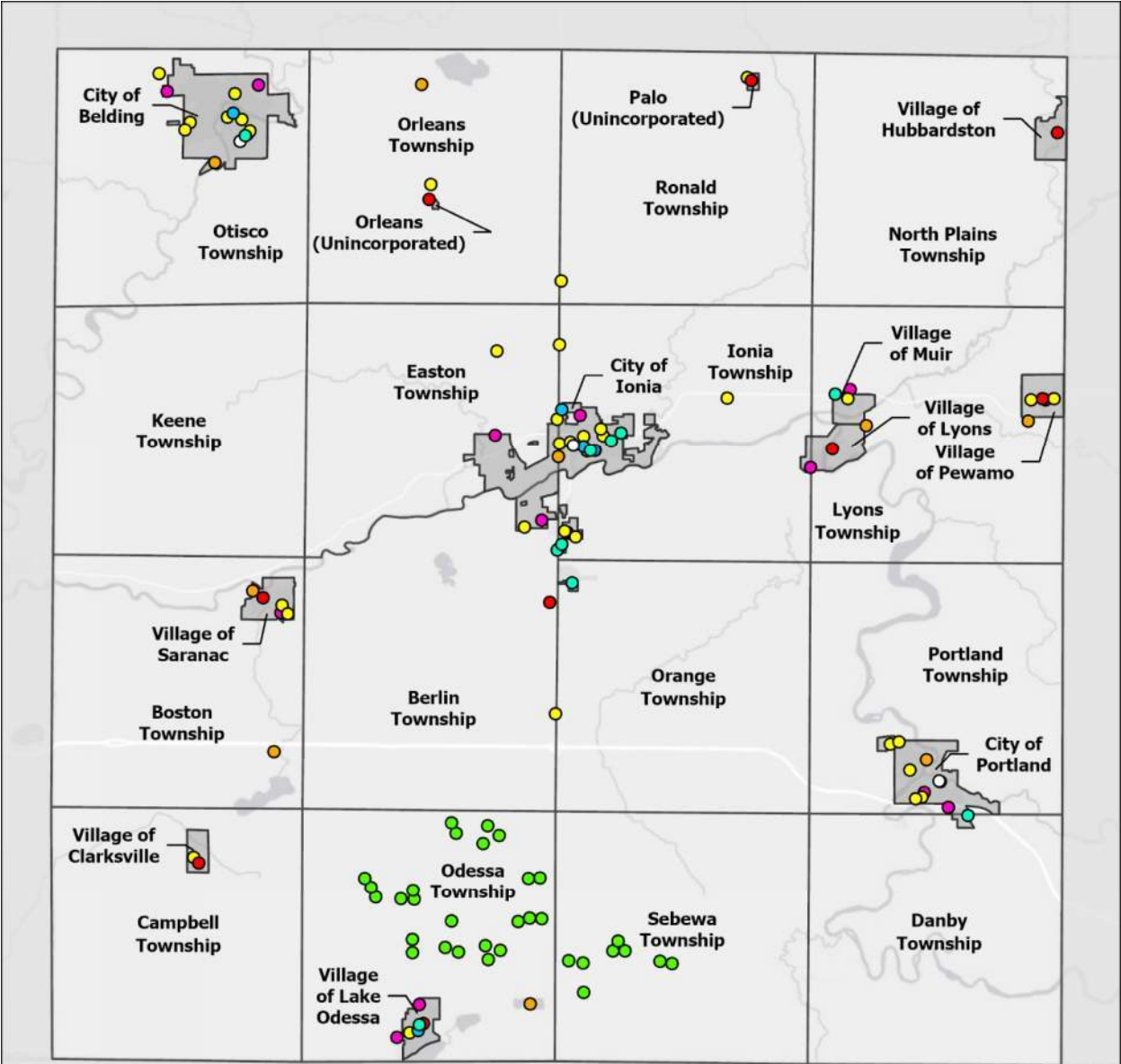
Fire Services: Township of Odessa Fire Department

*Township of Orange*

Fire Services: Berlin – Orange Fire Department  
Healthcare: Sparrow Ionia Hospital  
Food/Agriculture: Herbruck's Chickery

*Township of Sebewa*

Fire Services: Sunfield Fire Department  
Municipal Halls: Sebewa Township Hall

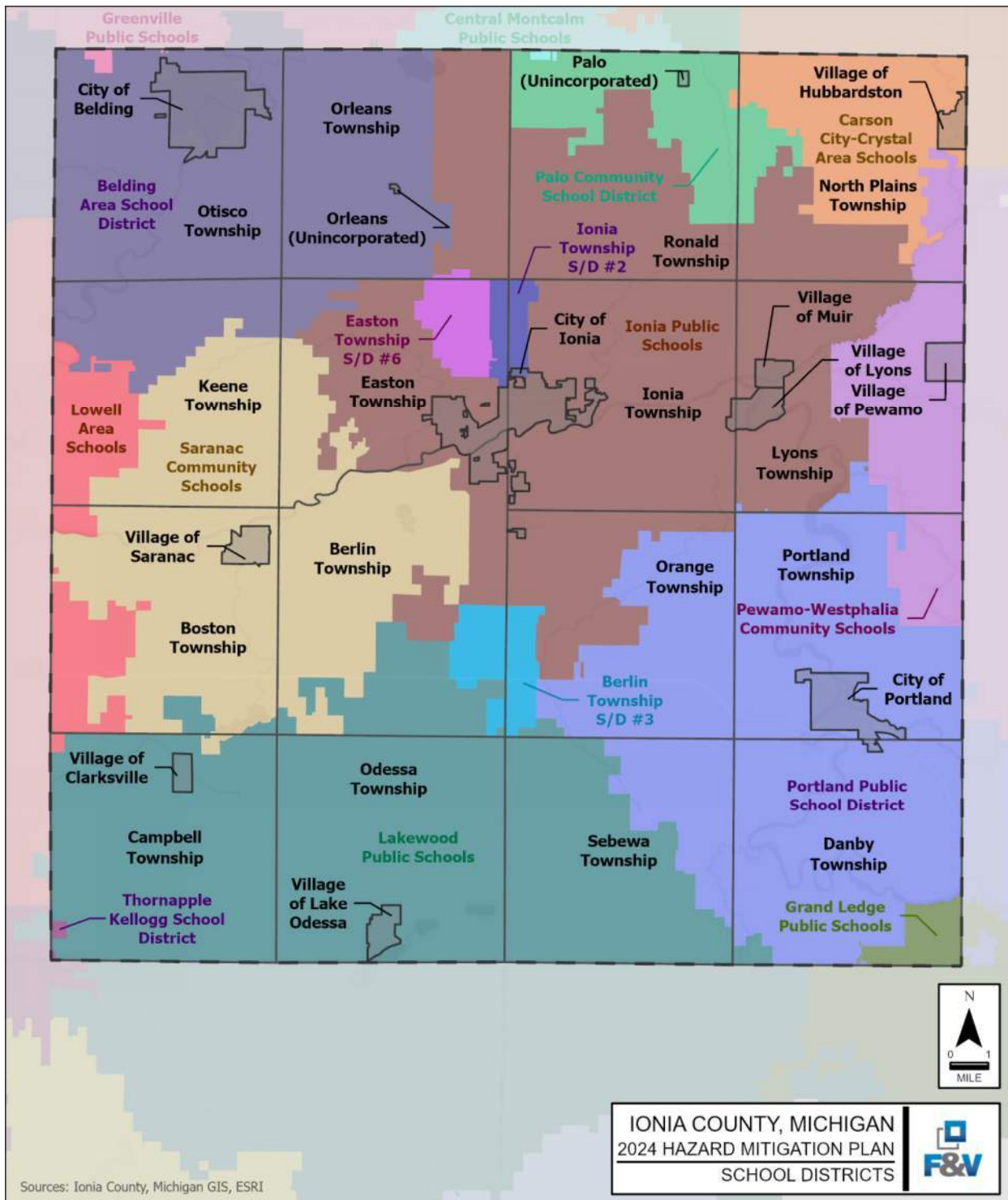


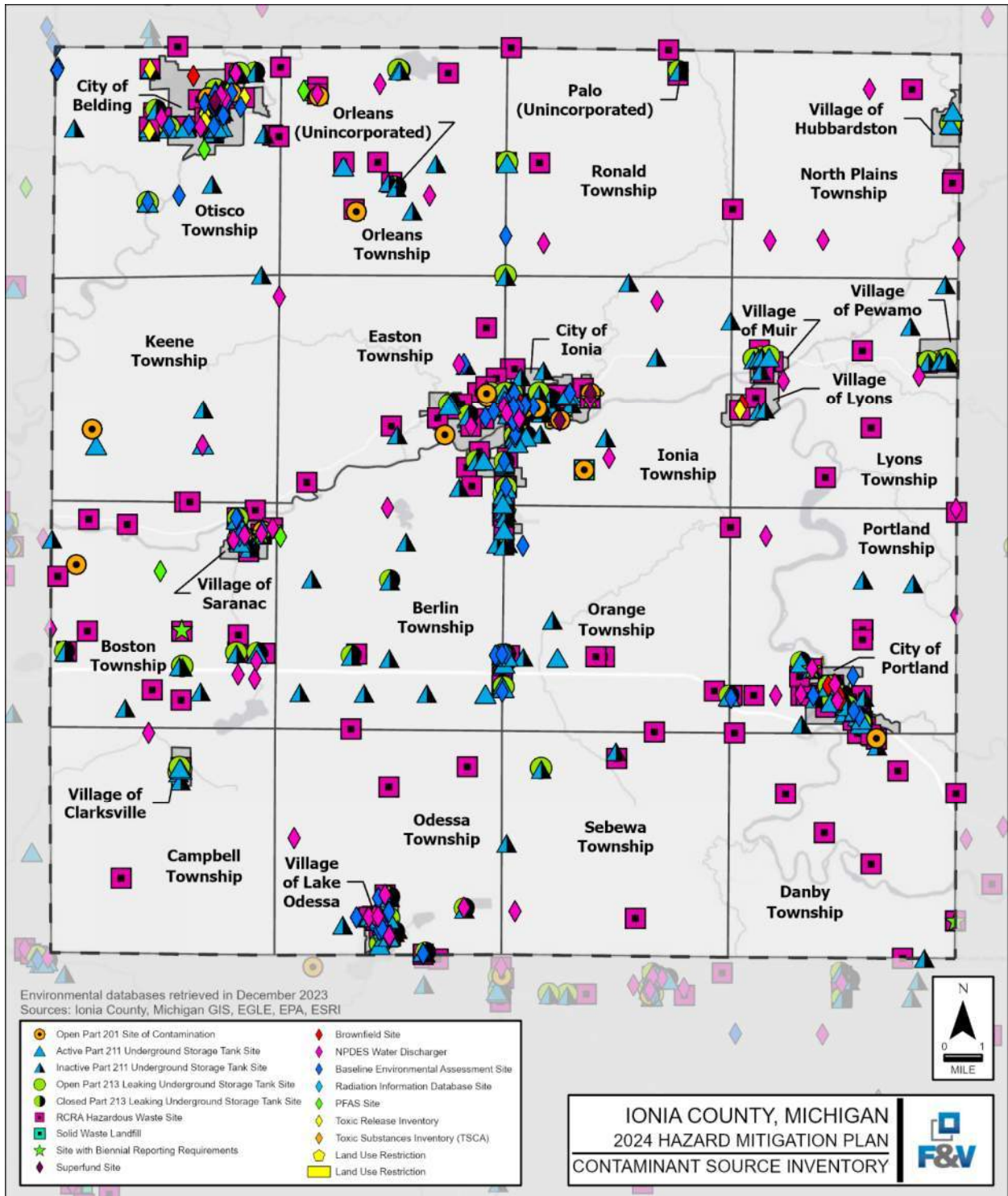
Sources: Ionia County, ESRI

- Ambulance
- Fire Station
- Police
- Healthcare
- Wind Turbine
- School
- Wastewater Treatment
- Water Tower



**IONIA COUNTY, MICHIGAN**  
**2024 HAZARD MITIGATION PLAN**  
**COUNTY INFRASTRUCTURE**





**Appendix B**  
**Participant Responses**



## Ionia County Hazard Mitigation Plan Development Municipality Participation and Involvement Document

Ionia County is currently in the process of developing a county-wide Hazard Mitigation Plan in coordination with Fleis & VandenBrink. Having an approved Plan allows for the County to take advantage of funding through multiple FEMA grants that are aimed at supporting projects considering hazard mitigation actions. Municipalities within the County are able to take advantage of this funding as well if they are involved in the development of the Plan; for a municipality to be considered as having been involved in the development of a Plan, they must meet a certain level of participation as required by FEMA.

Some of you have already participated in this Plan development process through a comprehensive survey distributed earlier in the Plan development cycle and through other lines of related communication. The feedback received has been a key consideration in Plan development and so we thank you for your previous participation. This document is intended to ensure that every municipality in Ionia County can readily meet the minimum threshold of participation in Plan development in a standardized way and thus take advantage of these grant funding sources for future local projects. **Your jurisdiction must complete this document to be counted as a participating member of the Plan. The completed document must be returned by June 23<sup>rd</sup>, 2023 to Tage Heyn via email (see below) or regular mail (Tage Heyn c/o Fleis & VandenBrink, 2960 Lucerne Dr SE, Grand Rapids MI 49546). Failure to do so will constitute non-participation in the Plan's development and will render your jurisdiction ineligible for Hazard Mitigation Assistance grants.**

If you have any questions or comments while completing this document, please reach out to Tage Heyn at [theyn@fveng.com](mailto:theyn@fveng.com) or Jason Pattok at [jpattok@ioniacounty.org](mailto:jpattok@ioniacounty.org). Thank you for your time and participation in this development process!

You may find the following resources useful:

<https://www.fema.gov/grants/mitigation> | Information about these grants and their scope.

<https://www.fema.gov/emergency-managers/risk-management/hazard-mitigation-planning> | Information about hazard mitigation planning in general.

<https://www.fema.gov/grants/mitigation/building-resilient-infrastructure-communities/after-apply/fy-2021-subapplication-status> | Applications for BRIC grant funding from 2021 (bottom of page), showing project type and funding amount requested, as well as the status of each application.

**Introduction:**

Name: TIM LUBITZ

Title: FIRE CHIEF

Jurisdiction representing: CITY OF BELDING

Email address: T.LUBITZ@CI.BELDING.MI.US

**Resolution of Adoption:**

This Hazard Mitigation Plan will be adopted as an official plan of Ionia County upon its completion. Participating jurisdictions **must** adopt the finished Plan as well. A template adoption resolution is attached to the end of this document for reference.

CITY OF BELDING  will  will not ] adopt the Ionia County  
(jurisdiction) (circle one)

Hazard Mitigation Plan as an official municipal plan upon its completion.

CITY OF BELDING  will  will not ] participate in efforts to  
(jurisdiction) (circle one)

implement and update the plan throughout its five-year lifespan.

## Hazard Identification and Ranking

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The following is the list of natural hazards identified by the Ionia County Hazard Mitigation Planning Committee as having the potential to affect Ionia County. These hazards have been ranked by their Risk Assessment Value, which is a number calculated by formulaic consideration of the hazards' probability of occurrence, severity of impacts, and expected future change of event frequency. Their order in the below list reflects this ranking, with the "most important" hazards for mitigation action at the top and the "least important" at the bottom.

Floods  
Severe Winds  
Ice/Sleet Storms  
Hail  
Tornadoes  
Winter Storms/Heavy Snow Events/Blizzards  
Drought  
Thunderstorms/Lightning  
Dam Failures  
Extreme Cold  
Extreme Heat  
Public Health Emergencies  
Fog  
Subsidence  
Invasive Species  
Wildfires  
Earthquakes  
Space Weather  
Impacting Objects (Celestial)

This list [  is ] is not [  is not ] a comprehensive list of natural hazards with the potential to affect CITY OF BELDING.  
(jurisdiction)

The ranking of this list [  is ] is not [  is not ] representative of the relative risk these hazards pose to CITY OF BELDING.  
(jurisdiction)

If you circled "is not" for either of the two previous items, please use this page for elaboration. You may offer a re-ordered list or add items as desired.

N/A

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## Mitigation Capability

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The overarching purpose of hazard mitigation planning is to reduce or eliminate long-term risk to life and property from the occurrence of hazard events. To realize this purpose, Ionia County has set the following long-term goals:

Goal: Minimize injuries and deaths caused by or related to hazard events.

Goal: Minimize the loss or damage of public and private property from hazard events.

Goal: Promote community awareness, understanding, cooperation, and participation in hazard mitigation actions.

Goal: Promote local growth and development through a lens of hazard mitigation.

Each jurisdiction within Ionia County has different capabilities for engaging in mitigation activities and working towards accomplishing these goals. FEMA has identified the following four primary types of capabilities in their planning handbook:

- Planning and Regulatory – implementation and enforcement of plans, policies, codes, ordinances, local and State law, etc.
- Administrative and Technical – departments, personnel, equipment, coordination with other public and private entities, etc.
- Financial – availability of funding or ability to secure funding through taxes, grants, etc.
- Education and Outreach – ability to engage and communicate hazard mitigation information to the public.

FEMA **requires** local communities who are participating in the development of a hazard mitigation plan to evaluate their capabilities for accomplishing hazard mitigation goals. For **each** capability listed above, you **must** describe existing authorities, policies, programs, **and** resources available for implementation of hazard mitigation actions and projects that lean on that capability, **as well as** how your jurisdiction may improve upon these capabilities. These do not need to be long descriptions, but they **must** include all elements as stated above. You **must** summarize your jurisdiction's capability as being **low, medium, or high** – you can circle the corresponding word at the top of the following four pages, where space has also been provided for your written answers. You may wish to refer to the list of mitigation actions under consideration by the County included later in this document for additional context.

THE CITY PROPOSES TO:

- (H) - DEVELOP NEW AND UP-TO-DATE POLICE POLICIES & RESPONSE INITIATIVES
- (H) - DEVELOP NEW AND UP-TO-DATE FIRE POLICIES & RESPONSE INITIATIVE AS DETERMINED BY NEW MIOSHA RULES.
- (H) - DEVELOP A NEW WATERSHED PLAN TO SECURE & SET PERIMETERS FOR CURRENT AND NEW FACILITIES OR PROCESSES THAT LYE WITHIN OUR WATERSHED.
- LOOK INTO ENFORCEMENT IDEAS AND INNOVATIVE "PUNISHMENT" PLANS

THE CITY PROPOSES TO:

- (M) - LOOK INTO THE REPLACEMENT OF OUR AGING PUBLIC ALERTING SIRENS & THEIR EFFECTIVE RANGE
- (H) - DEVELOPING CAPITAL IMPROVEMENT PLANS & REPLACEMENT SCHEDULES FOR OUR PRIORITY EQUIPMENT IN OUR DPW, POLICE & FIRE DEPARTMENTS.
- (H) - REVIEW OUR EMERGENCY OPERATIONS PLAN & IT'S COMPLETENESS.
- (H) - CHANGE FROM VHF TO 800MHZ RADIO SYSTEMS WHICH WILL PROVIDE FOR DEPARTMENT, COUNTY AND STATE INTEROPERABILITY.
- (M) - UPGRADE TRAINING: TRAIN IN HOUSE INSTRUCTORS
- (H) - UPDATE OUTDATED EQUIPMENT: RADIOS (PD & FD)  
RIFLES (PD), TASERS (PD). OLD VEST (PD)  
NEW VEST (FD) (BALLISTIC.).

THE CITY PROPOSES TO:

(H) - SEEK FUNDING FROM ~~GRANTS~~ GRANTS FOR ALL POSSIBLE PROJECTS

(M) - PERFORM A CITY WIDE EVALUATION FOR EMERGENCY SHELTERS, COMMUNICATION AND E.D.C. OPERATIONS.

THE CITY PROPOSES TO:

- (M) - EDUCATE OUR CITIZENS, THROUGH COMMUNITY OUTREACH PROGRAMS, WEBSITES, LITERATURE ON EMERGENCY OPERATIONS & CAPABILITIES.
- (H) - INCREASE USE OF ELECTRONICS IE: WEBSITE, WEBSITE BASED FORMS, RAVE ALERTING SYSTEMS, 911, FACEBOOK, AND OTHER POTENTIAL MEANS AS APPROPRIATE.

## Mitigation Actions

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Ionia County has identified a list of hazard mitigation actions to work towards implementing on the county level over the five-year lifespan of the finished Plan; this unsorted list is included below for your reference. Now that you have characterized your jurisdiction's hazard mitigation capabilities, you **must** also identify and select **at least one** mitigation action that your jurisdiction will implement, or fully attempt to implement, over the five-year lifespan of the finished Plan. You may choose from the list in this document, but you are **strongly recommended** to provide mitigation actions that are not listed below and address a **specific** local vulnerability. You **must** describe how your jurisdiction will track and report the progress of action implementation such that an update can be provided in the next iteration of the Plan. You **must** describe existing authorities, policies, programs, **and** resources available for implementation of the chosen mitigation actions, **as well as** how your jurisdiction may improve upon these capabilities. Space has been provided for your answers after the action list.

You may also wish to consider choosing mitigation actions focused on increasing capacity for hazard mitigation actions across the board, such as integrating hazard mitigation practices into community Master Plans. In general, you are encouraged to emphasize actions that reduce the effects of hazards on new and existing buildings and infrastructure.

1. Evaluate the need for expanding coverage of warning sirens and other warning systems, and assist local governments in doing the same, along with updating existing sirens to 800mhz.
2. Encourage non-participating local governments to meet requirements and become members of Tree City USA.
3. Expand the library and increase availability of hazard mitigation GIS maps, databases, locations of critical infrastructure such as fire hydrants and curb stops, etc.
4. Assist local governments in integrating hazard mitigation principles into local Master Plans.
5. Identify potential projects to strengthen the County's infrastructure and increase its hazard resistance and encourage local governments to do the same.
6. Evaluate the necessity and viability of implementing County-wide zoning ordinances.
7. Apply for hazard mitigation grant funding for a mitigation project.
8. Evaluate and increase usage of snow fences to limit drifting along critical roadways.
9. Assist local governments in evaluating the need for construction of new local facilities or departments, or the expansion of existing facilities and departments, such as WTPs, WWTPs, and DPWs, to meet community growth.
10. Evaluate the need for a revision of FEMA flood maps and local government participation in the National Flood Insurance Program.
11. Provide NOAA weather radios to local public buildings, schools, hospitals, campgrounds, etc. for free or at a subsidized price by use of grant funding.
12. Encourage the burial of utility lines in new developments and in reconstruction of current development.
13. Become a participating member of the Michigan Emergency Management Assistance Compact (MEMAC).
14. Evaluate the viability of implementing a house numbering ordinance to improve emergency response and standardize number assignment throughout the county.

15. Ensure critical public buildings are outfitted with auxiliary sources of power, such as generators or battery systems, as necessary and assist local governments in doing the same.
16. Evaluate and ensure that enforcement of building/electrical/mechanical/plumbing codes is sufficient to ensure development adequately addresses hazard mitigation principles.
17. Evaluate the necessity and viability of developing and implementing an Ionia County Community Wildfire Protection Plan.
18. Evaluate potential state and federal sources of funding that can be used for specific hazard mitigation projects and assist local governments in doing the same.
19. Conduct a full evaluation of County hazard mitigation actions to ensure they are sufficiently meeting resident needs and assist local governments in doing the same.
20. Meet requirements and become a participating member of the National Weather Service's StormReady program.
21. Increase availability of planning documents such as the Emergency Operations Plan that provide a framework and guidance to County and local government officials for emergency/disaster response and recovery.
22. Create and implement a feedback mechanism for County residents to provide input on hazard mitigation actions, as well as to report hazards and hazardous conditions to officials.
23. Incorporate hazard mitigation principles into the County's next Capital Improvement Plan update.
24. Form an environmental review board to review land use permits, site plans, or any other applications that may pose significant impacts on the environment.
25. Work with critical facilities to develop emergency plans that take into account the unique factors of each facility (ex. evacuation needs for nursing homes or hospitals).
26. Explore the necessity and viability of establishing a Transfer of Development Rights program to limit development in high-risk areas such as floodplains.

27. Ensure the capacity for mobilization and operation of emergency shelters during an emergency or disaster event and assist local governments in doing the same.
28. Adopt an ordinance requiring the anchoring of manufactured home installations located outside of a designated floodplain and/or encourage manufactured home owners to voluntarily anchor their units.
29. Encourage local governments to adopt, implement, and maintain floodplain management practices that go beyond NFIP requirements.
30. Encourage local governments to meet requirements and become participating communities under the Community Rating System.
31. Establish public parks in identified local floodplains and assist local governments in doing the same.
32. Continue to evaluate the sufficiency of existing drainage management (culverts, drains, etc.) and identify insufficiencies.
33. Assist the Drain Commissioner's office in formalizing a maintenance plan for County drains.
34. Require notifications to/approvals from the Drain Commissioner's office for drainage tie-ins to County drains.
35. Evaluate the necessity and viability of expanding Ionia County's Communicable Disease reporting program to allow for a wider range of citizens to make related reports.
36. Disseminate disaster planning and response information to community groups and critical facilities.
37. Make available federal, state, and county emergency management, disaster preparedness, and other pertinent information on County website, ensure accessibility of information to speakers of Spanish, and assist local governments in doing the same.
38. Encourage individuals and families to develop their own disaster preparedness plans using resources such as the American Red Cross and County hazard mitigation information.

39. Assist local governments in enforcing requirements for burn permits, especially during sensitive times such as dry periods or high wind conditions.
40. Expand public education and awareness regarding activities (open burning, etc.) with the capacity to result in an uncontrolled wildfire.
41. Maintain adequate road and debris clearing capabilities and assist local governments in doing the same.
42. Apply structural hazard mitigation and sustainability concepts during construction or remodeling of government facilities and encourage local governments to do the same.
43. Promote low-impact development techniques in development that reduce stormwater runoff and resultant flooding.
44. Ensure that emergency plans continue to be maintained for Webber Dam.
45. Evaluate municipal wells for capacity to continue to meet projected growth and resultant demand and assist local governments in doing the same.
46. Evaluate the need to increase emergency/disaster response capabilities with alternative transportation vehicles (snowmobiles, ATVs, etc.)
47. Explore the necessity and viability of expanding the Ionia County Building Department's capabilities such that the County can perform duties such as permit application review and building code enforcement with in-house resources.
48. Incorporate hazard mitigation principles and priorities into the County land use plan upon its next review.
49. Continue to ensure that all current hazard mitigation actions are maintained or improved upon.

CITY OF BELDING \_\_\_\_\_ has selected the following mitigation action(s)  
(jurisdiction)

which it will implement, or fully attempt to implement, over the five-year lifespan of the finished Ionia County Hazard Mitigation Plan:

ATTEMPT TO UPGRADE A BELDING HOUSING  
FACILITY TO AN EMERGENCY SHELTER  
WITH, WATER, POWER (GENERATOR), FOOD PREP,  
HEATING & COOLING FACILITY & FOR COUNTY  
RESIDENTS

CITY OF BELDING \_\_\_\_\_ will leverage the following existing authorities,  
(jurisdiction)

policies, programs, and resources available for implementation of the above mitigation action(s):

THE FULL ABILITY OF ALL CITY DEPARTMENTS  
AS REQUIRED TO FULLFILL OUR GOAL  
INCLUDING: POLICE, FIRE, DPW AND ADMINISTRATIVE  
DEPARTMENTS

CITY OF BELDING \_\_\_\_\_ may improve upon these listed capabilities for  
(jurisdiction)

implementing the above mitigation action(s) in the following ways:

THE CITY OR SURROUNDING AREAS HAVE  
NO SHELTERS W/ GENERATOR POWER AT  
ALL.

CITY OF BELDING will track and report the progress of the  
(jurisdiction)

implementation of the above mitigation action(s) in the following ways:

PURSUE LOCAL IMPACT & POTENTIAL  
NEEDS IN THE IMMEDIATE AREA.  
PERFORM ESTIMATES AND EVALUATION FOR  
NEEDS. PERFORM CHANGES AS NEEDED.  
VERIFY ALL NEEDS & GOALS WERE MET.  
CLOSE OUT PROJECT.

## **Critical Facilities**

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The following is a list of critical facilities within Ionia County sorted by category. FEMA defines critical facilities as "structures and institutions necessary for a community's response to and recovery from emergencies" who "must continue to operate during and following a disaster to reduce the severity of impacts and accelerate recovery". Please ensure all relevant critical facilities in your jurisdiction are accounted for in the appropriate category below and note any omissions, corrections, or additions in the space provided after the list.

### **LAW ENFORCEMENT**

Ionia County Sheriff Department  
City of Ionia Department of Public Safety  
City of Belding Police Department  
Michigan State Police  
Lake Odessa Police Department  
City of Portland Police Department  
Ionia Correctional Facility  
Bellamy Creek Correctional Facility  
Michigan Reformatory  
Richard A. Handlin Correctional Facility  
Ionia County Jail

### **FIRE SERVICES**

Hubbardston Fire Department  
City of Belding Fire Department  
Lake Odessa Fire Department  
City of Ionia Department of Public Safety, Fire Division  
Pewamo Fire Department  
Lyons-Muir Fire Department  
Saranac Fire Department  
Portland Fire Department  
Campbell Township (Clarksville) Fire Department  
Orleans Township Fire Department  
Ronald Township Fire Department  
Berlin-Orange Township Fire Department  
Grattan Township Fire Department  
Roxand Township Fire Department (Eaton County)  
Freeport Fire/Rescue (Barry County)

**HEALTHCARE**

- ~~Lakewood Community Ambulance Service (located in Barry County) - NO LONGER IN SERVICE.~~
- ~~Belding Ambulance Service- Belding Fire Department - NO LONGER IN SERVICE.~~
- Portland Ambulance Service- Portland Fire Department, Emergency Services Building
- Life EMS
- Sparrow Ionia Hospital
- Sparrow Group Ionia
- Sparrow Group Portland
- Ionia Senior Center
- Ionia County Health Department
- DaVita Ionia Dialysis
- Spectrum Health Family Practice

**PUBLIC SCHOOLS**

- Oakwood Elementary School ✓
- Portland Middle School
- Westwood Elementary School
- Lakewood Elementary School
- Saranac Elementary School
- Ionia County Career Center
- Coon School
- A.A. Rather School
- Ionia High School
- Emerson School
- Ionia Middle School
- Jefferson School
- Twin Rivers Elementary School
- Haynor School
- North LeValley Elementary School
- R.B. Boyce Elementary School
- Belding Middle School ✓
- Ellis Elementary School ✓
- Belding High School ✓
- Woodview Elementary School ✓
- Saranac Jr/Sr High School

### PRIVATE SCHOOLS

Faith Community Christian School ✓

Ionia Seventh Day Adventist School

Ss. Peter & Paul Elementary School

St. Joseph Elementary School

Ionia Nazarene Christian School

Lakewood Christian School

~~St. Joseph Elementary School (Belding)~~ NO LONGER EXIST.

St. Joseph Elementary School (Pewamo)

St. Patrick School

### CITY HALLS

Belding City Hall

Ionia City Hall

City of Portland Hall

### VILLAGE HALLS

Village of Muir Hall

Village of Lyons Hall

Village of Hubbardston Hall

Village of Lake Odessa Hall

Village of Clarksville Hall

Village of Saranac Hall

Village of Pewamo Hall

### TOWNSHIP HALLS

Campbell Township Hall

Boston Township Hall

Berlin Township Hall

Keene Township Hall ✓

Ionia Township Hall

Danby Township Hall

Odessa Township Hall

North Plains Township Hall

Lyons Township Hall

Ronald Township Hall

Sebewa Township Hall

Otisco Township Hall ✓

Orleans Township Hall  
Orange Township Hall  
Easton Township Hall  
Portland Township Hall

**LIVING**

Lighthouse Senior Living  
Lighthouse Rehab  
Saranac Housing Commission  
Mission Point of Belding ✓  
SKLD of Ionia  
Hope Network  
Green Acres Ionia  
Portland Assisted Living and Memory Center  
Hope Network  
Good Vibes Adult Foster Care  
Clarksville Manor

BELDING HOOSING COMMISSION  
-WOODHAVEN  
-BELHAVEN  
-TAFT COURT  
-HILL TOP COURT  
CROSSWINDS MANOR

**PUBLIC WORKS**

Ionia County Road Department  
Ionia Department of Public Works  
Belding Department of Public Works ✓  
Portland Department of Public Works

**WWTP**

Belding WWTP ✓  
Ionia WWTP  
Portland WWTP  
Lakewood Wastewater Authority WWTP  
Clarksville-Morrison Lake WWTP  
Saranac WWSL

**UTILITIES**

Water Towers: 14  
Wind Turbines: 32  
Substations: 7

**TRAIN/BUS STATIONS/CARPOOL LOTS**

- Lake Odessa Park and Ride
- Portland – West Park and Ride
- Portland #2 (NE) Park and Ride
- Ionia/Belding Park and Ride
- Ionia Dial-A-Ride
- Belding Dial-A-Ride ✓

**POST OFFICES**

- Belding Post Office ✓
- Clarksville Post Office
- Hubbardston Post Office
- Ionia Post Office
- Lake Odessa Post Office
- Lyons Post Office
- Muir Post Office
- Orleans Post Office
- Pewamo Post Office
- Portland Post Office
- Saranac Post Office

**PUBLIC LIBRARIES**

- Alvah N. Belding Memorial Library ✓
- Hall-Fowler Memorial Library
- Ionia Community Library
- Portland District Library
- Lyons Township District Library
- Lake Odessa Community Library
- Clarksville Area Library
- Saranac Public Library

**FOOD/AGRICULTURE**

- Herbruck's Poultry Ranch
- \*\* ANY OTHER BIG ONES/COMMUNITY ANCHORS?

**OTHER CRITICAL FACILITIES**

- \*\* ANYTHING NOTABLE?

MIZKAN - BELDING  
 CARGILL - LAKE ODESSA  
 TWIN CITY FOODS - LAKE ODESSA  
 FRUIT STORAGE - BELDING  
 MAREROW DAIRY  
 WILLOW POINT DAIRY - ORLEANS  
 GALAGHER FARM

This list [ is | is not ] a comprehensive and applicable list of critical facilities in

CITY OF BELDING  
(jurisdiction)

If you circled "is not" for the above, please use the rest of this page to elaborate on why.

N/A.

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You have completed the required portion of this document. Thank you once again for your time and participation. Access to hazard mitigation funding can be the difference between a viable infrastructure project and a missed opportunity. These last two pages are here for any additional comments or information you'd like to share to ensure your jurisdiction is sufficiently represented in the County Plan.

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## Example Adoption Resolution

(LOCAL COMMUNITY)

(STATE)

RESOLUTION NO. \_\_\_\_\_

A RESOLUTION OF THE (LOCAL COMMUNITY) ADOPTING THE

(TITLE AND DATE OF MITIGATION PLAN)

WHEREAS the (local governing body) recognizes the threat that natural hazards pose to people and property within (local community); and

WHEREAS the (local community) has prepared a multi-hazard mitigation plan, hereby known as (title and date of mitigation plan) in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS (title and date of mitigation plan) identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in (local community) from the impacts of future hazards and disasters; and

WHEREAS adoption by the (local governing body) demonstrates their commitment to the hazard mitigation and achieving the goals outlined in the (title and date of mitigation plan).

NOW THEREFORE, BE IT RESOLVED BY THE (LOCAL COMMUNITY), (STATE), THAT:

Section 1. In accordance with (local rule for adopting resolutions), the (local governing body) adopts the (title and date of mitigation plan).

ADOPTED by a vote of \_\_\_\_ in favor and \_\_\_\_ against, and \_\_\_\_ abstaining, this \_\_\_\_ day of

\_\_\_\_\_, \_\_\_\_\_.

By: \_\_\_\_\_

(print name)

ATTEST:

By: \_\_\_\_\_

(print name)

APPROVED AS TO FORM:

By: \_\_\_\_\_

(print name)

## Hazard Mitigation Plans – Belding

The City of Belding will adopt the counties Hazard Mitigation Plan as discussed previously.

These are as noted on the initial plans and the current status of the plans

### Planning and Regulatory capabilities

- Develop new and up to date police policies and response initiatives; **Police polices and code of conduct were updated 3/7/2023 and continue to be developed on an ongoing basis as needed.**
- Develop new and up to date Fire policies and response initiatives as determined by the new MIOSHA part 74; **All new regulations have been implemented and are written into our current policies.**
- Develop a new water shed plan to secure and set parameters for current and new facilities or processes that lye within our watershed; **A new watershed plan has been completed and submitted to EGLE and FEMA (may 2023). We are currently looking at regulatory items that need to be implemented and how they will need to be enforced.**

### Administrative and Technical capabilities

- Look into the replacement of our aging public alerting sirens and the effective range; **The current systems have been changed to 800 MHZ radio alerting capabilities. We are currently looking into the system and pursuing alternate alerting capabilities via phone, text, email, and Facebook methods.**
- Developing capitol improvement plans and replacement schedules for our priority equipment in our DPW, Police and Fire Departments; **The Police Department developed a CIP Dec. 2022, and the Fire Department has developed CIP plans Oct. 2020, and are currently implementing those plans. The DPW still needs to develop a plan. The City, as an entity needs to develop a plan for buildings, roads, water towers, and other “City“ items.**
- Review our Emergency Operations Plan; **The Fire Chief has developed an updated plan that was published in 2023**
- Change from VHF to 800 MHZ radio systems which will provide for department, county and state interoperability; **The Fire Department has completely changed to 800 MHZ radio and paging systems. The Police Department has completely changed to 800 MHZ radio systems but is still updating old radios. The DPW has no 800 MHZ capabilities. The Dial a Ride transportation system is fully 800 MHZ.**
- Upgrading training; **The Fire Department has 3 state certified instructors and currently teach all fire and medical trainings. The Police Department is currently upgrading its training. It has completed First Aid and CPR training for all of its officers, New tasers were purchased and all personnel have undergone taser training (8/1/2024).**
- Update outdated equipment (ie: radios, rifles, tasers, ballistic vest (Fire and PD); **The Fire department has obtained all new 800 MHZ radios (portables, mobiles**

and base radios). The Police have replaced 6 portables already and still need to replace 14 portables. Mobiles in the 4 vehicles are currently 18 years old. A plan has been implemented to replace each radio as new vehicles are purchased. The 4 rifles in the vehicles were replaced 6/11/2024, the 4 shotguns were also been replaced 8/8/2023. The Police have acquired 8 new tasers and completed training 8/1/2024. The Fire Department has acquired 6 plate ballistic vest and 4 level 3A personnel ballistic vest (this includes 10 ballistic helmets). The Police have 2 plate vest and 2 more coming in currently, providing one for each vehicle (these also include helmets). The personal vest is currently being replaced and are about half way through the CIP.

### **Financial capabilities**

- Seek funding from grant for all possible projects; The Fire and Police Departments have submitted and received some grants for the radios. We currently seek out grants for identified mitigation items. We also seek out grants for normal needed items, that if funded, opens up standard funding to provide for additional mitigation items.
- Perform a city-wide evaluation for emergency shelters, communication and EOC operations; The City currently has no Shelters for its community. We are pursuing options at this time and seeing what would be our best options in seeking funding help for these ideas. Our City-wide communications plan is being worked on and the Fire, Police and Dial a ride are all interoperational. We need to get the DPW on board at this time. The Fire Department has recently performed some renovations. This has allowed some work to be done on an EOC in the Fire Department. We currently have generator backup, bathroom facilities, cooking facilities, 2 methods of internet capabilities, WI-FI capabilities, 2 new tablets, marker boards, TV screens and other small abilities available to us if needed. The county Central Dispatch has also completed a renovation in which they also did some preparation for changing a training room into an EOC on site. Renovations are also being done at a “new” City Hall where the Police department is making plans with this in mind.

### **Education and Outreach capabilities**

- Educate our citizens through community outreach programs, websites, literature on emergency operations and capabilities; The City currently puts all City Council meetings on its website.
- Increase use of electronics (IE: website, website-based forms, Rave alerting systems, E911, Facebook, and other potential means of communication as appropriate); The City is currently putting items on the website like: zoning forms, employment applications that can be down loaded and uploaded directly to the city.

**The City of Belding, is currently working on the following items that we see as a need:**

- New City Master Plan – We have funding in place and are beginning the process.
- Providing a County wide Haz Mat team Co-Op. The County wants no part of a “county” team, so Belding is looking to develop a group of individual Fire Departments that will work together to provide a team that will travel county wide and provide services as need for the residents of our county. The teams have been chosen and training is underway. Some equipment has been purchased, and operational response is available at a small level at this time. This is a long process and sustained funding is being integrated into our planning process.
- Providing a community shelter for its residents. Our current needs are for heat/cold emergencies and hostile weather events. We have some solutions for hot/cold events, but an underground shelter would need to be a new facility.
- Our current lagoon WWTP system is aged and currently being replaced with a new facility. Our current usage is .600MGD/day and is the max capacity of the lagoons. The new mechanical plant that is under construction will have a capacity of 1.2 MGD/day with a potential of more if needed. The new facility will be operational October 2025, and completed in July of 2026. We have received some grants for this project, but are pursuing more to offset the cost to our residents.
- All of our current City wells are located in the same water shed. This is a potential issue waiting to happen. We are looking at locations to place an additional well in our other water shed.
- We have multiple streets with 4” and 6” aged water main. These mains were installed around 1908 (116 years ago). There is no current plan for replacement.



## Ionia County Hazard Mitigation Plan Development Municipality Participation and Involvement Document

Ionia County is currently in the process of developing a county-wide Hazard Mitigation Plan in coordination with Fleis & VandenBrink. Having an approved Plan allows for the County to take advantage of funding through multiple FEMA grants that are aimed at supporting projects considering hazard mitigation actions. Municipalities within the County are able to take advantage of this funding as well if they are involved in the development of the Plan; for a municipality to be considered as having been involved in the development of a Plan, they must meet a certain level of participation as required by FEMA.

Some of you have already participated in this Plan development process through a comprehensive survey distributed earlier in the Plan development cycle and through other lines of related communication. The feedback received has been a key consideration in Plan development and so we thank you for your previous participation. This document is intended to ensure that every municipality in Ionia County can readily meet the minimum threshold of participation in Plan development in a standardized way and thus take advantage of these grant funding sources for future local projects. **Your jurisdiction must complete this document to be counted as a participating member of the Plan. The completed document must be returned by June 23<sup>rd</sup>, 2023 to Tage Heyn via email (see below) or regular mail (Tage Heyn c/o Fleis & VandenBrink, 2960 Lucerne Dr SE, Grand Rapids MI 49546). Failure to do so will constitute non-participation in the Plan's development and will render your jurisdiction ineligible for Hazard Mitigation Assistance grants.**

If you have any questions or comments while completing this document, please reach out to Tage Heyn at [theyn@fveng.com](mailto:theyn@fveng.com) or Jason Pattok at [jpattok@ioniacounty.org](mailto:jpattok@ioniacounty.org). Thank you for your time and participation in this development process!

You may find the following resources useful:

<https://www.fema.gov/grants/mitigation> | Information about these grants and their scope.

<https://www.fema.gov/emergency-managers/risk-management/hazard-mitigation-planning> | Information about hazard mitigation planning in general.

<https://www.fema.gov/grants/mitigation/building-resilient-infrastructure-communities/after-apply/fy-2021-subapplication-status> | Applications for BRIC grant funding from 2021 (bottom of page), showing project type and funding amount requested, as well as the status of each application.

**Introduction:**

Name: Precia Garland

Title: City Manager

Jurisdiction representing: City of Ionia

Email address: pgarland@ci.ionia.mi.us

**Resolution of Adoption:**

This Hazard Mitigation Plan will be adopted as an official plan of Ionia County upon its completion. Participating jurisdictions **must** adopt the finished Plan as well. A template adoption resolution is attached to the end of this document for reference.

City of Ionia \_\_\_\_\_ [ will |  will not ] adopt the Ionia County  
(jurisdiction) (circle one)

Hazard Mitigation Plan as an official municipal plan upon its completion.

City of Ionia \_\_\_\_\_ [ will |  will not ] participate in efforts to  
(jurisdiction) (circle one)

implement and update the plan throughout its five-year lifespan.

## Hazard Identification and Ranking

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The following is the list of natural hazards identified by the Ionia County Hazard Mitigation Planning Committee as having the potential to affect Ionia County. These hazards have been ranked by their Risk Assessment Value, which is a number calculated by formulaic consideration of the hazards' probability of occurrence, severity of impacts, and expected future change of event frequency. Their order in the below list reflects this ranking, with the "most important" hazards for mitigation action at the top and the "least important" at the bottom.

- Floods
- Severe Winds
- Ice/Sleet Storms
- Hail
- Tornadoes
- Winter Storms/Heavy Snow Events/Blizzards
- Drought
- Thunderstorms/Lightning
- Dam Failures
- Extreme Cold
- Extreme Heat
- Public Health Emergencies
- Fog
- Subsidence
- Invasive Species
- Wildfires
- Earthquakes
- Space Weather
- Impacting Objects (Celestial)

This list [ is |  is not ] a comprehensive list of natural hazards with the potential to affect \_\_\_\_\_  
the City of Ionia  
(jurisdiction)

The ranking of this list [ is |  is not ] representative of the relative risk these hazards pose to \_\_\_\_\_  
the City of Ionia  
(jurisdiction)

If you circled "is not" for either of the two previous items, please use this page for elaboration. You may offer a re-ordered list or add items as desired.

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## Mitigation Capability

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The overarching purpose of hazard mitigation planning is to reduce or eliminate long-term risk to life and property from the occurrence of hazard events. To realize this purpose, Ionia County has set the following long-term goals:

Goal: Minimize injuries and deaths caused by or related to hazard events.

Goal: Minimize the loss or damage of public and private property from hazard events.

Goal: Promote community awareness, understanding, cooperation, and participation in hazard mitigation actions.

Goal: Promote local growth and development through a lens of hazard mitigation.

Each jurisdiction within Ionia County has different capabilities for engaging in mitigation activities and working towards accomplishing these goals. FEMA has identified the following four primary types of capabilities in their planning handbook:

- Planning and Regulatory – implementation and enforcement of plans, policies, codes, ordinances, local and State law, etc.
- Administrative and Technical – departments, personnel, equipment, coordination with other public and private entities, etc.
- Financial – availability of funding or ability to secure funding through taxes, grants, etc.
- Education and Outreach – ability to engage and communicate hazard mitigation information to the public.

FEMA **requires** local communities who are participating in the development of a hazard mitigation plan to evaluate their capabilities for accomplishing hazard mitigation goals. For **each** capability listed above, you **must** describe existing authorities, policies, programs, and resources available for implementation of hazard mitigation actions and projects that lean on that capability, **as well as** how your jurisdiction may improve upon these capabilities. These do not need to be long descriptions, but they **must** include all elements as stated above. You **must** summarize your jurisdiction's capability as being **low, medium, or high** – you can circle the corresponding word at the top of the following four pages, where space has also been provided for your written answers. You may wish to refer to the list of mitigation actions under consideration by the County included later in this document for additional context.

Summary of **Planning and Regulatory** capabilities: [Low Medium High ]

- The City of Ionia had adopted Chapter 1264- Flood Plain Overlay District. This facilitates participation in the National Flood Insurance Program. It also established a Flood Hazard Boundary Map- Zone A (areas of special flood hazard).

- The City has an active Planning Commission that can modify zones as needed to provide further protections regarding land use.

- The City has a Master Plan, which it updates every five years.

- The City has a full-time Public Safety Department that has its own comprehensive set of policies for responding to emergency situations.

Summary of **Administrative and Technical** capabilities: Low Medium High ]

-The City of Ionia is a Home Rule City organized under the council-management form. All City

departments are fully staffed and professionally managed.

Departments includes:

- Public Safety

- Public Works

- Utilities (Water & Waste water)

- Public Transportation

- Parks & Recreation

- Administration

- Finance

- Downtown Development

- These departments are available to quickly collaborate and coordinate with other agencies as needed to mitigate hazardous situations.

Summary of **Financial** capabilities: Low Medium High ]

- The City of Ionia has financial resources available to it through its normal capacity to levy property and income taxes, as well as receive state revenue sharing and other typical state funding.

-The city presently has an unrestricted general fund balance that slightly exceeds that level required by city policy (17%).

- The city has skilled staff who can write and administer various grant programs to assist with special projects and initiatives.



## Mitigation Actions

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Ionia County has identified a list of hazard mitigation actions to work towards implementing on the county level over the five-year lifespan of the finished Plan; this unsorted list is included below for your reference. Now that you have characterized your jurisdiction's hazard mitigation capabilities, you **must** also identify and select **at least one** mitigation action that your jurisdiction will implement, or fully attempt to implement, over the five-year lifespan of the finished Plan. You may choose from the list in this document, but you are **strongly recommended** to provide mitigation actions that are not listed below and address a **specific** local vulnerability. You **must** describe how your jurisdiction will track and report the progress of action implementation such that an update can be provided in the next iteration of the Plan. You **must** describe existing authorities, policies, programs, **and** resources available for implementation of the chosen mitigation actions, **as well as** how your jurisdiction may improve upon these capabilities. Space has been provided for your answers after the action list.

You may also wish to consider choosing mitigation actions focused on increasing capacity for hazard mitigation actions across the board, such as integrating hazard mitigation practices into community Master Plans. In general, you are encouraged to emphasize actions that reduce the effects of hazards on new and existing buildings and infrastructure.

1. Evaluate the need for expanding coverage of warning sirens and other warning systems, and assist local governments in doing the same, along with updating existing sirens to 800mhz.
2. Encourage non-participating local governments to meet requirements and become members of Tree City USA.
3. Expand the library and increase availability of hazard mitigation GIS maps, databases, locations of critical infrastructure such as fire hydrants and curb stops, etc.
4. Assist local governments in integrating hazard mitigation principles into local Master Plans.
5. Identify potential projects to strengthen the County's infrastructure and increase its hazard resistance and encourage local governments to do the same.
6. Evaluate the necessity and viability of implementing County-wide zoning ordinances.
7. Apply for hazard mitigation grant funding for a mitigation project.
8. Evaluate and increase usage of snow fences to limit drifting along critical roadways.
9. Assist local governments in evaluating the need for construction of new local facilities or departments, or the expansion of existing facilities and departments, such as WTPs, WWTPs, and DPWs, to meet community growth.
10. Evaluate the need for a revision of FEMA flood maps and local government participation in the National Flood Insurance Program.
11. Provide NOAA weather radios to local public buildings, schools, hospitals, campgrounds, etc. for free or at a subsidized price by use of grant funding.
12. Encourage the burial of utility lines in new developments and in reconstruction of current development.
13. Become a participating member of the Michigan Emergency Management Assistance Compact (MEMAC).
14. Evaluate the viability of implementing a house numbering ordinance to improve emergency response and standardize number assignment throughout the county.

15. Ensure critical public buildings are outfitted with auxiliary sources of power, such as generators or battery systems, as necessary and assist local governments in doing the same.
16. Evaluate and ensure that enforcement of building/electrical/mechanical/plumbing codes is sufficient to ensure development adequately addresses hazard mitigation principles.
17. Evaluate the necessity and viability of developing and implementing an Ionia County Community Wildfire Protection Plan.
18. Evaluate potential state and federal sources of funding that can be used for specific hazard mitigation projects and assist local governments in doing the same.
19. Conduct a full evaluation of County hazard mitigation actions to ensure they are sufficiently meeting resident needs and assist local governments in doing the same.
20. Meet requirements and become a participating member of the National Weather Service's StormReady program.
21. Increase availability of planning documents such as the Emergency Operations Plan that provide a framework and guidance to County and local government officials for emergency/disaster response and recovery.
22. Create and implement a feedback mechanism for County residents to provide input on hazard mitigation actions, as well as to report hazards and hazardous conditions to officials.
23. Incorporate hazard mitigation principles into the County's next Capital Improvement Plan update.
24. Form an environmental review board to review land use permits, site plans, or any other applications that may pose significant impacts on the environment.
25. Work with critical facilities to develop emergency plans that take into account the unique factors of each facility (ex. evacuation needs for nursing homes or hospitals).
26. Explore the necessity and viability of establishing a Transfer of Development Rights program to limit development in high-risk areas such as floodplains.

27. Ensure the capacity for mobilization and operation of emergency shelters during an emergency or disaster event and assist local governments in doing the same.
28. Adopt an ordinance requiring the anchoring of manufactured home installations located outside of a designated floodplain and/or encourage manufactured home owners to voluntarily anchor their units.
29. Encourage local governments to adopt, implement, and maintain floodplain management practices that go beyond NFIP requirements.
30. Encourage local governments to meet requirements and become participating communities under the Community Rating System.
31. Establish public parks in identified local floodplains and assist local governments in doing the same.
32. Continue to evaluate the sufficiency of existing drainage management (culverts, drains, etc.) and identify insufficiencies.
33. Assist the Drain Commissioner's office in formalizing a maintenance plan for County drains.
34. Require notifications to/approvals from the Drain Commissioner's office for drainage tie-ins to County drains.
35. Evaluate the necessity and viability of expanding Ionia County's Communicable Disease reporting program to allow for a wider range of citizens to make related reports.
36. Disseminate disaster planning and response information to community groups and critical facilities.
37. Make available federal, state, and county emergency management, disaster preparedness, and other pertinent information on County website, ensure accessibility of information to speakers of Spanish, and assist local governments in doing the same.
38. Encourage individuals and families to develop their own disaster preparedness plans using resources such as the American Red Cross and County hazard mitigation information.

39. Assist local governments in enforcing requirements for burn permits, especially during sensitive times such as dry periods or high wind conditions.
40. Expand public education and awareness regarding activities (open burning, etc.) with the capacity to result in an uncontrolled wildfire.
41. Maintain adequate road and debris clearing capabilities and assist local governments in doing the same.
42. Apply structural hazard mitigation and sustainability concepts during construction or remodeling of government facilities and encourage local governments to do the same.
43. Promote low-impact development techniques in development that reduce stormwater runoff and resultant flooding.
44. Ensure that emergency plans continue to be maintained for Webber Dam.
45. Evaluate municipal wells for capacity to continue to meet projected growth and resultant demand and assist local governments in doing the same.
46. Evaluate the need to increase emergency/disaster response capabilities with alternative transportation vehicles (snowmobiles, ATVs, etc.)
47. Explore the necessity and viability of expanding the Ionia County Building Department's capabilities such that the County can perform duties such as permit application review and building code enforcement with in-house resources.
48. Incorporate hazard mitigation principles and priorities into the County land use plan upon its next review.
49. Continue to ensure that all current hazard mitigation actions are maintained or improved upon.

City of Ionia

has selected the following mitigation action(s)

(jurisdiction)

which it will implement, or fully attempt to implement, over the five-year lifespan of the finished Ionia County Hazard Mitigation Plan:

1 Evaluate the need for expanding coverage of warning sirens and other warning systems, and assist local government in doing the same, along with updating existing sirens to 800 MHz

12 Encourage the burial of utility lines in new developments and in reconstruction of current development (old prison property as it gets redevelopment as possible residential and/or high tech industrial)

City of Ionia

will leverage the following existing authorities,

(jurisdiction)

policies, programs, and resources available for implementation of the above mitigation action(s):

Grants, General Fund funding through annual budgeting, City of Ionia Planning Commission (site plan review and approval), City of Ionia Brownfield Redevelopment Authority, partnership with Ionia County.

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City of Ionia  
(jurisdiction) may improve upon these listed capabilities for

implementing the above mitigation action(s) in the following ways:

46 Evaluate need to increase emergency / disaster response capabilities with alternative transportation vehicles -  
Currently IDPS has the only off road Side x Side vehicle (2009 Polaris Ranger) for firefighting / emergency transportation in the County. It is only a two seater, we could upgrade by auctioning current unit and purchasing a four seat Polaris Ranger (giving us cargo area for fire pump still) and more room for transporting emergency personnel or rescuing civilians.

Blank lined area for additional text or notes.

City of Ionia will track and report the progress of the  
(jurisdiction)

implementation of the above mitigation action(s) in the following ways:

- City Planning Commission - annual report regarding all plan reviews to City Council
- Regular communication with the Ionia County Emergency Management office
- Annual financial audit - review of funding expended toward goals

Blank lined area for additional text or notes.

## **Critical Facilities**

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The following is a list of critical facilities within Ionia County sorted by category. FEMA defines critical facilities as “structures and institutions necessary for a community’s response to and recovery from emergencies” who “must continue to operate during and following a disaster to reduce the severity of impacts and accelerate recovery”. Please ensure all relevant critical facilities in your jurisdiction are accounted for in the appropriate category below and note any omissions, corrections, or additions in the space provided after the list.

### **LAW ENFORCEMENT**

Ionia County Sheriff Department  
City of Ionia Department of Public Safety  
City of Belding Police Department  
Michigan State Police  
Lake Odessa Police Department  
City of Portland Police Department  
Ionia Correctional Facility  
Bellamy Creek Correctional Facility  
Michigan Reformatory  
Richard A. Handlin Correctional Facility  
Ionia County Jail

### **FIRE SERVICES**

Hubbardston Fire Department  
City of Belding Fire Department  
Lake Odessa Fire Department  
City of Ionia Department of Public Safety, Fire Division  
Pewamo Fire Department  
Lyons-Muir Fire Department  
Saranac Fire Department  
Portland Fire Department  
Campbell Township (Clarksville) Fire Department  
Orleans Township Fire Department  
Ronald Township Fire Department  
Berlin-Orange Township Fire Department  
Grattan Township Fire Department  
Roxand Township Fire Department (Eaton County)  
Freeport Fire/Rescue (Barry County)

**HEALTHCARE**

Lakewood Community Ambulance Service (located in Barry County)  
Belding Ambulance Service- Belding Fire Department  
Portland Ambulance Service- Portland Fire Department, Emergency Services Building  
Life EMS  
Sparrow Ionia Hospital  
Sparrow Group Ionia  
Sparrow Group Portland  
Ionia Senior Center  
Ionia County Health Department  
DaVita Ionia Dialysis  
Spectrum Health Family Practice

**PUBLIC SCHOOLS**

Oakwood Elementary School  
Portland Middle School  
Westwood Elementary School  
Lakewood Elementary School  
Saranac Elementary School  
Ionia County Career Center  
Coon School  
A.A. Rather School  
Ionia High School  
Emerson School  
Ionia Middle School  
Jefferson School  
Twin Rivers Elementary School  
Haynor School  
North LeValley Elementary School  
R.B. Boyce Elementary School  
Belding Middle School  
Ellis Elementary School  
Belding High School  
Woodview Elementary School  
Saranac Jr/Sr High School

**PRIVATE SCHOOLS**

Faith Community Christian School  
Ionia Seventh Day Adventist School  
Ss. Peter & Paul Elementary School  
St. Joseph Elementary School  
Ionia Nazarene Christian School  
Lakewood Christian School  
St. Joseph Elementary School (Belding)  
St. Joseph Elementary School (Pewamo)  
St. Patrick School

**CITY HALLS**

Belding City Hall  
Ionia City Hall  
City of Portland Hall

**VILLAGE HALLS**

Village of Muir Hall  
Village of Lyons Hall  
Village of Hubbardston Hall  
Village of Lake Odessa Hall  
Village of Clarksville Hall  
Village of Saranac Hall  
Village of Pewamo Hall

**TOWNSHIP HALLS**

Campbell Township Hall  
Boston Township Hall  
Berlin Township Hall  
Keene Township Hall  
Ionia Township Hall  
Danby Township Hall  
Odessa Township Hall  
North Plains Township Hall  
Lyons Township Hall  
Ronald Township Hall  
Sebewa Township Hall  
Otisco Township Hall

Orleans Township Hall  
Orange Township Hall  
Easton Township Hall  
Portland Township Hall

**LIVING**

Lighthouse Senior Living  
Lighthouse Rehab  
Saranac Housing Commission  
Mission Point of Belding  
SKLD of Ionia  
Hope Network  
Green Acres Ionia  
Portland Assisted Living and Memory Center  
Hope Network  
Good Vibes Adult Foster Care  
Clarksville Manor

**PUBLIC WORKS**

Ionia County Road Department  
Ionia Department of Public Works  
Belding Department of Public Works  
Portland Department of Public Works

**WWTP**

Belding WWTP  
Ionia WWTP  
Portland WWTP  
Lakewood Wastewater Authority WWTP  
Clarkesville-Morrison Lake WWTP  
Saranac WWSL

**UTILITIES**

Water Towers: 14  
Wind Turbines: 32  
Substations: 7

**TRAIN/BUS STATIONS/CARPOOL LOTS**

- Lake Odessa Park and Ride
- Portland – West Park and Ride
- Portland #2 (NE) Park and Ride
- Ionia/Belding Park and Ride
- Ionia Dial-A-Ride
- Belding Dial-A-Ride

**POST OFFICES**

- Belding Post Office
- Clarksville Post Office
- Hubbardston Post Office
- Ionia Post Office
- Lake Odessa Post Office
- Lyons Post Office
- Muir Post Office
- Orleans Post Office
- Pewamo Post Office
- Portland Post Office
- Saranac Post Office

**PUBLIC LIBRARIES**

- Alvah N. Belding Memorial Library
- Hall-Fowler Memorial Library
- Ionia Community Library
- Portland District Library
- Lyons Township District Library
- Lake Odessa Community Library
- Clarksville Area Library
- Saranac Public Library

**FOOD/AGRICULTURE**

- Herbruck’s Poultry Ranch
- \*\* ANY OTHER BIG ONES/COMMUNITY ANCHORS?

**OTHER CRITICAL FACILITIES**

- \*\* ANYTHING NOTABLE?

This list [ is |  is not ] a comprehensive and applicable list of critical facilities in

## City of Ionia

(jurisdiction)

If you circled "is not" for the above, please use the rest of this page to elaborate on why.

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You have completed the required portion of this document. Thank you once again for your time and participation. Access to hazard mitigation funding can be the difference between a viable infrastructure project and a missed opportunity. These last two pages are here for any additional comments or information you'd like to share to ensure your jurisdiction is sufficiently represented in the County Plan.

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## Example Adoption Resolution

(LOCAL COMMUNITY)

(STATE)

RESOLUTION NO. \_\_\_\_\_

A RESOLUTION OF THE (LOCAL COMMUNITY) ADOPTING THE

(TITLE AND DATE OF MITIGATION PLAN)

WHEREAS the (local governing body) recognizes the threat that natural hazards pose to people and property within (local community); and

WHEREAS the (local community) has prepared a multi-hazard mitigation plan, hereby known as (title and date of mitigation plan) in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS (title and date of mitigation plan) identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in (local community) from the impacts of future hazards and disasters; and

WHEREAS adoption by the (local governing body) demonstrates their commitment to the hazard mitigation and achieving the goals outlined in the (title and date of mitigation plan).

NOW THEREFORE, BE IT RESOLVED BY THE (LOCAL COMMUNITY), (STATE), THAT:

Section 1. In accordance with (local rule for adopting resolutions), the (local governing body) adopts the (title and date of mitigation plan).

ADOPTED by a vote of \_\_\_\_ in favor and \_\_\_\_ against, and \_\_\_\_ abstaining, this \_\_\_\_ day of

\_\_\_\_\_, \_\_\_\_\_.

By: \_\_\_\_\_

(print name)

ATTEST:

By: \_\_\_\_\_

(print name)

APPROVED AS TO FORM:

By: \_\_\_\_\_

(print name)



### 1. Current mitigation strategies –

Probably the greatest hazard the City of Ionia faces on a regular basis, given its proximity to the Grand River, is flooding. To this end, the city intends, with the assistance of future grant funding, to develop a plan specific to flood assessment and mitigation. The plan will more closely examine the risks caused by flood to public and private infrastructure, identify specific locations and assets particularly at risk, and further identify what actions can be taken to mitigate those threats and potential damage. The city has also created a flood zone overlay district, which restricts construction of new buildings within the flood zone unless they satisfy building code and flood insurance requirements. Additionally, the city has plans to upgrade various rescue/response equipment, such as replacing its all-terrain rescue vehicle utilized by its public safety department, adding a grapple bucket to its DPW front-end loader to more effectively deal with brush, and enhance siren warning systems for increased reliability.

### 2. County-level mitigation strategies and City of Ionia participation

The City of Ionia is currently in the process of updating its Master Plan, which will include an assessment of future land uses relative to natural hazards (i.e., flooding) and taking additional steps as may be available to mitigate potential damages caused by identifiable hazards. The City is also very interested and willing to participate in communication, education and awareness programs to inform residents and key stakeholders about hazard mitigation, especially pertinent to actions that can be taken at both the organizational and individual levels to reduce hazard risks.



## MEMORANDUM

To: Tage Heyn, Fleis & VandenBrink

From: Tutt Gorman, City Manager

Date: June 23, 2023

Re: Ionia County Hazard Mitigation Plan

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This memorandum is in response to the Ionia County Hazard Mitigation Plan Development and Involvement Document and request for information from participating municipalities. The City of Portland has endured multiple natural disasters and state of emergencies within the past few years and most notably, the 2019 flooding and ice jam that caused significant damage to our Wastewater Treatment Facility located in close proximity to the Grand River. The City is grateful for the opportunity to participate in this process.

### Planning and Regulatory: (High)

As a local unit of government, the City of Portland is the regulatory and legislative body that is responsible carrying out the municipal powers pursuant to the City Charter. The general powers include the authority to regulate matters related to public health and safety. The City Charter and complete list of regulatory powers can be found here:

[https://library.municode.com/mi/portland/codes/code\\_of\\_ordinances?nodeId=PTICH\\_CH2MUP\\_O\\_S2.1GEPO](https://library.municode.com/mi/portland/codes/code_of_ordinances?nodeId=PTICH_CH2MUP_O_S2.1GEPO)

The City also engages in comprehensive planning for our community pursuant to Michigan Zoning Enabling Act (MZEA) and through the master plan process. The City's Master Plan can be found here: <https://www.portland-michigan.org/DocumentCenter/View/170/2015-Master-Plan-PDF>

Through the City's Planning Commission, protective areas are established by zoned districts, such as the Flood Plain Overlay District which also facilitates participation in the National Flood

Insurance Program. The City's Police Department also has specific protocols and policies in responding to emergencies.

Administrative and Technical: (Medium)

The City of Portland operates and manages the following departments:

- Portland Police Department (PPD)
- Portland Ambulance Department
- Portland Area Fire Authority (one of three entities)
- Department of Public Works (DPW)
- Wastewater Department
- Finance
- Administration
- Electric Department - Board of Light & Power
- Parks & Recreation
- Downtown Development Authority (DDA)

The City and its respective departments operate and provide services to our residents. These departments are available to respond accordingly during an emergency event and collaborate with local, state and federal agencies. Understandably, however, the equipment and resources needed to effectively respond to various types of emergencies is insufficient. This was evident during the 2019 Ice Jam and State of Emergency.

Financial: (Medium)

As a local governmental until, the City receives revenue through property and income taxes, as well as state revenue sharing. The City's fiscal's health is strong and we aspire to maintain at least a 20% fund balance at all times in order to have the resources to respond during an event.

The City is further aggressive in applying and obtaining various grants that would offset the local burden to the residents and community.

Again, while we are financially sound, we ranked ourselves as "medium" based on past experience and the practical financial needs that often arise during an emergency.

Education and Outreach: (Medium)

The City has a website that is capable of many functions and alerts systems that can notify our residents in an emergency situation, but also host educational information as well. The City also has access to the RAVE mass-alert system.

The City further utilizes a robust social media presence that can be used during an event. City of Portland, Portland Police, as well as the DDA have Facebook pages.

Portland City Hall has a large space upstairs where public meetings, workshops or educational seminars can be held.

Police, Fire and Ambulance personnel can also host and participate in various educational activities.

*Note: Having no criteria or guidance in regard to the self-ranking (low, med, high), our rating in all categories was simply more of a best guess.*



## Ionia County Hazard Mitigation Plan Development Municipality Participation and Involvement Document

Ionia County is currently in the process of developing a county-wide Hazard Mitigation Plan in coordination with Fleis & VandenBrink. Having an approved Plan allows for the County to take advantage of funding through multiple FEMA grants that are aimed at supporting projects considering hazard mitigation actions. Municipalities within the County are able to take advantage of this funding as well if they are involved in the development of the Plan; for a municipality to be considered as having been involved in the development of a Plan, they must meet a certain level of participation as required by FEMA.

Some of you have already participated in this Plan development process through a comprehensive survey distributed earlier in the Plan development cycle and through other lines of related communication. The feedback received has been a key consideration in Plan development and so we thank you for your previous participation. This document is intended to ensure that every municipality in Ionia County can readily meet the minimum threshold of participation in Plan development in a standardized way and thus take advantage of these grant funding sources for future local projects. **Your jurisdiction must complete this document to be counted as a participating member of the Plan. The completed document must be returned by June 23<sup>rd</sup>, 2023 to Tage Heyn via email (see below) or regular mail (Tage Heyn c/o Fleis & VandenBrink, 2960 Lucerne Dr SE, Grand Rapids MI 49546). Failure to do so will constitute non-participation in the Plan's development and will render your jurisdiction ineligible for Hazard Mitigation Assistance grants.**

If you have any questions or comments while completing this document, please reach out to Tage Heyn at [theyn@fveng.com](mailto:theyn@fveng.com) or Jason Pattok at [jpattok@ioniacounty.org](mailto:jpattok@ioniacounty.org). Thank you for your time and participation in this development process!

You may find the following resources useful:

<https://www.fema.gov/grants/mitigation> | Information about these grants and their scope.

<https://www.fema.gov/emergency-managers/risk-management/hazard-mitigation-planning> | Information about hazard mitigation planning in general.

<https://www.fema.gov/grants/mitigation/building-resilient-infrastructure-communities/after-apply/fy-2021-subapplication-status> | Applications for BRIC grant funding from 2021 (bottom of page), showing project type and funding amount requested, as well as the status of each application.

**Introduction:**



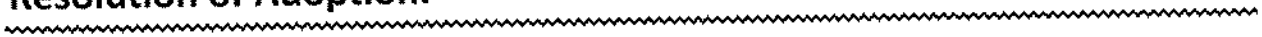
Name: Tull Gorman

Title: CITY Manager

Jurisdiction representing: CITY OF PORTLAND, Michigan

Email address: CITYMANAGER@PORTLAND-MICHIGAN.ORG

**Resolution of Adoption:**



This Hazard Mitigation Plan will be adopted as an official plan of Ionia County upon its completion. Participating jurisdictions **must** adopt the finished Plan as well. A template adoption resolution is attached to the end of this document for reference.

CITY OF PORTLAND  
(jurisdiction)  will  will not ] adopt the Ionia County  
(circle one)

Hazard Mitigation Plan as an official municipal plan upon its completion.

CITY OF PORTLAND  
(jurisdiction)  will  will not ] participate in efforts to  
(circle one)

implement and update the plan throughout its five-year lifespan.

## Hazard Identification and Ranking

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The following is the list of natural hazards identified by the Ionia County Hazard Mitigation Planning Committee as having the potential to affect Ionia County. These hazards have been ranked by their Risk Assessment Value, which is a number calculated by formulaic consideration of the hazards' probability of occurrence, severity of impacts, and expected future change of event frequency. Their order in the below list reflects this ranking, with the "most important" hazards for mitigation action at the top and the "least important" at the bottom.

- Floods
- Severe Winds
- Ice/Sleet Storms
- Hail
- Tornadoes
- Winter Storms/Heavy Snow Events/Blizzards
- Drought
- Thunderstorms/Lightning
- Dam Failures
- Extreme Cold
- Extreme Heat
- Public Health Emergencies
- Fog
- Subsidence
- Invasive Species
- Wildfires
- Earthquakes
- Space Weather
- Impacting Objects (Celestial)

This list [ is ] is not [ ] a comprehensive list of natural hazards with the potential to affect Portland City.  
(jurisdiction)

The ranking of this list [ is ] is not [ ] representative of the relative risk these hazards pose to Portland City.  
(jurisdiction)

If you circled "is not" for either of the two previous items, please use this page for elaboration. You may offer a re-ordered list or add items as desired.

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## Mitigation Capability

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The overarching purpose of hazard mitigation planning is to reduce or eliminate long-term risk to life and property from the occurrence of hazard events. To realize this purpose, Ionia County has set the following long-term goals:

Goal: Minimize injuries and deaths caused by or related to hazard events.

Goal: Minimize the loss or damage of public and private property from hazard events.

Goal: Promote community awareness, understanding, cooperation, and participation in hazard mitigation actions.

Goal: Promote local growth and development through a lens of hazard mitigation.

Each jurisdiction within Ionia County has different capabilities for engaging in mitigation activities and working towards accomplishing these goals. FEMA has identified the following four primary types of capabilities in their planning handbook:

- Planning and Regulatory – implementation and enforcement of plans, policies, codes, ordinances, local and State law, etc.
- Administrative and Technical – departments, personnel, equipment, coordination with other public and private entities, etc.
- Financial – availability of funding or ability to secure funding through taxes, grants, etc.
- Education and Outreach – ability to engage and communicate hazard mitigation information to the public.

FEMA **requires** local communities who are participating in the development of a hazard mitigation plan to evaluate their capabilities for accomplishing hazard mitigation goals. For **each** capability listed above, you **must** describe existing authorities, policies, programs, **and** resources available for implementation of hazard mitigation actions and projects that lean on that capability, **as well as** how your jurisdiction may improve upon these capabilities. These do not need to be long descriptions, but they **must** include all elements as stated above. You **must** summarize your jurisdiction's capability as being **low, medium, or high** – you can circle the corresponding word at the top of the following four pages, where space has also been provided for your written answers. You may wish to refer to the list of mitigation actions under consideration by the County included later in this document for additional context.

Summary of **Planning and Regulatory** capabilities: [ Low | Medium | High ]

Multiple horizontal lines for input or data entry.

Summary of **Administrative and Technical** capabilities: [ Low | Medium | High ]

Lined writing area consisting of multiple horizontal lines for text entry.



Summary of **Education and Outreach** capabilities: [ Low | Medium | High ]

Lined area for writing the summary of Education and Outreach capabilities.

## Mitigation Actions

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Ionia County has identified a list of hazard mitigation actions to work towards implementing on the county level over the five-year lifespan of the finished Plan; this unsorted list is included below for your reference. Now that you have characterized your jurisdiction's hazard mitigation capabilities, you **must** also identify and select **at least one** mitigation action that your jurisdiction will implement, or fully attempt to implement, over the five-year lifespan of the finished Plan. You may choose from the list in this document, but you are **strongly recommended** to provide mitigation actions that are not listed below and address a **specific** local vulnerability. You **must** describe how your jurisdiction will track and report the progress of action implementation such that an update can be provided in the next iteration of the Plan. You **must** describe existing authorities, policies, programs, **and** resources available for implementation of the chosen mitigation actions, **as well as** how your jurisdiction may improve upon these capabilities. Space has been provided for your answers after the action list.

You may also wish to consider choosing mitigation actions focused on increasing capacity for hazard mitigation actions across the board, such as integrating hazard mitigation practices into community Master Plans. In general, you are encouraged to emphasize actions that reduce the effects of hazards on new and existing buildings and infrastructure.

1. Evaluate the need for expanding coverage of warning sirens and other warning systems, and assist local governments in doing the same, along with updating existing sirens to 800mhz.
2. Encourage non-participating local governments to meet requirements and become members of Tree City USA.
3. Expand the library and increase availability of hazard mitigation GIS maps, databases, locations of critical infrastructure such as fire hydrants and curb stops, etc.
4. Assist local governments in integrating hazard mitigation principles into local Master Plans.
5. Identify potential projects to strengthen the County's infrastructure and increase its hazard resistance and encourage local governments to do the same.
6. Evaluate the necessity and viability of implementing County-wide zoning ordinances.
7. Apply for hazard mitigation grant funding for a mitigation project.
8. Evaluate and increase usage of snow fences to limit drifting along critical roadways.
9. Assist local governments in evaluating the need for construction of new local facilities or departments, or the expansion of existing facilities and departments, such as WTPs, WWTPs, and DPWs, to meet community growth.
10. Evaluate the need for a revision of FEMA flood maps and local government participation in the National Flood Insurance Program.
11. Provide NOAA weather radios to local public buildings, schools, hospitals, campgrounds, etc. for free or at a subsidized price by use of grant funding.
12. Encourage the burial of utility lines in new developments and in reconstruction of current development.
13. Become a participating member of the Michigan Emergency Management Assistance Compact (MEMAC).
14. Evaluate the viability of implementing a house numbering ordinance to improve emergency response and standardize number assignment throughout the county.

15. Ensure critical public buildings are outfitted with auxiliary sources of power, such as generators or battery systems, as necessary and assist local governments in doing the same.
16. Evaluate and ensure that enforcement of building/electrical/mechanical/plumbing codes is sufficient to ensure development adequately addresses hazard mitigation principles.
17. Evaluate the necessity and viability of developing and implementing an Ionia County Community Wildfire Protection Plan.
18. Evaluate potential state and federal sources of funding that can be used for specific hazard mitigation projects and assist local governments in doing the same.
19. Conduct a full evaluation of County hazard mitigation actions to ensure they are sufficiently meeting resident needs and assist local governments in doing the same.
20. Meet requirements and become a participating member of the National Weather Service's StormReady program.
21. Increase availability of planning documents such as the Emergency Operations Plan that provide a framework and guidance to County and local government officials for emergency/disaster response and recovery.
22. Create and implement a feedback mechanism for County residents to provide input on hazard mitigation actions, as well as to report hazards and hazardous conditions to officials.
23. Incorporate hazard mitigation principles into the County's next Capital Improvement Plan update.
24. Form an environmental review board to review land use permits, site plans, or any other applications that may pose significant impacts on the environment.
25. Work with critical facilities to develop emergency plans that take into account the unique factors of each facility (ex. evacuation needs for nursing homes or hospitals).
26. Explore the necessity and viability of establishing a Transfer of Development Rights program to limit development in high-risk areas such as floodplains.

27. Ensure the capacity for mobilization and operation of emergency shelters during an emergency or disaster event and assist local governments in doing the same.
28. Adopt an ordinance requiring the anchoring of manufactured home installations located outside of a designated floodplain and/or encourage manufactured home owners to voluntarily anchor their units.
29. Encourage local governments to adopt, implement, and maintain floodplain management practices that go beyond NFIP requirements.
30. Encourage local governments to meet requirements and become participating communities under the Community Rating System.
31. Establish public parks in identified local floodplains and assist local governments in doing the same.
32. Continue to evaluate the sufficiency of existing drainage management (culverts, drains, etc.) and identify insufficiencies.
33. Assist the Drain Commissioner's office in formalizing a maintenance plan for County drains.
34. Require notifications to/approvals from the Drain Commissioner's office for drainage tie-ins to County drains.
35. Evaluate the necessity and viability of expanding Ionia County's Communicable Disease reporting program to allow for a wider range of citizens to make related reports.
36. Disseminate disaster planning and response information to community groups and critical facilities.
37. Make available federal, state, and county emergency management, disaster preparedness, and other pertinent information on County website, ensure accessibility of information to speakers of Spanish, and assist local governments in doing the same.
38. Encourage individuals and families to develop their own disaster preparedness plans using resources such as the American Red Cross and County hazard mitigation information.

39. Assist local governments in enforcing requirements for burn permits, especially during sensitive times such as dry periods or high wind conditions.
40. Expand public education and awareness regarding activities (open burning, etc.) with the capacity to result in an uncontrolled wildfire.
41. Maintain adequate road and debris clearing capabilities and assist local governments in doing the same.
42. Apply structural hazard mitigation and sustainability concepts during construction or remodeling of government facilities and encourage local governments to do the same.
43. Promote low-impact development techniques in development that reduce stormwater runoff and resultant flooding.
44. Ensure that emergency plans continue to be maintained for Webber Dam.
45. Evaluate municipal wells for capacity to continue to meet projected growth and resultant demand and assist local governments in doing the same.
46. Evaluate the need to increase emergency/disaster response capabilities with alternative transportation vehicles (snowmobiles, ATVs, etc.)
47. Explore the necessity and viability of expanding the Ionia County Building Department's capabilities such that the County can perform duties such as permit application review and building code enforcement with in-house resources.
48. Incorporate hazard mitigation principles and priorities into the County land use plan upon its next review.
49. Continue to ensure that all current hazard mitigation actions are maintained or improved upon.

\_\_\_\_\_ has selected the following mitigation action(s)  
(jurisdiction)

which it will implement, or fully attempt to implement, over the five-year lifespan of the finished Ionia County Hazard Mitigation Plan:

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\_\_\_\_\_ will leverage the following existing authorities,  
(jurisdiction)

policies, programs, and resources available for implementation of the above mitigation action(s):

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\_\_\_\_\_ may improve upon these listed capabilities for  
(jurisdiction)

implementing the above mitigation action(s) in the following ways:

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\_\_\_\_\_ will track and report the progress of the  
(jurisdiction)  
implementation of the above mitigation action(s) in the following ways:

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## **Critical Facilities**

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The following is a list of critical facilities within Ionia County sorted by category. FEMA defines critical facilities as “structures and institutions necessary for a community’s response to and recovery from emergencies” who “must continue to operate during and following a disaster to reduce the severity of impacts and accelerate recovery”. Please ensure all relevant critical facilities in your jurisdiction are accounted for in the appropriate category below and note any omissions, corrections, or additions in the space provided after the list.

### **LAW ENFORCEMENT**

Ionia County Sheriff Department  
City of Ionia Department of Public Safety  
City of Belding Police Department  
Michigan State Police  
Lake Odessa Police Department  
City of Portland Police Department  
Ionia Correctional Facility  
Bellamy Creek Correctional Facility  
Michigan Reformatory  
Richard A. Handlin Correctional Facility  
Ionia County Jail

### **FIRE SERVICES**

Hubbardston Fire Department  
City of Belding Fire Department  
Lake Odessa Fire Department  
City of Ionia Department of Public Safety, Fire Division  
Pewamo Fire Department  
Lyons-Muir Fire Department  
Saranac Fire Department  
Portland Fire Department  
Campbell Township (Clarksville) Fire Department  
Orleans Township Fire Department  
Ronald Township Fire Department  
Berlin-Orange Township Fire Department  
Grattan Township Fire Department  
Roxand Township Fire Department (Eaton County)  
Freeport Fire/Rescue (Barry County)

## **HEALTHCARE**

Lakewood Community Ambulance Service (located in Barry County)

Belding Ambulance Service- Belding Fire Department

Portland Ambulance Service- Portland Fire Department, Emergency Services Building  
Life EMS

Sparrow Ionia Hospital

Sparrow Group Ionia

Sparrow Group Portland

Ionia Senior Center

Ionia County Health Department

DaVita Ionia Dialysis

Spectrum Health Family Practice

## **PUBLIC SCHOOLS**

Oakwood Elementary School

Portland Middle School

Westwood Elementary School

Lakewood Elementary School

Saranac Elementary School

Ionia County Career Center

Coon School

A.A. Rather School

Ionia High School

Emerson School

Ionia Middle School

Jefferson School

Twin Rivers Elementary School

Haynor School

North LeValley Elementary School

R.B. Boyce Elementary School

Belding Middle School

Ellis Elementary School

Belding High School

Woodview Elementary School

Saranac Jr/Sr High School

## **PRIVATE SCHOOLS**

Faith Community Christian School  
Ionia Seventh Day Adventist School  
Ss. Peter & Paul Elementary School  
St. Joseph Elementary School  
Ionia Nazarene Christian School  
Lakewood Christian School  
St. Joseph Elementary School (Belding)  
St. Joseph Elementary School (Pewamo)  
St. Patrick School

## **CITY HALLS**

Belding City Hall  
Ionia City Hall  
City of Portland Hall

## **VILLAGE HALLS**

Village of Muir Hall  
Village of Lyons Hall  
Village of Hubbardston Hall  
Village of Lake Odessa Hall  
Village of Clarksville Hall  
Village of Saranac Hall  
Village of Pewamo Hall

## **TOWNSHIP HALLS**

Campbell Township Hall  
Boston Township Hall  
Berlin Township Hall  
Keene Township Hall  
Ionia Township Hall  
Danby Township Hall  
Odessa Township Hall  
North Plains Township Hall  
Lyons Township Hall  
Ronald Township Hall  
Sebewa Township Hall  
Otisco Township Hall

Orleans Township Hall  
Orange Township Hall  
Easton Township Hall  
Portland Township Hall

### **LIVING**

Lighthouse Senior Living  
Lighthouse Rehab  
Saranac Housing Commission  
Mission Point of Belding  
SKLD of Ionia  
Hope Network  
Green Acres Ionia  
Portland Assisted Living and Memory Center  
Hope Network  
Good Vibes Adult Foster Care  
Clarksville Manor

### **PUBLIC WORKS**

Ionia County Road Department  
Ionia Department of Public Works  
Belding Department of Public Works  
Portland Department of Public Works  
*Port ELMWA Board of Light ? Power - Electric Dept.*

### **WWTP**

Belding WWTP  
Ionia WWTP  
Portland WWTP  
Lakewood Wastewater Authority WWTP  
Clarkesville-Morrison Lake WWTP  
Saranac WWSL

### **UTILITIES**

Water Towers: 14  
Wind Turbines: 32  
Substations: 7

**TRAIN/BUS STATIONS/CARPOOL LOTS**

- Lake Odessa Park and Ride
- Portland – West Park and Ride
- Portland #2 (NE) Park and Ride
- Ionia/Belding Park and Ride
- Ionia Dial-A-Ride
- Belding Dial-A-Ride

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- Hall-Fowler Memorial Library
- Ionia Community Library
- Portland District Library
- Lyons Township District Library
- Lake Odessa Community Library
- Clarksville Area Library
- Saranac Public Library

**FOOD/AGRICULTURE**

- Herbruck’s Poultry Ranch
- \*\* ANY OTHER BIG ONES/COMMUNITY ANCHORS?

**OTHER CRITICAL FACILITIES**

\*\* ANYTHING NOTABLE?

- PORTLAND BOARD OF LIGHT AND POWER
- PORTLAND HYDRO DAM

This list [ is | is not ] a comprehensive and applicable list of critical facilities in

Portland  
(jurisdiction)

If you circled "is not" for the above, please use the rest of this page to elaborate on why.

Public Schools → Portland High School  
→ Portland Area Community Education (PACE)

LIVING → · The Brook of Portland (Assisted Living)  
· Country Living Assisted Living

Utilities → · Portland Electric  
· Portland City Dam - Electric substation / hydro dam  
· 2<sup>nd</sup> substation (electric) to be built at N. end  
of Grant St.





## Example Adoption Resolution

(LOCAL COMMUNITY)

(STATE)

RESOLUTION NO. \_\_\_\_\_

A RESOLUTION OF THE (LOCAL COMMUNITY) ADOPTING THE

(TITLE AND DATE OF MITIGATION PLAN)

WHEREAS the (local governing body) recognizes the threat that natural hazards pose to people and property within (local community); and

WHEREAS the (local community) has prepared a multi-hazard mitigation plan, hereby known as (title and date of mitigation plan) in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS (title and date of mitigation plan) identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in (local community) from the impacts of future hazards and disasters; and

WHEREAS adoption by the (local governing body) demonstrates their commitment to the hazard mitigation and achieving the goals outlined in the (title and date of mitigation plan).

NOW THEREFORE, BE IT RESOLVED BY THE (LOCAL COMMUNITY), (STATE), THAT:

Section 1. In accordance with (local rule for adopting resolutions), the (local governing body) adopts the (title and date of mitigation plan).

ADOPTED by a vote of \_\_\_\_ in favor and \_\_\_\_ against, and \_\_\_\_ abstaining, this \_\_\_\_ day of

\_\_\_\_\_, \_\_\_\_\_.

By: \_\_\_\_\_

(print name)

ATTEST:

By: \_\_\_\_\_

(print name)

APPROVED AS TO FORM:

By: \_\_\_\_\_

(print name)

## City of Portland

Addressing the topics of floods, severe storms, and dam failures, the City of Portland could install water level monitoring at the dam, and Obermeyer pneumatic spillway gate system (<http://www.obermeyerhydro.com/>) and some simple controls to maintain a planned water level during flash flood, storm or other conditions where water levels peak at the dam and elevate risk to system integrity. This may also be one of many actions taken in a cascading plan to reduce flooding risk in the City.

Addressing the topics of severe storm, tornados, winter storms, thunderstorms which may cause power outages the Board of Light and Power will be moving to a 2 man on call/three-week rotation this year. Under this scenario two people will always be on call to respond to outages. Additionally, the electric department could allow linemen to take home a 4-wheel drive municipally owned Trucks during severe weather events to improve response reliability and efficiency. Finally, the Board of Light and Power could hire a third party engineering firm to conduct an independent low probability/high consequence single point of failure risk analysis for the power generation and distribution systems. The stated study outcomes would be recommendations for improving system reliability under adverse circumstances.

Create a written emergency plan designed to provide immediate shelter and victim services for victims of natural disasters or large-scale, weather-related traffic events occurring within the City of Portland, Danby Township and Portland Township. Work to enhance facilities, create direct points of contact and compile list of available resources.

- City of Portland, Danby and Portland Townships are all included due to church and school facilities serving residents within all three municipalities / townships.

Berlin Township, Ionia County

Michigan

Resolution #

A resolution of the Berlin Township adopting the  
Ionia County Hazard Mitigation Plan Development

WHEREAS the Berlin Township recognizes the threat that natural hazards pose to people and property within Berlin Township; and

WHEREAS the Berlin Township has prepared a multi-hazard mitigation plan, hereby known as Ionia County Hazard Mitigation Plan July 6<sup>th</sup>, 2023 in accordance with the Disaster Mitigation Act of 2000; and


WHEREAS The Ionia County Hazard Mitigation Plan identifies mitigation goals and actions to reduce or eliminate long term risk to people and property in Berlin Township from the impacts of future hazards and disasters; and

WHEREAS adoption by the Berlin Township Board demonstrates their commitment to the hazard mitigation and achieving the goals outlines in the Ionia County Hazard Mitigation Plan.

NOW THEREFORE, BE IT RESOLVED BY THE BERLIN TOWNSHIP, MICHIGAN, THAT:

Section 1. In accordance with local rule for adopting resolutions, the Berlin Township Board adopts the Ionia County Hazard Mitigation Plan on July 6<sup>th</sup>, 2023.

Adopted by a vote of 4 in favor, 0 against, and 1 absent, this 6<sup>th</sup> day of July 2023.

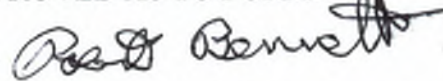
By: 

Robert Bennett, Berlin Twp Supervisor

By: 

Rachael Alexander, Berlin Twp Clerk

APPROVED AS TO FORM:

By: 

Robert Bennett, Berlin Twp Supervisor

**Introduction:**

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Name: Rachael Alexander

Title: Berlin Twp Clerk

Jurisdiction representing: Berlin Twp

Email address: BerlinClerkAlexander@gmail.com

**Resolution of Adoption:**

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This Hazard Mitigation Plan will be adopted as an official plan of Ionia County upon its completion. Participating jurisdictions **must** adopt the finished Plan as well. A template adoption resolution is attached to the end of this document for reference.

Berlin Twp (jurisdiction) [ will | will not ] adopt the Ionia County (circle one)

Hazard Mitigation Plan as an official municipal plan upon its completion.

Berlin Twp (jurisdiction) [ will | will not ] participate in efforts to (circle one)

implement and update the plan throughout its five-year lifespan.

## Hazard Identification and Ranking

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The following is the list of natural hazards identified by the Ionia County Hazard Mitigation Planning Committee as having the potential to affect Ionia County. These hazards have been ranked by their Risk Assessment Value, which is a number calculated by formulaic consideration of the hazards' probability of occurrence, severity of impacts, and expected future change of event frequency. Their order in the below list reflects this ranking, with the "most important" hazards for mitigation action at the top and the "least important" at the bottom.

Floods  
Severe Winds  
Ice/Sleet Storms  
Hail  
Tornadoes  
Winter Storms/Heavy Snow Events/Blizzards  
Drought  
Thunderstorms/Lightning  
Dam Failures  
Extreme Cold  
Extreme Heat  
Public Health Emergencies  
Fog  
Subsidence  
Invasive Species  
Wildfires  
Earthquakes  
Space Weather  
Impacting Objects (Celestial)

This list [ is ] is not [ ] a comprehensive list of natural hazards with the potential to affect Berlin Twp (jurisdiction).

The ranking of this list [ is ] is not [ ] representative of the relative risk these hazards pose to Berlin Twp (jurisdiction).



## Mitigation Capability

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The overarching purpose of hazard mitigation planning is to reduce or eliminate long-term risk to life and property from the occurrence of hazard events. To realize this purpose, Ionia County has set the following long-term goals:

Goal: Minimize injuries and deaths caused by or related to hazard events.

Goal: Minimize the loss or damage of public and private property from hazard events.

Goal: Promote community awareness, understanding, cooperation, and participation in hazard mitigation actions.

Goal: Promote local growth and development through a lens of hazard mitigation.

Each jurisdiction within Ionia County has different capabilities for engaging in mitigation activities and working towards accomplishing these goals. FEMA has identified the following four primary types of capabilities in their planning handbook:

- Planning and Regulatory – implementation and enforcement of plans, policies, codes, ordinances, local and State law, etc.
- Administrative and Technical – departments, personnel, equipment, coordination with other public and private entities, etc.
- Financial – availability of funding or ability to secure funding through taxes, grants, etc.
- Education and Outreach – ability to engage and communicate hazard mitigation information to the public.

FEMA **requires** local communities who are participating in the development of a hazard mitigation plan to evaluate their capabilities for accomplishing hazard mitigation goals. For **each** capability listed above, you **must** describe existing authorities, policies, programs, **and** resources available for implementation of hazard mitigation actions and projects that lean on that capability, **as well as** how your jurisdiction may improve upon these capabilities. These do not need to be long descriptions, but they **must** include all elements as stated above. You **must** summarize your jurisdiction's capability as being **low, medium, or high** – you can circle the corresponding word at the top of the following four pages, where space has also been provided for your written answers. You may wish to refer to the list of mitigation actions under consideration by the County included later in this document for additional context.

Summary of **Planning and Regulatory** capabilities: [ Low | Medium | High ]

Berlin Twp follows Ionia County Hazard Mitigation Plan, though currently does not have a plan of their own.

Summary of **Administrative and Technical** capabilities: [ Low | Medium | High ]

Berlin-Orange Fire Department  
is trained and will respond to  
all emergencies.



Summary of **Education and Outreach** capabilities: [ Low Medium | High ]

22 horizontal lines for handwritten input.

## Mitigation Actions

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Ionia County has identified a list of hazard mitigation actions to work towards implementing on the county level over the five-year lifespan of the finished Plan; this unsorted list is included below for your reference. Now that you have characterized your jurisdiction's hazard mitigation capabilities, you **must** also identify and select **at least one** mitigation action that your jurisdiction will implement, or fully attempt to implement, over the five-year lifespan of the finished Plan. You may choose from the list in this document, but you are **strongly recommended** to provide mitigation actions that are not listed below and address a **specific** local vulnerability. You **must** describe how your jurisdiction will track and report the progress of action implementation such that an update can be provided in the next iteration of the Plan. You **must** describe existing authorities, policies, programs, **and** resources available for implementation of the chosen mitigation actions, **as well as** how your jurisdiction may improve upon these capabilities. Space has been provided for your answers after the action list.

You may also wish to consider choosing mitigation actions focused on increasing capacity for hazard mitigation actions across the board, such as integrating hazard mitigation practices into community Master Plans. In general, you are encouraged to emphasize actions that reduce the effects of hazards on new and existing buildings and infrastructure.

1. Evaluate the need for expanding coverage of warning sirens and other warning systems, and assist local governments in doing the same, along with updating existing sirens to 800mhz.
2. Encourage non-participating local governments to meet requirements and become members of Tree City USA.
3. Expand the library and increase availability of hazard mitigation GIS maps, databases, locations of critical infrastructure such as fire hydrants and curb stops, etc.
4. Assist local governments in integrating hazard mitigation principles into local Master Plans.
5. Identify potential projects to strengthen the County's infrastructure and increase its hazard resistance and encourage local governments to do the same.
6. Evaluate the necessity and viability of implementing County-wide zoning ordinances.
7. Apply for hazard mitigation grant funding for a mitigation project.
8. Evaluate and increase usage of snow fences to limit drifting along critical roadways.
9. Assist local governments in evaluating the need for construction of new local facilities or departments, or the expansion of existing facilities and departments, such as WTPs, WWTPs, and DPWs, to meet community growth.
10. Evaluate the need for a revision of FEMA flood maps and local government participation in the National Flood Insurance Program.
11. Provide NOAA weather radios to local public buildings, schools, hospitals, campgrounds, etc. for free or at a subsidized price by use of grant funding.
12. Encourage the burial of utility lines in new developments and in reconstruction of current development.
13. Become a participating member of the Michigan Emergency Management Assistance Compact (MEMAC).
14. Evaluate the viability of implementing a house numbering ordinance to improve emergency response and standardize number assignment throughout the county.

15. Ensure critical public buildings are outfitted with auxiliary sources of power, such as generators or battery systems, as necessary and assist local governments in doing the same.
16. Evaluate and ensure that enforcement of building/electrical/mechanical/plumbing codes is sufficient to ensure development adequately addresses hazard mitigation principles.
17. Evaluate the necessity and viability of developing and implementing an Ionia County Community Wildfire Protection Plan.
18. Evaluate potential state and federal sources of funding that can be used for specific hazard mitigation projects and assist local governments in doing the same.
19. Conduct a full evaluation of County hazard mitigation actions to ensure they are sufficiently meeting resident needs and assist local governments in doing the same.
20. Meet requirements and become a participating member of the National Weather Service's StormReady program.
21. Increase availability of planning documents such as the Emergency Operations Plan that provide a framework and guidance to County and local government officials for emergency/disaster response and recovery.
22. Create and implement a feedback mechanism for County residents to provide input on hazard mitigation actions, as well as to report hazards and hazardous conditions to officials.
23. Incorporate hazard mitigation principles into the County's next Capital Improvement Plan update.
24. Form an environmental review board to review land use permits, site plans, or any other applications that may pose significant impacts on the environment.
25. Work with critical facilities to develop emergency plans that take into account the unique factors of each facility (ex. evacuation needs for nursing homes or hospitals).
26. Explore the necessity and viability of establishing a Transfer of Development Rights program to limit development in high-risk areas such as floodplains.

27. Ensure the capacity for mobilization and operation of emergency shelters during an emergency or disaster event and assist local governments in doing the same.
28. Adopt an ordinance requiring the anchoring of manufactured home installations located outside of a designated floodplain and/or encourage manufactured home owners to voluntarily anchor their units.
29. Encourage local governments to adopt, implement, and maintain floodplain management practices that go beyond NFIP requirements.
30. Encourage local governments to meet requirements and become participating communities under the Community Rating System.
31. Establish public parks in identified local floodplains and assist local governments in doing the same.
32. Continue to evaluate the sufficiency of existing drainage management (culverts, drains, etc.) and identify insufficiencies.
33. Assist the Drain Commissioner's office in formalizing a maintenance plan for County drains.
34. Require notifications to/approvals from the Drain Commissioner's office for drainage tie-ins to County drains.
35. Evaluate the necessity and viability of expanding Ionia County's Communicable Disease reporting program to allow for a wider range of citizens to make related reports.
36. Disseminate disaster planning and response information to community groups and critical facilities.
37. Make available federal, state, and county emergency management, disaster preparedness, and other pertinent information on County website, ensure accessibility of information to speakers of Spanish, and assist local governments in doing the same.
38. Encourage individuals and families to develop their own disaster preparedness plans using resources such as the American Red Cross and County hazard mitigation information.

39. Assist local governments in enforcing requirements for burn permits, especially during sensitive times such as dry periods or high wind conditions.
40. Expand public education and awareness regarding activities (open burning, etc.) with the capacity to result in an uncontrolled wildfire.
41. Maintain adequate road and debris clearing capabilities and assist local governments in doing the same.
42. Apply structural hazard mitigation and sustainability concepts during construction or remodeling of government facilities and encourage local governments to do the same.
43. Promote low-impact development techniques in development that reduce stormwater runoff and resultant flooding.
44. Ensure that emergency plans continue to be maintained for Webber Dam.
45. Evaluate municipal wells for capacity to continue to meet projected growth and resultant demand and assist local governments in doing the same.
46. Evaluate the need to increase emergency/disaster response capabilities with alternative transportation vehicles (snowmobiles, ATVs, etc.)
47. Explore the necessity and viability of expanding the Ionia County Building Department's capabilities such that the County can perform duties such as permit application review and building code enforcement with in-house resources.
48. Incorporate hazard mitigation principles and priorities into the County land use plan upon its next review.
49. Continue to ensure that all current hazard mitigation actions are maintained or improved upon.

Berlin Twp  
(jurisdiction)

has selected the following mitigation action(s)

which it will implement, or fully attempt to implement, over the five-year lifespan of the finished Ionia County Hazard Mitigation Plan:

1. Berlin-Orange FD will receive 800 mhz radios from the recent approval of Ionia County.
22. Berlin Twp will add an area on the website for the community to provide input re: hazards.
39. Berlin-Orange FD is currently enforcing burn permits.
40. Berlin Twp plans to add public education and awareness regarding fire on their website.

Berlin Twp  
(jurisdiction)

will leverage the following existing authorities,

policies, programs, and resources available for implementation of the above mitigation action(s):

Berlin Twp currently works with Ionia County authorities and will continue to do so.

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Berlin Twp \_\_\_\_\_ may improve upon these listed capabilities for  
(jurisdiction)

implementing the above mitigation action(s) in the following ways:

Berlin Twp will discuss hazards and  
planning at board meetings.

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Berlin Twp \_\_\_\_\_ will track and report the progress of the  
(jurisdiction)

implementation of the above mitigation action(s) in the following ways:

Berlin Twp will track and report  
progress during Board Meetings.

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## **Critical Facilities**

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The following is a list of critical facilities within Ionia County sorted by category. FEMA defines critical facilities as “structures and institutions necessary for a community’s response to and recovery from emergencies” who “must continue to operate during and following a disaster to reduce the severity of impacts and accelerate recovery”. Please ensure all relevant critical facilities in your jurisdiction are accounted for in the appropriate category below and note any omissions, corrections, or additions in the space provided after the list.

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Berlin-Orange Township Fire Department  
Grattan Township Fire Department  
Roxand Township Fire Department (Eaton County)  
Freeport Fire/Rescue (Barry County)

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Life EMS  
Sparrow Ionia Hospital  
Sparrow Group Ionia  
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Ionia Senior Center  
Ionia County Health Department  
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Spectrum Health Family Practice

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#### **LIVING**

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Lighthouse Rehab  
Saranac Housing Commission  
Mission Point of Belding  
SKLD of Ionia  
Hope Network  
Green Acres Ionia  
Portland Assisted Living and Memory Center  
Hope Network  
Good Vibes Adult Foster Care  
Clarksville Manor

#### **PUBLIC WORKS**

Ionia County Road Department  
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Belding Department of Public Works  
Portland Department of Public Works

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Portland WWTP  
Lakewood Wastewater Authority WWTP  
Clarkesville-Morrison Lake WWTP  
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Substations: 7

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Ionia Dial-A-Ride  
Belding Dial-A-Ride

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Clarksville Area Library  
Saranac Public Library

**FOOD/AGRICULTURE**

Herbruck's Poultry Ranch  
\*\* ANY OTHER BIG ONES/COMMUNITY ANCHORS?

**OTHER CRITICAL FACILITIES**

\*\* ANYTHING NOTABLE?

This list [ is | is not ] a comprehensive and applicable list of critical facilities in  
Berlin Twp  
(jurisdiction)

If you circled "is not" for the above, please use the rest of this page to elaborate on why.

Note: Berlin Twp does not have a  
Twp Hall. Meeting occur at Berlin-  
Orange Fire Barn.





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# Berlin Township

Rachael Alexander, Berlin Township Clerk  
4825 Ainsworth Rd  
Ionia, MI 48846

Emergency Manager

Sergent Fredrick Straubel

On July 6<sup>th</sup> 2023 a resolution of the Berlin Township adopting the Ionia County Hazard Mitigation Plan Development passed. Berlin Township Board feels as though severe winds, ice/sleet storms, winter storms are the greatest threats to the area. Over the past year, Berlin Orange Fire Department improved the radio systems to 800mhz radios. Berlin Orange Fire Department currently responds to all dispatched emergencies relating to hazards caused by severe weather.

Berlin Township will continue to work with Berlin Orange Fire Department in aiding and supporting the department's needed resources and supplies to ensure adequate response to hazardous emergencies. Berlin Orange Fire Department also works closely with neighboring departments for mutual aid during hazardous situations.

Berlin Township will be looking into purchasing road barricades for the Berlin Orange Fire Department. After speaking with Chief Bennett, this has been decided as the next purchase to aid the department during emergencies such as road closures due to ice/winter storms/severe winds.

Please feel free to contact us with any questions or concerns.

PHONE: (616) 527-9567  
CELL: (616) 523-2762  
EMAIL: BERLINCLERKALEXANDER@GMAIL.COM

---

Sincerely,

Rachael Alexander

Rachael Alexander

Berlin Twp Clerk

Introduction:

Name: Dennis G. Bowen

Title: Township Supervisor

Jurisdiction representing: Boston Township

Email address: bostontwpsupervisor@gmail.com

Resolution of Adoption:

This Hazard Mitigation Plan will be adopted as an official plan of Ionia County upon its completion. Participating jurisdictions must adopt the finished Plan as well. A template adoption resolution is attached to the end of this document for reference.

Boston Township [ will I will not ] adopt the Ionia County  
(jurisdiction) (circle one)

Hazard Mitigation Plan as an official municipal plan upon its completion.

Boston Township [ will I will not ] participate in efforts to  
(jurisdiction) (circle one)

implement and update the plan throughout its five-year lifespan.

852710 Ionia County Hazard Mitigation Plan 2023

## Hazard Identification and Ranking

The following is the list of natural hazards identified by the Ionia County Hazard Mitigation Planning Committee as having the potential to affect Ionia County. These hazards have been ranked by their Risk Assessment Value, which is a number calculated by formulaic consideration of the hazards' probability of occurrence, severity of impacts, and expected future change of event frequency. Their order in the below list reflects this ranking, with the "most important" hazards for mitigation action at the top and the "least important" at the bottom.

- Floods
- Severe Winds
- Ice/Sleet Storms
- Hail
- Tornadoes
- Winter Storms/Heavy Snow Events/Blizzards
- Drought
- Thunderstorms/Lightning
- Dam Failures
- Extreme Cold
- Extreme Heat
- Public Health Emergencies
- Fog
- Subsidence
- Invasive Species
- Wildfires
- Earthquakes
- Space Weather
- Impacting Objects (Celestial)

This list [ is ] is not a comprehensive list of natural hazards with the potential to

affect Boston Township.  
(jurisdiction)

The ranking of this list [ is ] is not representative of the relative risk these hazards

pose to Boston Township  
(jurisdiction)

Summary of Planning and Regulatory capabilities: [ Low I Medium I High I  
852710 Ionia County Hazard Mitigation Plan 2023

Boston Township will cooperate with other jurisdictions in the effort to adopt and enforce the plans, policies, codes, ordinances, local and state laws regarding the Ionia County hazard mitigation program.

Boston Township will work with our attorney's in the development, adoption and enforcement of any ordinances, required to ensure the adoption and enforcement of the Hazard Mitigation Plan.

Boston Township does not have a public works department or equipment to offer for a hazard mitigation effort.

Boston Township would offer administrative personnel and/or office facilities to assist with any hazard mitigation efforts.

Boston Township officials would be willing to fill administrative and/or other positions to assist during a hazard mitigation effort.

Summary of Financial capabilities: [ Low I Medium I High ]  
852710 Ionia County Hazard Mitigation Plan 2023

Boston Township would work with other jurisdictions in the process to obtain grants or funding to support the Ionia County Hazard Mitigation Plan.

I am not sure the citizens of the county would support paying more taxes to support this effort.

Boston Township could discuss supplying funding for the effort to educate residents and/or prepare for a possible situation in the Township that would require activating the Hazard Mitigation Plan.

Summary of Education and Outreach capabilities: [ Low I Medium I High I  
852710 Ionia County Hazard Mitigation Plan 2023

Boston Township's website would be a useful tool for educating it's residents and communicating hazard midigation information to the public.

The Township Supervisor utilizes the mailing of taxes, twice per year, to distribute news letters to the township's residents. Utilizing this process would help to educate our residents and pass along important information regarding the Ionia County Hazard Midigation Plan.

The Township board could discuss the possiblity of sending out mailers in an effort to reach all its residents with cridical information.

Another option would be the possibility of utilizing the local school systems auditoriums for quetion and answer presentations. This would allow for larger numbers of residents to take part and get pertinent information.

## Hazard Identification and Ranking

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The following is the list of natural hazards identified by the Ionia County Hazard Mitigation Planning Committee as having the potential to affect Ionia County. These hazards have been ranked by their Risk Assessment Value, which is a number calculated by formulaic consideration of the hazards' probability of occurrence, severity of impacts, and expected future change of event frequency. Their order in the below list reflects this ranking, with the "most important" hazards for mitigation action at the top and the "least important" at the bottom.

Floods  
Severe Winds  
Ice/Sleet Storms  
Hail  
Tornadoes  
Winter Storms/Heavy Snow Events/Blizzards  
Drought  
Thunderstorms/Lightning  
Dam Failures  
Extreme Cold  
Extreme Heat  
Public Health Emergencies  
Fog  
Subsidence  
Invasive Species  
Wildfires  
Earthquakes  
Space Weather  
Impacting Objects (Celestial)

This list [ is | is not ] a comprehensive list of natural hazards with the potential to affect Boston Township.  
(jurisdiction)

The ranking of this list [ is | is not ] representative of the relative risk these hazards pose to Boston Township.  
(jurisdiction)

## Introduction:

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Name: \_\_\_\_\_

Title: \_\_\_\_\_

Jurisdiction representing: \_\_\_\_\_

Email address: \_\_\_\_\_

## Resolution of Adoption:

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This Hazard Mitigation Plan will be adopted as an official plan of Ionia County upon its completion. Participating jurisdictions **must** adopt the finished Plan as well. A template adoption resolution is attached to the end of this document for reference.

Boston Township [  will | will not ] adopt the Ionia County  
(jurisdiction) (circle one)

Hazard Mitigation Plan as an official municipal plan upon its completion.

Boston Township [  will | will not ] participate in efforts to  
(jurisdiction) (circle one)

implement and update the plan throughout its five-year lifespan.

Boston Township

(jurisdiction)

has selected the following mitigation action(s)

which it will implement, or fully attempt to implement, over the five-year lifespan of the finished Ionia County Hazard Mitigation Plan:

ENCOURAGE individuals and families to develop their own disaster preparedness plans using resources such as the American Red Cross and County Hazard Mitigation information.

Boston Township

(jurisdiction)

will leverage the following existing authorities,

policies, programs, and resources available for implementation of the above mitigation action(s):

Use of our Township website, approach the local school system to assist with handouts and directions.

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\_\_\_\_\_ may improve upon these listed capabilities for  
(Jurisdiction)

implementing the above mitigation action(s) in the following ways:

*CONTACT LOCAL community groups to GET INVOLVED  
AND TAKE PART in the EFFORT.*

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Boston Township  
(Jurisdiction)

will track and report the progress of the

implementation of the above mitigation action(s) in the following ways:

Work with schools to have students report back  
and describe their families progress.

Work with local community groups to devise  
contest for families and young students to  
verify their families progress.

Work with the local fire dept. to assist in the  
implementation of this program.

This list [  is |  is not ] a comprehensive and applicable list of critical facilities in

Boston Township  
(jurisdiction)

If you circled "is not" for the above, please use the rest of this page to elaborate on why.

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This list [  is | is not ] a comprehensive and applicable list of critical facilities in

Boston Township  
(jurisdiction)

If you circled "is not" for the above, please use the rest of this page to elaborate on why.

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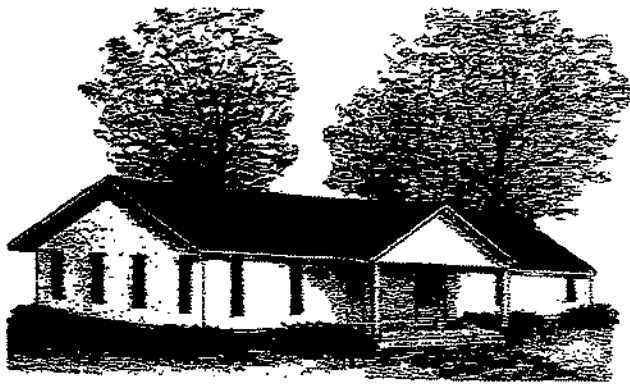
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Boston Township could assist with some administrative responsibilities.

We would have no technical knowledge or experience.



## BOSTON TOWNSHIP

Ionia County  
30 N. Center • P. O. Box 2  
SARANAC, MICHIGAN 48881  
(616) 642-6636

August 5, 2024

RE: Ionia County Hazardous Mitigation Plan:

### Boston Township Current Mitigation Strategies

#### **Available Administration Office. Also, an Area for a Heating or Cooling Facility, and/or for Displaced Residents:**

Boston Township has taken several steps regarding emergency response support. Our first focus was on the possible need for an administrative facility. We have also put things in place to provide a facility for displaced residents and/or a heating or cooling facility. The following necessities have been put in place:

- A standby generator
- Furnaces and air conditioning
- A full kitchen for food preparation
- Chairs and tables for up to 100 people
- Male and female restroom facilities
- A cable television connection
- WIFI
- An administrative office area equipped with computers, printers, and a phone system

In 2024 the Township Office will be remodeled to include:

- Video surveillance of all entry doors, and the parking lot.
- Three separate locking offices with computers, printers, phone system, and surveillance video monitoring screens
- Two walk up service windows from the foyer into the offices
- A work and planning area with large table and multiple chairs

#### **Disseminating Information:**

Once the office remodeling has been completed, the Township will be able to utilize its website to disseminate information to our residents on a routine basis. We are also preparing to start mailing out informational newsletters.

**Local Mitigation Actions:**

Morrison Lake, located in Boston and Campbell Townships, has recently experienced a rain storm which elevated the lake level very rapidly. The water rose to the point that water entered some crawl spaces under homes and cottages.

The Township worked with a group of lake residents, the Drain Commissioner, and the Lake Improvement Board to establish a procedure for determining when to request a boat speed limit on the lake. This would be done to eliminate boats creating waves that cause more damage.

**Future Feasibility Studies:**

Boston Township is a rural Township, consisting of approximately 36 square miles. We do not have the funding to establish an all-hazards siren system that could cover the entire Township. At the current time, we are researching the possibility of providing NOAA Weather Radios to low-income, high-risk residents.

We are also concerned about some heavier populated areas in the Township. One of these areas consists of approximately 270 homes and cottages on a lake. None of these residences have basements. During a weather event it is important that these residents receive emergency weather notices as early as feasibly possible.

This is one area where we will be researching the possibility of installing all-weather sirens that would be activated by the Ionia County Central Dispatch Center.

If grant funding should become available, we would be interested in the possibility of installing an all-weather siren system, to cover the entire Township.

Boston Township is willing to discuss joining with, or working with, other municipalities or agencies to assist in any action or research that is seen as being in the best interest of multiple municipalities or Ionia County as a whole.

I am also willing to assist in any way to help develop and/or implement Ionia County's Hazardous Mitigation Plan.

Dennis G. Bowen  
Township Supervisor



## Ionia County Hazard Mitigation Plan Development Municipality Participation and Involvement Document

Ionia County is currently in the process of developing a county-wide Hazard Mitigation Plan in coordination with Fleis & VandenBrink. Having an approved Plan allows for the County to take advantage of funding through multiple FEMA grants that are aimed at supporting projects considering hazard mitigation actions. Municipalities within the County are able to take advantage of this funding as well if they are involved in the development of the Plan; for a municipality to be considered as having been involved in the development of a Plan, they must meet a certain level of participation as required by FEMA.

Some of you have already participated in this Plan development process through a comprehensive survey distributed earlier in the Plan development cycle and through other lines of related communication. The feedback received has been a key consideration in Plan development and so we thank you for your previous participation. This document is intended to ensure that every municipality in Ionia County can readily meet the minimum threshold of participation in Plan development in a standardized way and thus take advantage of these grant funding sources for future local projects. **Your jurisdiction must complete this document to be counted as a participating member of the Plan. The completed document must be returned by June 23<sup>rd</sup>, 2023 to Tage Heyn via email (see below) or regular mail (Tage Heyn c/o Fleis & VandenBrink, 2960 Lucerne Dr SE, Grand Rapids MI 49546). Failure to do so will constitute non-participation in the Plan's development and will render your jurisdiction ineligible for Hazard Mitigation Assistance grants.**

If you have any questions or comments while completing this document, please reach out to Tage Heyn at [theyn@fveng.com](mailto:theyn@fveng.com) or Jason Pattok at [jpattok@ioniacounty.org](mailto:jpattok@ioniacounty.org). Thank you for your time and participation in this development process!

You may find the following resources useful:

<https://www.fema.gov/grants/mitigation> | Information about these grants and their scope.

<https://www.fema.gov/emergency-managers/risk-management/hazard-mitigation-planning> | Information about hazard mitigation planning in general.

<https://www.fema.gov/grants/mitigation/building-resilient-infrastructure-communities/after-apply/fy-2021-subapplication-status> | Applications for BRIC grant funding from 2021 (bottom of page), showing project type and funding amount requested, as well as the status of each application.

**Introduction:**

Name: Brian Thompson - Dennis Pepper starting July 1

Title: Supervisor

Jurisdiction representing: Campbell Twp

Email address: Supervisor@campbelltownship.org

**Resolution of Adoption:**

This Hazard Mitigation Plan will be adopted as an official plan of Ionia County upon its completion. Participating jurisdictions **must** adopt the finished Plan as well. A template adoption resolution is attached to the end of this document for reference.

Campbell Twp [  will | will not ] adopt the Ionia County  
(jurisdiction) (circle one)

Hazard Mitigation Plan as an official municipal plan upon its completion.

Campbell Twp [  will | will not ] participate in efforts to  
(jurisdiction) (circle one)

implement and update the plan throughout its five-year lifespan.

## Hazard Identification and Ranking

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The following is the list of natural hazards identified by the Ionia County Hazard Mitigation Planning Committee as having the potential to affect Ionia County. These hazards have been ranked by their Risk Assessment Value, which is a number calculated by formulaic consideration of the hazards' probability of occurrence, severity of impacts, and expected future change of event frequency. Their order in the below list reflects this ranking, with the "most important" hazards for mitigation action at the top and the "least important" at the bottom.

Floods  
Severe Winds  
Ice/Sleet Storms  
Hail  
Tornadoes  
Winter Storms/Heavy Snow Events/Blizzards  
Drought  
Thunderstorms/Lightning  
Dam Failures  
Extreme Cold  
Extreme Heat  
Public Health Emergencies  
Fog  
Subsidence  
Invasive Species  
Wildfires  
Earthquakes  
Space Weather  
Impacting Objects (Celestial)

This list [  is | is not ] a comprehensive list of natural hazards with the potential to affect Campbell Twp  
(jurisdiction)

The ranking of this list [  is | is not ] representative of the relative risk these hazards pose to Campbell Twp  
(jurisdiction)

If you circled "is not" for either of the two previous items, please use this page for elaboration. You may offer a re-ordered list or add items as desired.

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## Mitigation Capability

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The overarching purpose of hazard mitigation planning is to reduce or eliminate long-term risk to life and property from the occurrence of hazard events. To realize this purpose, Ionia County has set the following long-term goals:

Goal: Minimize injuries and deaths caused by or related to hazard events.

Goal: Minimize the loss or damage of public and private property from hazard events.

Goal: Promote community awareness, understanding, cooperation, and participation in hazard mitigation actions.

Goal: Promote local growth and development through a lens of hazard mitigation.

Each jurisdiction within Ionia County has different capabilities for engaging in mitigation activities and working towards accomplishing these goals. FEMA has identified the following four primary types of capabilities in their planning handbook:

- Planning and Regulatory – implementation and enforcement of plans, policies, codes, ordinances, local and State law, etc.
- Administrative and Technical – departments, personnel, equipment, coordination with other public and private entities, etc.
- Financial – availability of funding or ability to secure funding through taxes, grants, etc.
- Education and Outreach – ability to engage and communicate hazard mitigation information to the public.

FEMA **requires** local communities who are participating in the development of a hazard mitigation plan to evaluate their capabilities for accomplishing hazard mitigation goals. For **each** capability listed above, you **must** describe existing authorities, policies, programs, and resources available for implementation of hazard mitigation actions and projects that lean on that capability, **as well as** how your jurisdiction may improve upon these capabilities. These do not need to be long descriptions, but they **must** include all elements as stated above. You **must** summarize your jurisdiction's capability as being **low, medium, or high** – you can circle the corresponding word at the top of the following four pages, where space has also been provided for your written answers. You may wish to refer to the list of mitigation actions under consideration by the County included later in this document for additional context.

participate with FEMA Floodplain studies

so home owners in our town have the

ability to purchase flood insurance

thru FEMA if they choose to do so

Summary of **Administrative and Technical** capabilities: [ Low | Medium | High ]

Campbell Twp maintains a volunteer  
Fire Dept. with 19 members -  
with 14 of them being certified first  
responders and 4 of them being EMT's

Summary of **Financial** capabilities: [ Low | Medium | High ]

Campbell Twp has a limited budget  
to be able to respond to unexpected  
disaster expenses

Summary of Education and Outreach capabilities: [ Low | Medium | High ]

Campbell Twp has a web-site that we can use for communication to the public.

Our Fire Dept has a web site and Facebook account also.

The Volunteer Fire Dept participate in the state of Mich (EPS) ~~educational~~ education process, for their continuing education.

thru the FFTD

## Mitigation Actions

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Ionia County has identified a list of hazard mitigation actions to work towards implementing on the county level over the five-year lifespan of the finished Plan; this unsorted list is included below for your reference. Now that you have characterized your jurisdiction's hazard mitigation capabilities, you **must** also identify and select **at least one** mitigation action that your jurisdiction will implement, or fully attempt to implement, over the five-year lifespan of the finished Plan. You may choose from the list in this document, but you are **strongly recommended** to provide mitigation actions that are not listed below and address a **specific** local vulnerability. You **must** describe how your jurisdiction will track and report the progress of action implementation such that an update can be provided in the next iteration of the Plan. You **must** describe existing authorities, policies, programs, **and** resources available for implementation of the chosen mitigation actions, **as well as** how your jurisdiction may improve upon these capabilities. Space has been provided for your answers after the action list.

You may also wish to consider choosing mitigation actions focused on increasing capacity for hazard mitigation actions across the board, such as integrating hazard mitigation practices into community Master Plans. In general, you are encouraged to emphasize actions that reduce the effects of hazards on new and existing buildings and infrastructure.

1. Evaluate the need for expanding coverage of warning sirens and other warning systems, and assist local governments in doing the same, along with updating existing sirens to 800mhz.
2. Encourage non-participating local governments to meet requirements and become members of Tree City USA.
3. Expand the library and increase availability of hazard mitigation GIS maps, databases, locations of critical infrastructure such as fire hydrants and curb stops, etc.
4. Assist local governments in integrating hazard mitigation principles into local Master Plans.
5. Identify potential projects to strengthen the County's infrastructure and increase its hazard resistance and encourage local governments to do the same.
6. Evaluate the necessity and viability of implementing County-wide zoning ordinances.
7. Apply for hazard mitigation grant funding for a mitigation project.
8. Evaluate and increase usage of snow fences to limit drifting along critical roadways.
9. Assist local governments in evaluating the need for construction of new local facilities or departments, or the expansion of existing facilities and departments, such as WTPs, WWTPs, and DPWs, to meet community growth.
10. Evaluate the need for a revision of FEMA flood maps and local government participation in the National Flood Insurance Program.
11. Provide NOAA weather radios to local public buildings, schools, hospitals, campgrounds, etc. for free or at a subsidized price by use of grant funding.
12. Encourage the burial of utility lines in new developments and in reconstruction of current development.
13. Become a participating member of the Michigan Emergency Management Assistance Compact (MEMAC).
14. Evaluate the viability of implementing a house numbering ordinance to improve emergency response and standardize number assignment throughout the county.

15. Ensure critical public buildings are outfitted with auxiliary sources of power, such as generators or battery systems, as necessary and assist local governments in doing the same.
16. Evaluate and ensure that enforcement of building/electrical/mechanical/plumbing codes is sufficient to ensure development adequately addresses hazard mitigation principles.
17. Evaluate the necessity and viability of developing and implementing an Ionia County Community Wildfire Protection Plan.
18. Evaluate potential state and federal sources of funding that can be used for specific hazard mitigation projects and assist local governments in doing the same.
19. Conduct a full evaluation of County hazard mitigation actions to ensure they are sufficiently meeting resident needs and assist local governments in doing the same.
20. Meet requirements and become a participating member of the National Weather Service's StormReady program.
21. Increase availability of planning documents such as the Emergency Operations Plan that provide a framework and guidance to County and local government officials for emergency/disaster response and recovery.
22. Create and implement a feedback mechanism for County residents to provide input on hazard mitigation actions, as well as to report hazards and hazardous conditions to officials.
23. Incorporate hazard mitigation principles into the County's next Capital Improvement Plan update.
24. Form an environmental review board to review land use permits, site plans, or any other applications that may pose significant impacts on the environment.
25. Work with critical facilities to develop emergency plans that take into account the unique factors of each facility (ex. evacuation needs for nursing homes or hospitals).
26. Explore the necessity and viability of establishing a Transfer of Development Rights program to limit development in high-risk areas such as floodplains.

27. Ensure the capacity for mobilization and operation of emergency shelters during an emergency or disaster event and assist local governments in doing the same.
28. Adopt an ordinance requiring the anchoring of manufactured home installations located outside of a designated floodplain and/or encourage manufactured home owners to voluntarily anchor their units.
29. Encourage local governments to adopt, implement, and maintain floodplain management practices that go beyond NFIP requirements.
30. Encourage local governments to meet requirements and become participating communities under the Community Rating System.
31. Establish public parks in identified local floodplains and assist local governments in doing the same.
32. Continue to evaluate the sufficiency of existing drainage management (culverts, drains, etc.) and identify insufficiencies.
33. Assist the Drain Commissioner's office in formalizing a maintenance plan for County drains.
34. Require notifications to/approvals from the Drain Commissioner's office for drainage tie-ins to County drains.
35. Evaluate the necessity and viability of expanding Ionia County's Communicable Disease reporting program to allow for a wider range of citizens to make related reports.
36. Disseminate disaster planning and response information to community groups and critical facilities.
37. Make available federal, state, and county emergency management, disaster preparedness, and other pertinent information on County website, ensure accessibility of information to speakers of Spanish, and assist local governments in doing the same.
38. Encourage individuals and families to develop their own disaster preparedness plans using resources such as the American Red Cross and County hazard mitigation information.

39. Assist local governments in enforcing requirements for burn permits, especially during sensitive times such as dry periods or high wind conditions.
40. Expand public education and awareness regarding activities (open burning, etc.) with the capacity to result in an uncontrolled wildfire.
41. Maintain adequate road and debris clearing capabilities and assist local governments in doing the same.
42. Apply structural hazard mitigation and sustainability concepts during construction or remodeling of government facilities and encourage local governments to do the same.
43. Promote low-impact development techniques in development that reduce stormwater runoff and resultant flooding.
44. Ensure that emergency plans continue to be maintained for Webber Dam.
45. Evaluate municipal wells for capacity to continue to meet projected growth and resultant demand and assist local governments in doing the same.
46. Evaluate the need to increase emergency/disaster response capabilities with alternative transportation vehicles (snowmobiles, ATVs, etc.)
47. Explore the necessity and viability of expanding the Ionia County Building Department's capabilities such that the County can perform duties such as permit application review and building code enforcement with in-house resources.
48. Incorporate hazard mitigation principles and priorities into the County land use plan upon its next review.
49. Continue to ensure that all current hazard mitigation actions are maintained or improved upon.

Campbell Twp

(jurisdiction)

has selected the following mitigation action(s)

which it will implement, or fully attempt to implement, over the five-year lifespan of the finished Ionia County Hazard Mitigation Plan:

#39

#41

Campbell Twp

(jurisdiction)

will leverage the following existing authorities,

policies, programs, and resources available for implementation of the above mitigation action(s):

Make our burn permit <sup>available</sup> on line  
mow road sides



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Campbell will track and report the progress of the  
(jurisdiction)

Implementation of the above mitigation action(s) in the following ways:

regular reporting to the Twp board of the

number of boom permits issued

commit funding in annual budget for roadside

mowing

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## **Critical Facilities**

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The following is a list of critical facilities within Ionia County sorted by category. FEMA defines critical facilities as “structures and institutions necessary for a community’s response to and recovery from emergencies” who “must continue to operate during and following a disaster to reduce the severity of impacts and accelerate recovery”. Please ensure all relevant critical facilities in your jurisdiction are accounted for in the appropriate category below and note any omissions, corrections, or additions in the space provided after the list.

### **LAW ENFORCEMENT**

Ionia County Sheriff Department  
City of Ionia Department of Public Safety  
City of Belding Police Department  
Michigan State Police  
Lake Odessa Police Department  
City of Portland Police Department  
Ionia Correctional Facility  
Bellamy Creek Correctional Facility  
Michigan Reformatory  
Richard A. Handlin Correctional Facility  
Ionia County Jail

### **FIRE SERVICES**

Hubbardston Fire Department  
City of Belding Fire Department  
Lake Odessa Fire Department  
City of Ionia Department of Public Safety, Fire Division  
Pewamo Fire Department  
Lyons-Muir Fire Department  
Saranac Fire Department  
Portland Fire Department  
Campbell Township (Clarksville) Fire Department  
Orleans Township Fire Department  
Ronald Township Fire Department  
Berlin-Orange Township Fire Department  
Grattan Township Fire Department  
Roxand Township Fire Department (Eaton County)  
Freeport Fire/Rescue (Barry County)

## HEALTHCARE

Lakewood Community Ambulance Service (located in Barry County)

*No longer in operation*

Belding Ambulance Service- Belding Fire Department

Portland Ambulance Service- Portland Fire Department, Emergency Services Building

Life EMS

Sparrow Ionia Hospital

Sparrow Group Ionia

Sparrow Group Portland

Ionia Senior Center

Ionia County Health Department

DaVita Ionia Dialysis

Spectrum Health Family Practice

*air-care  
aer-med*

*helicopter  
services*

*Nashville ambulance  
Lowell - Rockford  
Mercy (Chestings)*

*Have all helped service our  
area (we are the most S/W  
Twp)*

*Admin. office in Barry Co  
along with Jr & Sr high school*

## PUBLIC SCHOOLS

Oakwood Elementary School

Portland Middle School

Westwood Elementary School

Lakewood Elementary School

Saranac Elementary School

Ionia County Career Center

Coon School

A.A. Rather School

Ionia High School

Emerson School

Ionia Middle School

Jefferson School

Twin Rivers Elementary School

Haynor School

North LeValley Elementary School

R.B. Boyce Elementary School

Belding Middle School

Ellis Elementary School

Belding High School

Woodview Elementary School

Saranac Jr/Sr High School

### PRIVATE SCHOOLS

Faith Community Christian School

Ionia Seventh Day Adventist School

Ss. Peter & Paul Elementary School

St. Joseph Elementary School

Ionia Nazarene Christian School

Lakewood Christian School

St. Joseph Elementary School (Belding)

St. Joseph Elementary School (Pewamo)

St. Patrick School

⇒ also Barry county

closed

### CITY HALLS

Belding City Hall

Ionia City Hall

City of Portland Hall

### VILLAGE HALLS

Village of Muir Hall

Village of Lyons Hall

Village of Hubbardston Hall

Village of Lake Odessa Hall

Village of Clarksville Hall

Village of Saranac Hall

Village of Pewamo Hall

### TOWNSHIP HALLS

Campbell Township Hall

Boston Township Hall

Berlin Township Hall

Keene Township Hall

Ionia Township Hall

Danby Township Hall

Odessa Township Hall

North Plains Township Hall

Lyons Township Hall

Ronald Township Hall

Sebewa Township Hall

Otisco Township Hall

Orleans Township Hall  
Orange Township Hall  
Easton Township Hall  
Portland Township Hall

#### **LIVING**

Lighthouse Senior Living  
Lighthouse Rehab  
Saranac Housing Commission  
Mission Point of Belding  
SKLD of Ionia  
Hope Network  
Green Acres Ionia  
Portland Assisted Living and Memory Center  
Hope Network  
Good Vibes Adult Foster Care  
Clarksville Manor

*Bear Creek Villa*

#### **PUBLIC WORKS**

Ionia County Road Department  
Ionia Department of Public Works  
Belding Department of Public Works  
Portland Department of Public Works

#### **WWTP**

Belding WWTP  
Ionia WWTP  
Portland WWTP  
Lakewood Wastewater Authority WWTP  
Clarksville-Morrison Lake WWTP  
SARANAC WWTP

#### **UTILITIES**

Water Towers: 14  
Wind Turbines: 32  
Substations: 7

**TRAIN/BUS STATIONS/CARPOOL LOTS**

Lake Odessa Park and Ride  
Portland – West Park and Ride  
Portland #2 (NE) Park and Ride  
Ionia/Belding Park and Ride  
Ionia Dial-A-Ride  
Belding Dial-A-Ride

**POST OFFICES**

Belding Post Office  
Clarksville Post Office  
Hubbardston Post Office  
Ionia Post Office  
Lake Odessa Post Office  
Lyons Post Office  
Muir Post Office  
Orleans Post Office  
Pewamo Post Office  
Portland Post Office  
Saranac Post Office

**PUBLIC LIBRARIES**

Alvah N. Belding Memorial Library  
Hall-Fowler Memorial Library  
Ionia Community Library  
Portland District Library  
Lyons Township District Library  
Lake Odessa Community Library  
Clarksville Area Library  
Saranac Public Library

**FOOD/AGRICULTURE**

Herbruck's Poultry Ranch  
**\*\* ANY OTHER BIG ONES/COMMUNITY ANCHORS?**

**OTHER CRITICAL FACILITIES**

**\*\* ANYTHING NOTABLE?**

This list [~~is~~ | is not] a comprehensive and applicable list of critical facilities in  
\_\_\_\_\_  
(jurisdiction)

If you circled "is not" for the above, please use the rest of this page to elaborate on why.

*Made corrections on previous pages*

You have completed the required portion of this document. Thank you once again for your time and participation. Access to hazard mitigation funding can be the difference between a viable infrastructure project and a missed opportunity. These last two pages are here for any additional comments or information you'd like to share to ensure your jurisdiction is sufficiently represented in the County Plan.

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**From:** supervisor@campbelltownship.org  
**Sent:** Monday, August 12, 2024 10:40 AM  
**To:** Sgt. Fred Strauble  
**Cc:** pauli@campbelltownshipfire.org  
**Subject:** Campbell Twp - Ionia County Hazard Mitigation Plan

Sgt Strauble,

Campbell Twp - Ionia County Hazard Mitigation Plan

Question #1

What would Campbell Twp do to mitigate a future hazard?

Campbell Twp could practice and refine their responses to the various emergency events most likely to happen in our area of the county, and how they could assist other agencies in the event they were called to do so.

Question #2

How can Campbell Twp improve on the existing resources?

Campbell Twp can practice setting up and establishing a Point of Command Location, methods and back up means of communication, temporary locations of shelter, water, food. Means of Public and Community information sharing and resources available to the affected people of the event.

Dennis Pepper,  
Campbell Township Supervisor  
C# (269) 953-5556



## Ionia County Hazard Mitigation Plan Development Municipality Participation and Involvement Document

Ionia County is currently in the process of developing a county-wide Hazard Mitigation Plan in coordination with Fleis & VandenBrink. Having an approved Plan allows for the County to take advantage of funding through multiple FEMA grants that are aimed at supporting projects considering hazard mitigation actions. Municipalities within the County are able to take advantage of this funding as well if they are involved in the development of the Plan; for a municipality to be considered as having been involved in the development of a Plan, they must meet a certain level of participation as required by FEMA.

Some of you have already participated in this Plan development process through a comprehensive survey distributed earlier in the Plan development cycle and through other lines of related communication. The feedback received has been a key consideration in Plan development and so we thank you for your previous participation. This document is intended to ensure that every municipality in Ionia County can readily meet the minimum threshold of participation in Plan development in a standardized way and thus take advantage of these grant funding sources for future local projects. **Your jurisdiction must complete this document to be counted as a participating member of the Plan. The completed document must be returned by June 23<sup>rd</sup>, 2023 to Tage Heyn via email (see below) or regular mail (Tage Heyn c/o Fleis & VandenBrink, 2960 Lucerne Dr SE, Grand Rapids MI 49546). Failure to do so will constitute non-participation in the Plan's development and will render your jurisdiction ineligible for Hazard Mitigation Assistance grants.**

If you have any questions or comments while completing this document, please reach out to Tage Heyn at [theyn@fveng.com](mailto:theyn@fveng.com) or Jason Pattok at [jpattok@ioniacounty.org](mailto:jpattok@ioniacounty.org). Thank you for your time and participation in this development process!

You may find the following resources useful:

<https://www.fema.gov/grants/mitigation> | Information about these grants and their scope.

<https://www.fema.gov/emergency-managers/risk-management/hazard-mitigation-planning> | Information about hazard mitigation planning in general.

<https://www.fema.gov/grants/mitigation/building-resilient-infrastructure-communities/after-apply/fy-2021-subapplication-status> | Applications for BRIC grant funding from 2021 (bottom of page), showing project type and funding amount requested, as well as the status of each application.

**Introduction:**



Name: William M. Patton

Title: Supervisor

Easton Township

Jurisdiction representing: \_\_\_\_\_

eastontownhall@gmail.com

Email address: \_\_\_\_\_

**Resolution of Adoption:**



This Hazard Mitigation Plan will be adopted as an official plan of Ionia County upon its completion. Participating jurisdictions **must** adopt the finished Plan as well. A template adoption resolution is attached to the end of this document for reference.

Easton Township (jurisdiction) [ will (circle one) | will not ] adopt the Ionia County

Hazard Mitigation Plan as an official municipal plan upon its completion.

Easton Township (jurisdiction) [ will (circle one) | will not ] participate in efforts to

implement and update the plan throughout its five-year lifespan.

## Hazard Identification and Ranking

The following is the list of natural hazards identified by the Ionia County Hazard Mitigation Planning Committee as having the potential to affect Ionia County. These hazards have been ranked by their Risk Assessment Value, which is a number calculated by formulaic consideration of the hazards' probability of occurrence, severity of impacts, and expected future change of event frequency. Their order in the below list reflects this ranking, with the "most important" hazards for mitigation action at the top and the "least important" at the bottom.

- Floods
- Severe Winds
- Ice/Sleet Storms
- Hail
- Tornadoes
- Winter Storms/Heavy Snow Events/Blizzards
- Drought
- Thunderstorms/Lightning
- Dam Failures
- Extreme Cold
- Extreme Heat
- Public Health Emergencies
- Fog
- Subsidence
- Invasive Species
- Wildfires
- Earthquakes
- Space Weather
- Impacting Objects (Celestial)

This list [  is | is not ] a comprehensive list of natural hazards with the potential to affect EASTON TOWNSHIP.  
(jurisdiction)

The ranking of this list [  is | is not ] representative of the relative risk these hazards pose to EASTON TOWNSHIP.  
(jurisdiction)

## Mitigation Capability

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The overarching purpose of hazard mitigation planning is to reduce or eliminate long-term risk to life and property from the occurrence of hazard events. To realize this purpose, Ionia County has set the following long-term goals:

Goal: Minimize injuries and deaths caused by or related to hazard events.

Goal: Minimize the loss or damage of public and private property from hazard events.

Goal: Promote community awareness, understanding, cooperation, and participation in hazard mitigation actions.

Goal: Promote local growth and development through a lens of hazard mitigation.

Each jurisdiction within Ionia County has different capabilities for engaging in mitigation activities and working towards accomplishing these goals. FEMA has identified the following four primary types of capabilities in their planning handbook:

- Planning and Regulatory – implementation and enforcement of plans, policies, codes, ordinances, local and State law, etc.
- Administrative and Technical – departments, personnel, equipment, coordination with other public and private entities, etc.
- Financial – availability of funding or ability to secure funding through taxes, grants, etc.
- Education and Outreach – ability to engage and communicate hazard mitigation information to the public.

FEMA **requires** local communities who are participating in the development of a hazard mitigation plan to evaluate their capabilities for accomplishing hazard mitigation goals. For **each** capability listed above, you **must** describe existing authorities, policies, programs, **and** resources available for implementation of hazard mitigation actions and projects that lean on that capability, **as well as** how your jurisdiction may improve upon these capabilities. These do not need to be long descriptions, but they **must** include all elements as stated above. You **must** summarize your jurisdiction's capability as being **low, medium, or high** – you can circle the corresponding word at the top of the following four pages, where space has also been provided for your written answers. You may wish to refer to the list of mitigation actions under consideration by the County included later in this document for additional context.

Summary of Planning and Regulatory capabilities: [ Low | Medium | High ]

Easton Township's building ordinances as well as the State of Michigan building codes are enforced by the Ionia County Building Department. Township Ordinances are enforced by the Township Board members or by the Ionia County ~~Sheriff~~ Sheriff Deputy that we have working for us for 20 hours per week. Before the Township creates a new Ordinance, we work with our Attorneys at Foster Swift to draft a document that is up to date with current case law. We also consult with local experts, such as the fire department to make sure that their concerns are addressed.

EASTON Township it self has little Administrative and technical capabilities. EASTON Township has Agreements with the City of IONIA for fire coverage and also with the Village of SARANAC. For police coverage we have an agreement with the IONIA County Sheriff's Department. For 911 service, we are covered by IONIA County Central Dispatch. For roads we are covered by the IONIA County Road Department. Electricity is provided by Consumers Energy. EASTON Township is covered by the IONIA County Public Health Department. There is no dams within the Township. We have participated in FEMA's flood plain identification program. EASTON Township helps to finance IONIA Dial A Ride which provides transportation throughout the area. The Township is also a participant in the IONIA Regional Utilities Authority which provides water ~~for a large~~ and sewage disposal for a large part of our population in the eastern side of the township. When the Drain Commissioner identifies a township drain that needs work we help paying for it to be cleaned out. The Township has an ordinance requiring anchoring systems on mobile homes.

EASTON Township MAINTAINS A fund balance adequate to ~~mitigate~~ mitigate current and future risks and to ensure stable tax rates.

IN the past EASTON Township has applied for and received a grant to instal ~~cameras~~ surveillance camera's inside and outside of the Town Hall.

The Township receives revenue sharing from the State for having the prisons within the Township. This allows the Township to have among the lowest tax rates among the Townships within the State. Only 12% of EASTON Townships revenues come from property taxes.

According to a May 20th 2019 mlive article, EASTON ~~is~~ has the 28th. lowest property tax rate out of the 1240 townships in Michigan.

Easton Township does have a website at [Eastontownship.org](http://Eastontownship.org). We're able to pass along information on the website. We have monthly public meeting during which we pass along timely information. We also have bulletin boards inside and outside on which we post information. The public also calls the Board members to get information and referral information. Also Board members are constantly speaking to our community members face to face and explaining things and gathering information. Easton Township also helps to financially support the Ionia Community Library. The Township meets quarterly with the Community Liaison Committee which includes representatives from the three prisons within the township, the sheriff, the fire department, the county emergency manager and others. The prisons will blow their sirens and call neighbors and the 911 center if a prisoner escapes. Monthly the Township meets with the Ionia Legislative Coffee. This group includes Federal, State and local politicians or staff plus local community groups and agencies.

## Mitigation Actions

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Ionia County has identified a list of hazard mitigation actions to work towards implementing on the county level over the five-year lifespan of the finished Plan; this unsorted list is included below for your reference. Now that you have characterized your jurisdiction's hazard mitigation capabilities, you **must** also identify and select **at least one** mitigation action that your jurisdiction will implement, or fully attempt to implement, over the five-year lifespan of the finished Plan. You may choose from the list in this document, but you are **strongly recommended** to provide mitigation actions that are not listed below and address a **specific** local vulnerability. You **must** describe how your jurisdiction will track and report the progress of action implementation such that an update can be provided in the next iteration of the Plan. You **must** describe existing authorities, policies, programs, **and** resources available for implementation of the chosen mitigation actions, **as well as** how your jurisdiction may improve upon these capabilities. Space has been provided for your answers after the action list.

You may also wish to consider choosing mitigation actions focused on increasing capacity for hazard mitigation actions across the board, such as integrating hazard mitigation practices into community Master Plans. In general, you are encouraged to emphasize actions that reduce the effects of hazards on new and existing buildings and infrastructure.

1. Evaluate the need for expanding coverage of warning sirens and other warning systems, and assist local governments in doing the same, along with updating existing sirens to 800mhz.
2. Encourage non-participating local governments to meet requirements and become members of Tree City USA.
3. Expand the library and increase availability of hazard mitigation GIS maps, databases, locations of critical infrastructure such as fire hydrants and curb stops, etc.
4. Assist local governments in integrating hazard mitigation principles into local Master Plans.
5. Identify potential projects to strengthen the County's infrastructure and increase its hazard resistance and encourage local governments to do the same.
6. Evaluate the necessity and viability of implementing County-wide zoning ordinances.
7. Apply for hazard mitigation grant funding for a mitigation project.
8. Evaluate and increase usage of snow fences to limit drifting along critical roadways.
9. Assist local governments in evaluating the need for construction of new local facilities or departments, or the expansion of existing facilities and departments, such as WTPs, WWTPs, and DPWs, to meet community growth.
10. Evaluate the need for a revision of FEMA flood maps and local government participation in the National Flood Insurance Program.
11. Provide NOAA weather radios to local public buildings, schools, hospitals, campgrounds, etc. for free or at a subsidized price by use of grant funding.
12. Encourage the burial of utility lines in new developments and in reconstruction of current development.
13. Become a participating member of the Michigan Emergency Management Assistance Compact (MEMAC).
14. Evaluate the viability of implementing a house numbering ordinance to improve emergency response and standardize number assignment throughout the county.

15. Ensure critical public buildings are outfitted with auxiliary sources of power, such as generators or battery systems, as necessary and assist local governments in doing the same.
16. Evaluate and ensure that enforcement of building/electrical/mechanical/plumbing codes is sufficient to ensure development adequately addresses hazard mitigation principles.
17. Evaluate the necessity and viability of developing and implementing an Ionia County Community Wildfire Protection Plan.
18. Evaluate potential state and federal sources of funding that can be used for specific hazard mitigation projects and assist local governments in doing the same.
19. Conduct a full evaluation of County hazard mitigation actions to ensure they are sufficiently meeting resident needs and assist local governments in doing the same.
20. Meet requirements and become a participating member of the National Weather Service's StormReady program.
21. Increase availability of planning documents such as the Emergency Operations Plan that provide a framework and guidance to County and local government officials for emergency/disaster response and recovery.
22. Create and implement a feedback mechanism for County residents to provide input on hazard mitigation actions, as well as to report hazards and hazardous conditions to officials.
23. Incorporate hazard mitigation principles into the County's next Capital Improvement Plan update.
24. Form an environmental review board to review land use permits, site plans, or any other applications that may pose significant impacts on the environment.
25. Work with critical facilities to develop emergency plans that take into account the unique factors of each facility (ex. evacuation needs for nursing homes or hospitals).
26. Explore the necessity and viability of establishing a Transfer of Development Rights program to limit development in high-risk areas such as floodplains.

27. Ensure the capacity for mobilization and operation of emergency shelters during an emergency or disaster event and assist local governments in doing the same.
28. Adopt an ordinance requiring the anchoring of manufactured home installations located outside of a designated floodplain and/or encourage manufactured home owners to voluntarily anchor their units.
29. Encourage local governments to adopt, implement, and maintain floodplain management practices that go beyond NFIP requirements.
30. Encourage local governments to meet requirements and become participating communities under the Community Rating System.
31. Establish public parks in identified local floodplains and assist local governments in doing the same.
32. Continue to evaluate the sufficiency of existing drainage management (culverts, drains, etc.) and identify insufficiencies.
33. Assist the Drain Commissioner's office in formalizing a maintenance plan for County drains.
34. Require notifications to/approvals from the Drain Commissioner's office for drainage tie-ins to County drains.
35. Evaluate the necessity and viability of expanding Ionia County's Communicable Disease reporting program to allow for a wider range of citizens to make related reports.
36. Disseminate disaster planning and response information to community groups and critical facilities.
37. Make available federal, state, and county emergency management, disaster preparedness, and other pertinent information on County website, ensure accessibility of information to speakers of Spanish, and assist local governments in doing the same.
38. Encourage individuals and families to develop their own disaster preparedness plans using resources such as the American Red Cross and County hazard mitigation information.

39. Assist local governments in enforcing requirements for burn permits, especially during sensitive times such as dry periods or high wind conditions.
40. Expand public education and awareness regarding activities (open burning, etc.) with the capacity to result in an uncontrolled wildfire.
41. Maintain adequate road and debris clearing capabilities and assist local governments in doing the same.
42. Apply structural hazard mitigation and sustainability concepts during construction or remodeling of government facilities and encourage local governments to do the same.
43. Promote low-impact development techniques in development that reduce stormwater runoff and resultant flooding.
44. Ensure that emergency plans continue to be maintained for Webber Dam.
45. Evaluate municipal wells for capacity to continue to meet projected growth and resultant demand and assist local governments in doing the same.
46. Evaluate the need to increase emergency/disaster response capabilities with alternative transportation vehicles (snowmobiles, ATVs, etc.)
47. Explore the necessity and viability of expanding the Ionia County Building Department's capabilities such that the County can perform duties such as permit application review and building code enforcement with in-house resources.
48. Incorporate hazard mitigation principles and priorities into the County land use plan upon its next review.
49. Continue to ensure that all current hazard mitigation actions are maintained or improved upon.

EASTON TOWNSHIP  
(jurisdiction)

has selected the following mitigation action(s)

which it will implement, or fully attempt to implement, over the five-year lifespan of the finished Ionia County Hazard Mitigation Plan:

CONTINUE to ensure that all current hazard mitigation  
ACTIONS ARE MAINTAINED or improved upon.

EASTON TOWNSHIP  
(jurisdiction)

will leverage the following existing authorities,

policies, programs, and resources available for implementation of the above mitigation action(s):

EASTON TOWNSHIP will continue to work with the IONIA  
County Sheriff's Department, City of Ionia Public Safety, the  
State Prisons, the SARONAE Fire Dept., IONIA County Health Dept.,  
the IONIA Co. Road Dept, IONIA WWTP, and IONIA DIAL-A-RIDE  
to look for and negate hazards and how to respond  
to their aftermath.

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\_\_\_\_\_ may improve upon these listed capabilities for  
(jurisdiction)  
implementing the above mitigation action(s) in the following ways:

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\_\_\_\_\_ will track and report the progress of the  
(jurisdiction)  
implementation of the above mitigation action(s) in the following ways:

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## **Critical Facilities**

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The following is a list of critical facilities within Ionia County sorted by category. FEMA defines critical facilities as “structures and institutions necessary for a community’s response to and recovery from emergencies” who “must continue to operate during and following a disaster to reduce the severity of impacts and accelerate recovery”. Please ensure all relevant critical facilities in your jurisdiction are accounted for in the appropriate category below and note any omissions, corrections, or additions in the space provided after the list.

### **LAW ENFORCEMENT**

Ionia County Sheriff Department  
City of Ionia Department of Public Safety  
City of Belding Police Department  
Michigan State Police  
Lake Odessa Police Department  
City of Portland Police Department  
Ionia Correctional Facility  
Bellamy Creek Correctional Facility  
Michigan Reformatory  
Richard A. Handlin Correctional Facility  
Ionia County Jail

### **FIRE SERVICES**

Hubbardston Fire Department  
City of Belding Fire Department  
Lake Odessa Fire Department  
City of Ionia Department of Public Safety, Fire Division  
Pewamo Fire Department  
Lyons-Muir Fire Department  
Saranac Fire Department  
Portland Fire Department  
Campbell Township (Clarksville) Fire Department  
Orleans Township Fire Department  
Ronald Township Fire Department  
Berlin-Orange Township Fire Department  
Grattan Township Fire Department  
Roxand Township Fire Department (Eaton County)  
Freeport Fire/Rescue (Barry County)

## **HEALTHCARE**

Lakewood Community Ambulance Service (located in Barry County)  
Belding Ambulance Service- Belding Fire Department  
Portland Ambulance Service- Portland Fire Department, Emergency Services Building  
Life EMS  
Sparrow Ionia Hospital  
Sparrow Group Ionia  
Sparrow Group Portland  
Ionia Senior Center  
Ionia County Health Department  
DaVita Ionia Dialysis  
Spectrum Health Family Practice

## **PUBLIC SCHOOLS**

Oakwood Elementary School  
Portland Middle School  
Westwood Elementary School  
Lakewood Elementary School  
Saranac Elementary School  
Ionia County Career Center  
Coon School  
A.A. Rather School  
Ionia High School  
Emerson School  
Ionia Middle School  
Jefferson School  
Twin Rivers Elementary School  
Haynor School  
North LeValley Elementary School  
R.B. Boyce Elementary School  
Belding Middle School  
Ellis Elementary School  
Belding High School  
Woodview Elementary School  
Saranac Jr/Sr High School

**PRIVATE SCHOOLS**

Faith Community Christian School  
Ionia Seventh Day Adventist School  
Ss. Peter & Paul Elementary School  
St. Joseph Elementary School  
Ionia Nazarene Christian School  
Lakewood Christian School  
St. Joseph Elementary School (Belding)  
St. Joseph Elementary School (Pewamo)  
St. Patrick School

**CITY HALLS**

Belding City Hall  
Ionia City Hall  
City of Portland Hall

**VILLAGE HALLS**

Village of Muir Hall  
Village of Lyons Hall  
Village of Hubbardston Hall  
Village of Lake Odessa Hall  
Village of Clarksville Hall  
Village of Saranac Hall  
Village of Pewamo Hall

**TOWNSHIP HALLS**

Campbell Township Hall  
Boston Township Hall  
Berlin Township Hall  
Keene Township Hall  
Ionia Township Hall  
Danby Township Hall  
Odessa Township Hall  
North Plains Township Hall  
Lyons Township Hall  
Ronald Township Hall  
Sebewa Township Hall  
Otisco Township Hall

Orleans Township Hall  
Orange Township Hall  
Easton Township Hall  
Portland Township Hall

**LIVING**

Lighthouse Senior Living  
Lighthouse Rehab  
Saranac Housing Commission  
Mission Point of Belding  
SKLD of Ionia  
Hope Network  
Green Acres Ionia  
Portland Assisted Living and Memory Center  
Hope Network  
Good Vibes Adult Foster Care  
Clarksville Manor

**PUBLIC WORKS**

Ionia County Road Department  
Ionia Department of Public Works  
Belding Department of Public Works  
Portland Department of Public Works

**WWTP**

Belding WWTP  
Ionia WWTP  
Portland WWTP  
Lakewood Wastewater Authority WWTP  
Clarkesville-Morrison Lake WWTP  
Saranac WWSL

**UTILITIES**

Water Towers: 14  
Wind Turbines: 32  
Substations: 7

**TRAIN/BUS STATIONS/CARPOOL LOTS**

Lake Odessa Park and Ride  
Portland – West Park and Ride  
Portland #2 (NE) Park and Ride  
Ionia/Belding Park and Ride  
Ionia Dial-A-Ride  
Belding Dial-A-Ride

**POST OFFICES**

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Clarksville Post Office  
Hubbardston Post Office  
Ionia Post Office  
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Lyons Post Office  
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Saranac Public Library

**FOOD/AGRICULTURE**

Herbruck's Poultry Ranch  
\*\* ANY OTHER BIG ONES/COMMUNITY ANCHORS?

**OTHER CRITICAL FACILITIES**

\*\* ANYTHING NOTABLE?

This list [ (is) | is not ] a comprehensive and applicable list of critical facilities in  
EASTAN TOWNSHIP  
(jurisdiction)

If you circled "is not" for the above, please use the rest of this page to elaborate on why.

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## Ionia County Hazard Mitigation Plan Development Municipality Participation and Involvement Document

Ionia County is currently in the process of developing a county-wide Hazard Mitigation Plan in coordination with Fleis & VandenBrink. Having an approved Plan allows for the County to take advantage of funding through multiple FEMA grants that are aimed at supporting projects considering hazard mitigation actions. Municipalities within the County are able to take advantage of this funding as well if they are involved in the development of the Plan; for a municipality to be considered as having been involved in the development of a Plan, they must meet a certain level of participation as required by FEMA.

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If you have any questions or comments while completing this document, please reach out to Tage Heyn at [theyn@fveng.com](mailto:theyn@fveng.com) or Jason Pattok at [jpattok@ioniacounty.org](mailto:jpattok@ioniacounty.org). Thank you for your time and participation in this development process!

You may find the following resources useful:

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**Introduction:**

Name: Julie Heckman

Title: Clerk

Jurisdiction representing: Lyons Twp

Email address: lyonstwp@hotmail.com

**Resolution of Adoption:**

This Hazard Mitigation Plan will be adopted as an official plan of Ionia County upon its completion. Participating jurisdictions **must** adopt the finished Plan as well. A template adoption resolution is attached to the end of this document for reference.

Lyons Twp [  will | will not ] adopt the Ionia County  
(jurisdiction) (circle one)

Hazard Mitigation Plan as an official municipal plan upon its completion.

Lyons Twp [  will | will not ] participate in efforts to  
(jurisdiction) (circle one)

implement and update the plan throughout its five-year lifespan.

## Hazard Identification and Ranking

---

The following is the list of natural hazards identified by the Ionia County Hazard Mitigation Planning Committee as having the potential to affect Ionia County. These hazards have been ranked by their Risk Assessment Value, which is a number calculated by formulaic consideration of the hazards' probability of occurrence, severity of impacts, and expected future change of event frequency. Their order in the below list reflects this ranking, with the "most important" hazards for mitigation action at the top and the "least important" at the bottom.

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- Severe Winds
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- Hail
- Tornadoes
- Winter Storms/Heavy Snow Events/Blizzards
- Drought
- Thunderstorms/Lightning
- Dam Failures
- Extreme Cold
- Extreme Heat
- Public Health Emergencies
- Fog
- Subsidence
- Invasive Species
- Wildfires
- Earthquakes
- Space Weather
- Impacting Objects (Celestial)

This list [  is ] is not [  ] a comprehensive list of natural hazards with the potential to affect Lyons Twp (jurisdiction).

The ranking of this list [  is ] is not [  ] representative of the relative risk these hazards pose to Lyons Twp (jurisdiction).



## Mitigation Capability

---

The overarching purpose of hazard mitigation planning is to reduce or eliminate long-term risk to life and property from the occurrence of hazard events. To realize this purpose, Ionia County has set the following long-term goals:

Goal: Minimize injuries and deaths caused by or related to hazard events.

Goal: Minimize the loss or damage of public and private property from hazard events.

Goal: Promote community awareness, understanding, cooperation, and participation in hazard mitigation actions.

Goal: Promote local growth and development through a lens of hazard mitigation.

Each jurisdiction within Ionia County has different capabilities for engaging in mitigation activities and working towards accomplishing these goals. FEMA has identified the following four primary types of capabilities in their planning handbook:

- Planning and Regulatory – implementation and enforcement of plans, policies, codes, ordinances, local and State law, etc.
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- Financial – availability of funding or ability to secure funding through taxes, grants, etc.
- Education and Outreach – ability to engage and communicate hazard mitigation information to the public.

FEMA **requires** local communities who are participating in the development of a hazard mitigation plan to evaluate their capabilities for accomplishing hazard mitigation goals. For **each** capability listed above, you **must** describe existing authorities, policies, programs, **and** resources available for implementation of hazard mitigation actions and projects that lean on that capability, **as well as** how your jurisdiction may improve upon these capabilities. These do not need to be long descriptions, but they **must** include all elements as stated above. You **must** summarize your jurisdiction’s capability as being **low, medium, or high** – you can circle the corresponding word at the top of the following four pages, where space has also been provided for your written answers. You may wish to refer to the list of mitigation actions under consideration by the County included later in this document for additional context.

Summary of **Planning and Regulatory** capabilities: [ Low | Medium | High ]

Defer to county.

Lined writing area

Defer to county. Lyons Sup provides the fire protection for Lyons, Muis, and Pewamo. Lyons, Muis, and Pewamo need new fire sirens. Fire department is volunteer, so availability is limited. The fire departments are trained in incident command.

Summary of **Financial** capabilities: { Low | Medium | High }

Depen to county. We are a small  
Township with limited funding

Summary of **Education and Outreach** capabilities: [ Low | Medium | High ]

Defer to county resources

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## Mitigation Actions

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Ionia County has identified a list of hazard mitigation actions to work towards implementing on the county level over the five-year lifespan of the finished Plan; this unsorted list is included below for your reference. Now that you have characterized your jurisdiction's hazard mitigation capabilities, you **must** also identify and select **at least one** mitigation action that your jurisdiction will implement, or fully attempt to implement, over the five-year lifespan of the finished Plan. You may choose from the list in this document, but you are **strongly recommended** to provide mitigation actions that are not listed below and address a **specific** local vulnerability. You **must** describe how your jurisdiction will track and report the progress of action implementation such that an update can be provided in the next iteration of the Plan. You **must** describe existing authorities, policies, programs, **and** resources available for implementation of the chosen mitigation actions, **as well as** how your jurisdiction may improve upon these capabilities. Space has been provided for your answers after the action list.

You may also wish to consider choosing mitigation actions focused on increasing capacity for hazard mitigation actions across the board, such as integrating hazard mitigation practices into community Master Plans. In general, you are encouraged to emphasize actions that reduce the effects of hazards on new and existing buildings and infrastructure.

1. Evaluate the need for expanding coverage of warning sirens and other warning systems, and assist local governments in doing the same, along with updating existing sirens to 800mhz.
2. Encourage non-participating local governments to meet requirements and become members of Tree City USA.
3. Expand the library and increase availability of hazard mitigation GIS maps, databases, locations of critical infrastructure such as fire hydrants and curb stops, etc.
4. Assist local governments in integrating hazard mitigation principles into local Master Plans.
5. Identify potential projects to strengthen the County's infrastructure and increase its hazard resistance and encourage local governments to do the same.
6. Evaluate the necessity and viability of implementing County-wide zoning ordinances.
7. Apply for hazard mitigation grant funding for a mitigation project.
8. Evaluate and increase usage of snow fences to limit drifting along critical roadways.
9. Assist local governments in evaluating the need for construction of new local facilities or departments, or the expansion of existing facilities and departments, such as WTPs, WWTPs, and DPWs, to meet community growth.
10. Evaluate the need for a revision of FEMA flood maps and local government participation in the National Flood Insurance Program.
11. Provide NOAA weather radios to local public buildings, schools, hospitals, campgrounds, etc. for free or at a subsidized price by use of grant funding.
12. Encourage the burial of utility lines in new developments and in reconstruction of current development.
13. Become a participating member of the Michigan Emergency Management Assistance Compact (MEMAC).
14. Evaluate the viability of implementing a house numbering ordinance to improve emergency response and standardize number assignment throughout the county.

15. Ensure critical public buildings are outfitted with auxiliary sources of power, such as generators or battery systems, as necessary and assist local governments in doing the same.
16. Evaluate and ensure that enforcement of building/electrical/mechanical/plumbing codes is sufficient to ensure development adequately addresses hazard mitigation principles.
17. Evaluate the necessity and viability of developing and implementing an Ionia County Community Wildfire Protection Plan.
18. Evaluate potential state and federal sources of funding that can be used for specific hazard mitigation projects and assist local governments in doing the same.
19. Conduct a full evaluation of County hazard mitigation actions to ensure they are sufficiently meeting resident needs and assist local governments in doing the same.
20. Meet requirements and become a participating member of the National Weather Service's StormReady program.
21. Increase availability of planning documents such as the Emergency Operations Plan that provide a framework and guidance to County and local government officials for emergency/disaster response and recovery.
22. Create and implement a feedback mechanism for County residents to provide input on hazard mitigation actions, as well as to report hazards and hazardous conditions to officials.
23. Incorporate hazard mitigation principles into the County's next Capital Improvement Plan update.
24. Form an environmental review board to review land use permits, site plans, or any other applications that may pose significant impacts on the environment.
25. Work with critical facilities to develop emergency plans that take into account the unique factors of each facility (ex. evacuation needs for nursing homes or hospitals).
26. Explore the necessity and viability of establishing a Transfer of Development Rights program to limit development in high-risk areas such as floodplains.

27. Ensure the capacity for mobilization and operation of emergency shelters during an emergency or disaster event and assist local governments in doing the same.
28. Adopt an ordinance requiring the anchoring of manufactured home installations located outside of a designated floodplain and/or encourage manufactured home owners to voluntarily anchor their units.
29. Encourage local governments to adopt, implement, and maintain floodplain management practices that go beyond NFIP requirements.
30. Encourage local governments to meet requirements and become participating communities under the Community Rating System.
31. Establish public parks in identified local floodplains and assist local governments in doing the same.
32. Continue to evaluate the sufficiency of existing drainage management (culverts, drains, etc.) and identify insufficiencies.
33. Assist the Drain Commissioner's office in formalizing a maintenance plan for County drains.
34. Require notifications to/approvals from the Drain Commissioner's office for drainage tie-ins to County drains.
35. Evaluate the necessity and viability of expanding Ionia County's Communicable Disease reporting program to allow for a wider range of citizens to make related reports.
36. Disseminate disaster planning and response information to community groups and critical facilities.
37. Make available federal, state, and county emergency management, disaster preparedness, and other pertinent information on County website, ensure accessibility of information to speakers of Spanish, and assist local governments in doing the same.
38. Encourage individuals and families to develop their own disaster preparedness plans using resources such as the American Red Cross and County hazard mitigation information.

39. Assist local governments in enforcing requirements for burn permits, especially during sensitive times such as dry periods or high wind conditions.
40. Expand public education and awareness regarding activities (open burning, etc.) with the capacity to result in an uncontrolled wildfire.
41. Maintain adequate road and debris clearing capabilities and assist local governments in doing the same.
42. Apply structural hazard mitigation and sustainability concepts during construction or remodeling of government facilities and encourage local governments to do the same.
43. Promote low-impact development techniques in development that reduce stormwater runoff and resultant flooding.
44. Ensure that emergency plans continue to be maintained for Webber Dam.
45. Evaluate municipal wells for capacity to continue to meet projected growth and resultant demand and assist local governments in doing the same.
46. Evaluate the need to increase emergency/disaster response capabilities with alternative transportation vehicles (snowmobiles, ATVs, etc.)
47. Explore the necessity and viability of expanding the Ionia County Building Department's capabilities such that the County can perform duties such as permit application review and building code enforcement with in-house resources.
48. Incorporate hazard mitigation principles and priorities into the County land use plan upon its next review.
49. Continue to ensure that all current hazard mitigation actions are maintained or improved upon.

Lyons Twp

(jurisdiction)

has selected the following mitigation action(s)

which it will implement, or fully attempt to implement, over the five-year lifespan of the finished Ionia County Hazard Mitigation Plan:

Upgrade the tornado sirens for each village.  
Money for 800 radios.

Lyons Twp

(jurisdiction)

will leverage the following existing authorities,

policies, programs, and resources available for implementation of the above mitigation action(s):

Villages and Ionia County resources

16 horizontal lines for writing.

Lyons Sup may improve upon these listed capabilities for  
(Jurisdiction)

implementing the above mitigation action(s) in the following ways:

Reach out to county for grant writing and  
emergency management.

6 horizontal lines for writing.

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Lyons Sup will track and report the progress of the  
(jurisdiction)

implementation of the above mitigation action(s) in the following ways:

Report same annually to county on progress.

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## **Critical Facilities**

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The following is a list of critical facilities within Ionia County sorted by category. FEMA defines critical facilities as “structures and institutions necessary for a community’s response to and recovery from emergencies” who “must continue to operate during and following a disaster to reduce the severity of impacts and accelerate recovery”. Please ensure all relevant critical facilities in your jurisdiction are accounted for in the appropriate category below and note any omissions, corrections, or additions in the space provided after the list.

### **LAW ENFORCEMENT**

Ionia County Sheriff Department  
City of Ionia Department of Public Safety  
City of Belding Police Department  
Michigan State Police  
Lake Odessa Police Department  
City of Portland Police Department  
Ionia Correctional Facility  
Bellamy Creek Correctional Facility  
Michigan Reformatory  
Richard A. Handlin Correctional Facility  
Ionia County Jail

### **FIRE SERVICES**

Hubbardston Fire Department  
City of Belding Fire Department  
Lake Odessa Fire Department  
City of Ionia Department of Public Safety, Fire Division  
Pewamo Fire Department  
Lyons-Muir Fire Department  
Saranac Fire Department  
Portland Fire Department  
Campbell Township (Clarksville) Fire Department  
Orleans Township Fire Department  
Ronald Township Fire Department  
Berlin-Orange Township Fire Department  
Grattan Township Fire Department  
Roxand Township Fire Department (Eaton County)  
Freeport Fire/Rescue (Barry County)

## **HEALTHCARE**

Lakewood Community Ambulance Service (located in Barry County)

Belding Ambulance Service- Belding Fire Department

Portland Ambulance Service- Portland Fire Department, Emergency Services Building  
Life EMS

Sparrow Ionia Hospital

Sparrow Group Ionia

Sparrow Group Portland

Ionia Senior Center

Ionia County Health Department

DaVita Ionia Dialysis

Spectrum Health Family Practice

## **PUBLIC SCHOOLS**

Oakwood Elementary School

Portland Middle School

Westwood Elementary School

Lakewood Elementary School

Saranac Elementary School

Ionia County Career Center

Coon School

A.A. Rather School

Ionia High School

Emerson School

Ionia Middle School

Jefferson School

Twin Rivers Elementary School

Haynor School

North LeValley Elementary School

R.B. Boyce Elementary School

Belding Middle School

Ellis Elementary School

Belding High School

Woodview Elementary School

Saranac Jr/Sr High School

## **PRIVATE SCHOOLS**

Faith Community Christian School  
Ionia Seventh Day Adventist School  
Ss. Peter & Paul Elementary School  
St. Joseph Elementary School  
Ionia Nazarene Christian School  
Lakewood Christian School  
St. Joseph Elementary School (Belding)  
St. Joseph Elementary School (Pewamo)  
St. Patrick School

## **CITY HALLS**

Belding City Hall  
Ionia City Hall  
City of Portland Hall

## **VILLAGE HALLS**

Village of Muir Hall  
Village of Lyons Hall  
Village of Hubbardston Hall  
Village of Lake Odessa Hall  
Village of Clarksville Hall  
Village of Saranac Hall  
Village of Pewamo Hall

## **TOWNSHIP HALLS**

Campbell Township Hall  
Boston Township Hall  
Berlin Township Hall  
Keene Township Hall  
Ionia Township Hall  
Danby Township Hall  
Odessa Township Hall  
North Plains Township Hall  
Lyons Township Hall  
Ronald Township Hall  
Sebewa Township Hall  
Otisco Township Hall

Orleans Township Hall  
Orange Township Hall  
Easton Township Hall  
Portland Township Hall

### **LIVING**

Lighthouse Senior Living  
Lighthouse Rehab  
Saranac Housing Commission  
Mission Point of Belding  
SKLD of Ionia  
Hope Network  
Green Acres Ionia  
Portland Assisted Living and Memory Center  
Hope Network  
Good Vibes Adult Foster Care  
Clarksville Manor

### **PUBLIC WORKS**

Ionia County Road Department  
Ionia Department of Public Works  
Belding Department of Public Works  
Portland Department of Public Works

### **WWTP**

Belding WWTP  
Ionia WWTP  
Portland WWTP  
Lakewood Wastewater Authority WWTP  
Clarksville-Morrison Lake WWTP  
Saranac WWSL

### **UTILITIES**

Water Towers: 14  
Wind Turbines: 32  
Substations: 7

**TRAIN/BUS STATIONS/CARPOOL LOTS**

Lake Odessa Park and Ride  
Portland – West Park and Ride  
Portland #2 (NE) Park and Ride  
Ionia/Belding Park and Ride  
Ionia Dial-A-Ride  
Belding Dial-A-Ride

**POST OFFICES**

Belding Post Office  
Clarksville Post Office  
Hubbardston Post Office  
Ionia Post Office  
Lake Odessa Post Office  
Lyons Post Office  
Muir Post Office  
Orleans Post Office  
Pewamo Post Office  
Portland Post Office  
Saranac Post Office

**PUBLIC LIBRARIES**

Alvah N. Belding Memorial Library  
Hall-Fowler Memorial Library  
Ionia Community Library  
Portland District Library  
Lyons Township District Library  
Lake Odessa Community Library  
Clarksville Area Library  
Saranac Public Library

**FOOD/AGRICULTURE**

Herbruck's Poultry Ranch  
\*\* ANY OTHER BIG ONES/COMMUNITY ANCHORS?

**OTHER CRITICAL FACILITIES**

\*\* ANYTHING NOTABLE?

This list [  is |  is not ] a comprehensive and applicable list of critical facilities in

Lyons Sup  
(Jurisdiction)

If you circled "is not" for the above, please use the rest of this page to elaborate on why.

Main DPW

Lyons DPW

Pewamo DPW

Fuel resources





## Example Adoption Resolution

(LOCAL COMMUNITY)

(STATE)

RESOLUTION NO. \_\_\_\_\_

A RESOLUTION OF THE (LOCAL COMMUNITY) ADOPTING THE

(TITLE AND DATE OF MITIGATION PLAN)

WHEREAS the (local governing body) recognizes the threat that natural hazards pose to people and property within (local community); and

WHEREAS the (local community) has prepared a multi-hazard mitigation plan, hereby known as (title and date of mitigation plan) in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS (title and date of mitigation plan) identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in (local community) from the impacts of future hazards and disasters; and

WHEREAS adoption by the (local governing body) demonstrates their commitment to the hazard mitigation and achieving the goals outlined in the (title and date of mitigation plan).

NOW THEREFORE, BE IT RESOLVED BY THE (LOCAL COMMUNITY), (STATE), THAT:

Section 1. In accordance with (local rule for adopting resolutions), the (local governing body) adopts the (title and date of mitigation plan).

ADOPTED by a vote of \_\_\_\_ in favor and \_\_\_\_ against, and \_\_\_\_ abstaining, this \_\_\_\_ day of

\_\_\_\_\_, \_\_\_\_\_.

By: \_\_\_\_\_

(print name)

ATTEST:

By: \_\_\_\_\_

(print name)

APPROVED AS TO FORM:

By: \_\_\_\_\_

(print name)

ADOPTION RESOLUTION  
IONIA COUNTY HAZARD MITIGATION 2023

Lyons Township

Michigan

RESOLUTION NO. \_\_\_\_\_

A RESOLUTION OF THE TOWNSHIP OF LYONS

IONIA COUNTY HAZARD MITIGATION PLAN 2023

WHEREAS the Township of Lyons recognizes the threat that natural hazards pose to the people and property within Lyons Township; and

WHEREAS the Township of Lyons has prepared a multi-hazard mitigation plan, hereby known as the Ionia County Hazard Mitigation Plan 2023 in accordance with the Disaster Mitigation Act 2000; and

WHEREAS Ionia County Hazard Mitigation Plan 2023 identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in Lyons Township from the impacts of future hazards and disasters; and

WHEREAS adoption by the Lyons Township Board demonstrates their commitment to hazard mitigation and achieving the goals outlined in the Ionia County Hazard Mitigation Plan 2023.

NOW THEREFORE, BE IT RESOLVED BY THE TOWNSHIP OF LYONS MICHIGAN, THAT

Section 1. In accordance with \_\_\_\_\_, the Lyons Township Board adopts the Ionia County Hazard Mitigation Plan 2023.

ADOPTED by a vote of 5 in favor and 0 against, and 0 abstaining, this 5<sup>th</sup> day of June, 2023.

By: Robert Schauer

ATTEST:

By: Andy Hengestrich

APPROVE:

By: Lyons Twp Board



August 20, 2024

Sgt. Straubel

Emergency Manager Ionia County

Updates to the 2023 submittal for the Township of Lyons

The township runs both Lyons/Muir fire department and Pewamo Fire department and the warning sirens in Muir and Lyons are old and are not being heard like they should. If there are any grants out there for warning sirens we could use them. Our fire departments are our biggest priority and expense so any help there would be greatly appreciated.

Julie Heckman

Lyons TWP. Clerk

989-590-2008

lyons-twp@hotmail.com



## Ionia County Hazard Mitigation Plan Development Municipality Participation and Involvement Document

Ionia County is currently in the process of developing a county-wide Hazard Mitigation Plan in coordination with Fleis & VandenBrink. Having an approved Plan allows for the County to take advantage of funding through multiple FEMA grants that are aimed at supporting projects considering hazard mitigation actions. Municipalities within the County are able to take advantage of this funding as well if they are involved in the development of the Plan; for a municipality to be considered as having been involved in the development of a Plan, they must meet a certain level of participation as required by FEMA.

Some of you have already participated in this Plan development process through a comprehensive survey distributed earlier in the Plan development cycle and through other lines of related communication. The feedback received has been a key consideration in Plan development and so we thank you for your previous participation. This document is intended to ensure that every municipality in Ionia County can readily meet the minimum threshold of participation in Plan development in a standardized way and thus take advantage of these grant funding sources for future local projects. **Your jurisdiction must complete this document to be counted as a participating member of the Plan. The completed document must be returned by June 23<sup>rd</sup>, 2023 to Tage Heyn via email (see below) or regular mail (Tage Heyn c/o Fleis & VandenBrink, 2960 Lucerne Dr SE, Grand Rapids MI 49546). Failure to do so will constitute non-participation in the Plan's development and will render your jurisdiction ineligible for Hazard Mitigation Assistance grants.**

If you have any questions or comments while completing this document, please reach out to Tage Heyn at [theyn@fveng.com](mailto:theyn@fveng.com) or Jason Pattok at [jpattok@ioniacounty.org](mailto:jpattok@ioniacounty.org). Thank you for your time and participation in this development process!

You may find the following resources useful:

<https://www.fema.gov/grants/mitigation> | Information about these grants and their scope.

<https://www.fema.gov/emergency-managers/risk-management/hazard-mitigation-planning> | Information about hazard mitigation planning in general.

<https://www.fema.gov/grants/mitigation/building-resilient-infrastructure-communities/after-apply/fy-2021-subapplication-status> | Applications for BRIC grant funding from 2021 (bottom of page), showing project type and funding amount requested, as well as the status of each application.

**Introduction:**



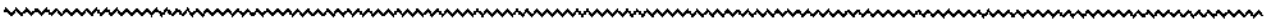
Name: Gary P. Secor

Title: Township Supervisor

Jurisdiction representing: Odessa Township

Email address: Supervisor@odessatownship.org

**Resolution of Adoption:**



This Hazard Mitigation Plan will be adopted as an official plan of Ionia County upon its completion. Participating jurisdictions **must** adopt the finished Plan as well. A template adoption resolution is attached to the end of this document for reference.

Odessa Township (jurisdiction) [  will ] | will not ] adopt the Ionia County  
(circle one)

Hazard Mitigation Plan as an official municipal plan upon its completion.

Odessa Township (jurisdiction) [  will ] | will not ] participate in efforts to  
(circle one)

implement and update the plan throughout its five-year lifespan.

## Hazard Identification and Ranking

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The following is the list of natural hazards identified by the Ionia County Hazard Mitigation Planning Committee as having the potential to affect Ionia County. These hazards have been ranked by their Risk Assessment Value, which is a number calculated by formulaic consideration of the hazards' probability of occurrence, severity of impacts, and expected future change of event frequency. Their order in the below list reflects this ranking, with the "most important" hazards for mitigation action at the top and the "least important" at the bottom.

- Floods
- Severe Winds
- Ice/Sleet Storms
- Hail
- Tornadoes
- Winter Storms/Heavy Snow Events/Blizzards
- Drought
- Thunderstorms/Lightning
- Dam Failures
- Extreme Cold
- Extreme Heat
- Public Health Emergencies
- Fog
- Subsidence
- Invasive Species
- Wildfires
- Earthquakes
- Space Weather
- Impacting Objects (Celestial)

This list [ (is) | is not ] a comprehensive list of natural hazards with the potential to affect Odessa Township.  
(jurisdiction)

The ranking of this list [ (is) | is not ] representative of the relative risk these hazards pose to Odessa Township.  
(jurisdiction)



## Mitigation Capability

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The overarching purpose of hazard mitigation planning is to reduce or eliminate long-term risk to life and property from the occurrence of hazard events. To realize this purpose, Ionia County has set the following long-term goals:

Goal: Minimize injuries and deaths caused by or related to hazard events.

Goal: Minimize the loss or damage of public and private property from hazard events.

Goal: Promote community awareness, understanding, cooperation, and participation in hazard mitigation actions.

Goal: Promote local growth and development through a lens of hazard mitigation.

Each jurisdiction within Ionia County has different capabilities for engaging in mitigation activities and working towards accomplishing these goals. FEMA has identified the following four primary types of capabilities in their planning handbook:

- Planning and Regulatory – implementation and enforcement of plans, policies, codes, ordinances, local and State law, etc.
- Administrative and Technical – departments, personnel, equipment, coordination with other public and private entities, etc.
- Financial – availability of funding or ability to secure funding through taxes, grants, etc.
- Education and Outreach – ability to engage and communicate hazard mitigation information to the public.

FEMA **requires** local communities who are participating in the development of a hazard mitigation plan to evaluate their capabilities for accomplishing hazard mitigation goals. For **each** capability listed above, you **must** describe existing authorities, policies, programs, **and** resources available for implementation of hazard mitigation actions and projects that lean on that capability, **as well as** how your jurisdiction may improve upon these capabilities. These do not need to be long descriptions, but they **must** include all elements as stated above. You **must** summarize your jurisdiction’s capability as being **low, medium, or high** – you can circle the corresponding word at the top of the following four pages, where space has also been provided for your written answers. You may wish to refer to the list of mitigation actions under consideration by the County included later in this document for additional context.

Summary of **Planning and Regulatory** capabilities: [ Low | Medium | High ]

We implement and enforce ordinances  
in the best interests of public  
safety and health. All ordinances have  
been reviewed to conform to sections 196  
0.1151 et seq.

Summary of **Administrative and Technical** capabilities: [ Low | Medium | High ]

Our Odessa Township Fire Department  
coordinates with other fire departments,  
law enforcement agencies and EMT's  
in fire and emergency planning and  
providing services in emergencies

Summary of **Financial** capabilities: [ Low | Medium | High ]

The township has obtained grants

for security of township offices

and additional equipment for Fire Dept.

and to develop recreational trails

Summary of **Education and Outreach** capabilities: [ Low | Medium | High ]

We do little education and outreach other than fire dept. visits to schools.

## Mitigation Actions

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Ionia County has identified a list of hazard mitigation actions to work towards implementing on the county level over the five-year lifespan of the finished Plan; this unsorted list is included below for your reference. Now that you have characterized your jurisdiction's hazard mitigation capabilities, you **must** also identify and select **at least one** mitigation action that your jurisdiction will implement, or fully attempt to implement, over the five-year lifespan of the finished Plan. You may choose from the list in this document, but you are **strongly recommended** to provide mitigation actions that are not listed below and address a **specific** local vulnerability. You **must** describe how your jurisdiction will track and report the progress of action implementation such that an update can be provided in the next iteration of the Plan. You **must** describe existing authorities, policies, programs, **and** resources available for implementation of the chosen mitigation actions, **as well as** how your jurisdiction may improve upon these capabilities. Space has been provided for your answers after the action list.

You may also wish to consider choosing mitigation actions focused on increasing capacity for hazard mitigation actions across the board, such as integrating hazard mitigation practices into community Master Plans. In general, you are encouraged to emphasize actions that reduce the effects of hazards on new and existing buildings and infrastructure.

1. Evaluate the need for expanding coverage of warning sirens and other warning systems, and assist local governments in doing the same, along with updating existing sirens to 800mhz.
2. Encourage non-participating local governments to meet requirements and become members of Tree City USA.
3. Expand the library and increase availability of hazard mitigation GIS maps, databases, locations of critical infrastructure such as fire hydrants and curb stops, etc.
4. Assist local governments in integrating hazard mitigation principles into local Master Plans.
5. Identify potential projects to strengthen the County's infrastructure and increase its hazard resistance and encourage local governments to do the same.
6. Evaluate the necessity and viability of implementing County-wide zoning ordinances.
7. Apply for hazard mitigation grant funding for a mitigation project.
8. Evaluate and increase usage of snow fences to limit drifting along critical roadways.
9. Assist local governments in evaluating the need for construction of new local facilities or departments, or the expansion of existing facilities and departments, such as WTPs, WWTPs, and DPWs, to meet community growth.
10. Evaluate the need for a revision of FEMA flood maps and local government participation in the National Flood Insurance Program.
11. Provide NOAA weather radios to local public buildings, schools, hospitals, campgrounds, etc. for free or at a subsidized price by use of grant funding.
12. Encourage the burial of utility lines in new developments and in reconstruction of current development.
13. Become a participating member of the Michigan Emergency Management Assistance Compact (MEMAC).
14. Evaluate the viability of implementing a house numbering ordinance to improve emergency response and standardize number assignment throughout the county.

15. Ensure critical public buildings are outfitted with auxiliary sources of power, such as generators or battery systems, as necessary and assist local governments in doing the same.
16. Evaluate and ensure that enforcement of building/electrical/mechanical/plumbing codes is sufficient to ensure development adequately addresses hazard mitigation principles.
17. Evaluate the necessity and viability of developing and implementing an Ionia County Community Wildfire Protection Plan.
18. Evaluate potential state and federal sources of funding that can be used for specific hazard mitigation projects and assist local governments in doing the same.
19. Conduct a full evaluation of County hazard mitigation actions to ensure they are sufficiently meeting resident needs and assist local governments in doing the same.
20. Meet requirements and become a participating member of the National Weather Service's StormReady program.
21. Increase availability of planning documents such as the Emergency Operations Plan that provide a framework and guidance to County and local government officials for emergency/disaster response and recovery.
22. Create and implement a feedback mechanism for County residents to provide input on hazard mitigation actions, as well as to report hazards and hazardous conditions to officials.
23. Incorporate hazard mitigation principles into the County's next Capital Improvement Plan update.
24. Form an environmental review board to review land use permits, site plans, or any other applications that may pose significant impacts on the environment.
25. Work with critical facilities to develop emergency plans that take into account the unique factors of each facility (ex. evacuation needs for nursing homes or hospitals).
26. Explore the necessity and viability of establishing a Transfer of Development Rights program to limit development in high-risk areas such as floodplains.

39. Assist local governments in enforcing requirements for burn permits, especially during sensitive times such as dry periods or high wind conditions.
40. Expand public education and awareness regarding activities (open burning, etc.) with the capacity to result in an uncontrolled wildfire.
41. Maintain adequate road and debris clearing capabilities and assist local governments in doing the same.
42. Apply structural hazard mitigation and sustainability concepts during construction or remodeling of government facilities and encourage local governments to do the same.
43. Promote low-impact development techniques in development that reduce stormwater runoff and resultant flooding.
44. Ensure that emergency plans continue to be maintained for Webber Dam.
45. Evaluate municipal wells for capacity to continue to meet projected growth and resultant demand and assist local governments in doing the same.
46. Evaluate the need to increase emergency/disaster response capabilities with alternative transportation vehicles (snowmobiles, ATVs, etc.)
47. Explore the necessity and viability of expanding the Ionia County Building Department's capabilities such that the County can perform duties such as permit application review and building code enforcement with in-house resources.
48. Incorporate hazard mitigation principles and priorities into the County land use plan upon its next review.
49. Continue to ensure that all current hazard mitigation actions are maintained or improved upon.

27. Ensure the capacity for mobilization and operation of emergency shelters during an emergency or disaster event and assist local governments in doing the same.
28. Adopt an ordinance requiring the anchoring of manufactured home installations located outside of a designated floodplain and/or encourage manufactured home owners to voluntarily anchor their units.
29. Encourage local governments to adopt, implement, and maintain floodplain management practices that go beyond NFIP requirements.
30. Encourage local governments to meet requirements and become participating communities under the Community Rating System.
31. Establish public parks in identified local floodplains and assist local governments in doing the same.
32. Continue to evaluate the sufficiency of existing drainage management (culverts, drains, etc.) and identify insufficiencies.
33. Assist the Drain Commissioner's office in formalizing a maintenance plan for County drains.
34. Require notifications to/approvals from the Drain Commissioner's office for drainage tie-ins to County drains.
35. Evaluate the necessity and viability of expanding Ionia County's Communicable Disease reporting program to allow for a wider range of citizens to make related reports.
36. Disseminate disaster planning and response information to community groups and critical facilities.
37. Make available federal, state, and county emergency management, disaster preparedness, and other pertinent information on County website, ensure accessibility of information to speakers of Spanish, and assist local governments in doing the same.
38. Encourage individuals and families to develop their own disaster preparedness plans using resources such as the American Red Cross and County hazard mitigation information.

Odessa Township  
(jurisdiction)

has selected the following mitigation action(s)

which it will implement, or fully attempt to implement, over the five-year lifespan of the finished Ionia County Hazard Mitigation Plan:

Provide and work with local emergency relief and service agencies to provide additional emergency shelter capacity in Odessa Township

Odessa Township  
(jurisdiction)

will leverage the following existing authorities,

policies, programs, and resources available for implementation of the above mitigation action(s):

Local fire departments, relief agencies and Township facilities.

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Odessa Township may improve upon these listed capabilities for  
(jurisdiction)

implementing the above mitigation action(s) in the following ways:

Review use of township held in  
case of emergency need)

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Lined area for text entry.

Odelette Township will track and report the progress of the  
(jurisdiction)

implementation of the above mitigation action(s) in the following ways:

Provide annual progress reports

Lined area for text entry.

## Critical Facilities

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The following is a list of critical facilities within Ionia County sorted by category. FEMA defines critical facilities as “structures and institutions necessary for a community’s response to and recovery from emergencies” who “must continue to operate during and following a disaster to reduce the severity of impacts and accelerate recovery”. Please ensure all relevant critical facilities in your jurisdiction are accounted for in the appropriate category below and note any omissions, corrections, or additions in the space provided after the list.

### LAW ENFORCEMENT

- Ionia County Sheriff Department
- City of Ionia Department of Public Safety
- City of Belding Police Department
- Michigan State Police
- Lake Odessa Police Department
- City of Portland Police Department
- Ionia Correctional Facility
- Bellamy Creek Correctional Facility
- Michigan Reformatory
- Richard A. Handlin Correctional Facility
- Ionia County Jail

### FIRE SERVICES

- Hubbardston Fire Department
- City of Belding Fire Department
- Lake Odessa Fire Department
- City of Ionia Department of Public Safety, Fire Division
- Pewamo Fire Department
- Lyons-Muir Fire Department
- Saranac Fire Department
- Portland Fire Department
- Campbell Township (Clarksville) Fire Department
- Orleans Township Fire Department
- Ronald Township Fire Department
- Berlin-Orange Township Fire Department
- Grattan Township Fire Department
- Roxand Township Fire Department (Eaton County)
- Freeport Fire/Rescue (Barry County)

## **HEALTHCARE**

Lakewood Community Ambulance Service (located in Barry County)

Belding Ambulance Service- Belding Fire Department

Portland Ambulance Service- Portland Fire Department, Emergency Services Building  
Life EMS

Sparrow Ionia Hospital

Sparrow Group Ionia

Sparrow Group Portland

Ionia Senior Center

Ionia County Health Department

DaVita Ionia Dialysis

Spectrum Health Family Practice

## **PUBLIC SCHOOLS**

Oakwood Elementary School

Portland Middle School

Westwood Elementary School

Lakewood Elementary School

Saranac Elementary School

Ionia County Career Center

Coon School

A.A. Rather School

Ionia High School

Emerson School

Ionia Middle School

Jefferson School

Twin Rivers Elementary School

Haynor School

North LeValley Elementary School

R.B. Boyce Elementary School

Belding Middle School

Ellis Elementary School

Belding High School

Woodview Elementary School

Saranac Jr/Sr High School

**PRIVATE SCHOOLS**

- Faith Community Christian School
- Ionia Seventh Day Adventist School
- Ss. Peter & Paul Elementary School
- St. Joseph Elementary School
- Ionia Nazarene Christian School
- Lakewood Christian School
- St. Joseph Elementary School (Belding)
- St. Joseph Elementary School (Pewamo)
- St. Patrick School

**CITY HALLS**

- Belding City Hall
- Ionia City Hall
- City of Portland Hall

**VILLAGE HALLS**

- Village of Muir Hall
- Village of Lyons Hall
- Village of Hubbardston Hall
- Village of Lake Odessa Hall
- Village of Clarksville Hall
- Village of Saranac Hall
- Village of Pewamo Hall

**TOWNSHIP HALLS**

- Campbell Township Hall
- Boston Township Hall
- Berlin Township Hall
- Keene Township Hall
- Ionia Township Hall
- Danby Township Hall
- Odessa Township Hall
- North Plains Township Hall
- Lyons Township Hall
- Ronald Township Hall
- Sebewa Township Hall
- Otisco Township Hall

Orleans Township Hall  
Orange Township Hall  
Easton Township Hall  
Portland Township Hall

### **LIVING**

Lighthouse Senior Living  
Lighthouse Rehab  
Saranac Housing Commission  
Mission Point of Belding  
SKLD of Ionia  
Hope Network  
Green Acres Ionia  
Portland Assisted Living and Memory Center  
Hope Network  
Good Vibes Adult Foster Care  
Clarksville Manor

### **PUBLIC WORKS**

Ionia County Road Department  
Ionia Department of Public Works  
Belding Department of Public Works  
Portland Department of Public Works

### **WWTP**

Belding WWTP  
Ionia WWTP  
Portland WWTP  
Lakewood Wastewater Authority WWTP  
Clarkesville-Morrison Lake WWTP  
Saranac WWSL

### **UTILITIES**

Water Towers: 14  
Wind Turbines: 32  
Substations: 7

**TRAIN/BUS STATIONS/CARPOOL LOTS**

Lake Odessa Park and Ride  
Portland – West Park and Ride  
Portland #2 (NE) Park and Ride  
Ionia/Belding Park and Ride  
Ionia Dial-A-Ride  
Belding Dial-A-Ride

**POST OFFICES**

Belding Post Office  
Clarksville Post Office  
Hubbardston Post Office  
Ionia Post Office  
Lake Odessa Post Office  
Lyons Post Office  
Muir Post Office  
Orleans Post Office  
Pewamo Post Office  
Portland Post Office  
Saranac Post Office

**PUBLIC LIBRARIES**

Alvah N. Belding Memorial Library  
Hall-Fowler Memorial Library  
Ionia Community Library  
Portland District Library  
Lyons Township District Library  
Lake Odessa Community Library  
Clarksville Area Library  
Saranac Public Library

**FOOD/AGRICULTURE**

Herbruck’s Poultry Ranch  
\*\* ANY OTHER BIG ONES/COMMUNITY ANCHORS?

**OTHER CRITICAL FACILITIES**

\*\* ANYTHING NOTABLE?

This list [ is | is not ] a comprehensive and applicable list of critical facilities in

Adessa Township  
(jurisdiction)

If you circled "is not" for the above, please use the rest of this page to elaborate on why.

(Correction and Fire Department)

Lined area for elaboration.

You have completed the required portion of this document. Thank you once again for your time and participation. Access to hazard mitigation funding can be the difference between a viable infrastructure project and a missed opportunity. These last two pages are here for any additional comments or information you'd like to share to ensure your jurisdiction is sufficiently represented in the County Plan.

Lined area for providing additional comments or information.

# Odessa Township Treasurer's Office

## Sharon Rohrbacher, Treasurer

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\* P.O. Box 566. 3862 Laurel Drive \* Lake Odessa, MI 48849\*

- Phone: 616-374-4237 ext. 11 \*
- Fax 616-374-4257\*

Email [sharon@odessatownship.org](mailto:sharon@odessatownship.org)

August 5, 2024

### HAZARD MITIGATION PLAN

Odessa Township considers pre-incident planning vital to mitigating future hazards. Holding county-wide training for large rail road incidents such as derailing and spills is a vital mitigating strategy. Such an incident would call into necessity cooperation from multiple departments with multiple specialized techs. Purchase of, or immediate access to, an aerial apparatus is another area that would be helpful. There are currently ten buildings in our jurisdiction that would require an aerial to access the top story and the closest apparatus is twenty-five minutes away. Setting up a County-Wide Training facility would aid the local departments in shared pre-incident planning. While communications on County-wide equipment have been updated and is working well, full cooperation and team work from Central Dispatch and additional police coverage are two other areas, in which we are lacking, that play significant roles in the mitigation of future hazards. Odessa Township has well-trained water rescue techs but lacks the proper boat and trailer equipment to respond as quickly as may be necessary. Having the assets for pre-incident training and rescue operations are top priority on a long list of emergency response needs.

Odessa Township Fire Fighters and First Responders work hard to go above and beyond to use existing resources and specialized training to do their best to meet the emergency needs of the local community and beyond. Our Department is fully trained with High Angle Techs, Hazardous Waste Techs, Confined Space Techs, Water/Open Water/Swift Water Techs and Advanced Vehicle Extrication. All Paid-on call members are Fire Fighter I & II plus Medically Certified. While there are no Fall-Out Shelters located in Odessa Township, we do have two Emergency Shelter facilities with plans in place to use for any evacuation. These two facilities are ready-to-go, at moment's notice. The only concern is that both shelters are located within the Village of Lake Odessa.

On another note, while looking at the list from the 16 participants rating the issues that may confront local communities, Odessa Township First Responders rated the list as it relates to our community, as follows:

1. Severe Storms
2. Hail
3. Thunderstorms/lightning
4. Winter Storms/Heavy Snow/Blizzards
5. Tornados
6. Ice/Sleet Storms
7. Wild Fires
8. Extreme Heat
9. Extreme Cole
10. Public Health Emergencies
11. Impacting Objects
12. Space Weather
13. Earthquakes
14. Invasive Species
15. Subsidence
16. Fog
17. Dam Failures
18. Floods

**Introduction:**

Name:

JOHN PIERCEFIELD

Title:

SUPERVISOR

Jurisdiction representing:

SEBEWA TOWNSHIP

Email address:

sebewa.supervisor@outlook.com

**Resolution of Adoption:**

This Hazard Mitigation Plan will be adopted as an official plan of Ionia County upon its completion. Participating jurisdictions **must** adopt the finished Plan as well. A template adoption resolution is attached to the end of this document for reference.

SEBEWA TOWNSHIP [  will |  will not ] adopt the Ionia County  
(jurisdiction) (circle one)

Hazard Mitigation Plan as an official municipal plan upon its completion.

SEBEWA TOWNSHIP [  will |  will not ] participate in efforts to  
(jurisdiction) (circle one)

implement and update the plan throughout its five-year lifespan.

## Hazard Identification and Ranking

The following is the list of natural hazards identified by the Ionia County Hazard Mitigation Planning Committee as having the potential to affect Ionia County. These hazards have been ranked by their Risk Assessment Value, which is a number calculated by formulaic consideration of the hazards' probability of occurrence, severity of impacts, and expected future change of event frequency. Their order in the below list reflects this ranking, with the "most important" hazards for mitigation action at the top and the "least important" at the bottom.

9. Floods
5. Severe Winds
6. Ice/Sleet Storms
7. Hail
1. Tornadoes
2. Winter Storms/Heavy Snow Events/Blizzards
4. Drought
3. Thunderstorms/Lightning
  - Dam Failures
  - Extreme Cold
  - Extreme Heat
8. Public Health Emergencies
  - Fog
  - Subsidence
  - Invasive Species
10. Wildfires
  - Earthquakes
  - Space Weather
  - Impacting Objects (Celestial)

Most Imp **TORNADOES**  
 WINTER STORM/HSE  
 THUNDERSTORMS  
 DROUGHT  
 SEVERE WINDS  
 ICE/SLEET  
 HAIL  
 PUBLIC HEALTH EMERGENCY  
 FLOODS  
 10. WILDFIRE  
 ↓  
 REST  
 LEAST IMP

This list [  is ] is not [ ] a comprehensive list of natural hazards with the potential to affect SERENA TOWNSHIP.  
(jurisdiction)

The ranking of this list [  is ] is not [ ] representative of the relative risk these hazards pose to SERENA TOWNSHIP.  
(jurisdiction)

If you circled "is not" for either of the two previous items, please use this page for elaboration. You may offer a re-ordered list or add items as desired.

We reserve the right to review, amend and implement the Plan as accepted & approved by the Ionia County. Upon review and approval, with any amendments or exclusions, Sebewa Township will approve and cooperate with the Ionia County Hazardous Mitigation Plan 2023.

## Mitigation Capability

The overarching purpose of hazard mitigation planning is to reduce or eliminate long-term risk to life and property from the occurrence of hazard events. To realize this purpose, Ionia County has set the following long-term goals:

Goal: Minimize injuries and deaths caused by or related to hazard events.

Goal: Minimize the loss or damage of public and private property from hazard events.

Goal: Promote community awareness, understanding, cooperation, and participation in hazard mitigation actions.

Goal: Promote local growth and development through a lens of hazard mitigation.

Each jurisdiction within Ionia County has different capabilities for engaging in mitigation activities and working towards accomplishing these goals. FEMA has identified the following four primary types of capabilities in their planning handbook:

- Planning and Regulatory – implementation and enforcement of plans, policies, codes, ordinances, local and State law, etc.
- Administrative and Technical – departments, personnel, equipment, coordination with other public and private entities, etc.
- Financial – availability of funding or ability to secure funding through taxes, grants, etc.
- Education and Outreach – ability to engage and communicate hazard mitigation information to the public.

FEMA **requires** local communities who are participating in the development of a hazard mitigation plan to evaluate their capabilities for accomplishing hazard mitigation goals. For **each** capability listed above, you **must** describe existing authorities, policies, programs, and resources available for implementation of hazard mitigation actions and projects that lean on that capability, **as well as** how your jurisdiction may improve upon these capabilities. These do not need to be long descriptions, but they **must** include all elements as stated above. You **must** summarize your jurisdiction's capability as being **low**, **medium**, or **high** – you can circle the corresponding word at the top of the following four pages, where space has also been provided for your written answers. You may wish to refer to the list of mitigation actions under consideration by the County included later in this document for additional context.

Summary of **Planning and Regulatory** capabilities: [ **Low** | Medium | High ]

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Summary of **Education and Outreach** capabilities: [ Low | Medium | High ]

Lined area for writing details.

## Mitigation Actions

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Ionia County has identified a list of hazard mitigation actions to work towards implementing on the county level over the five-year lifespan of the finished Plan; this unsorted list is included below for your reference. Now that you have characterized your jurisdiction's hazard mitigation capabilities, you **must** also identify and select **at least one** mitigation action that your jurisdiction will implement, or fully attempt to implement, over the five-year lifespan of the finished Plan. You may choose from the list in this document, but you are **strongly recommended** to provide mitigation actions that are not listed below and address a **specific** local vulnerability. You **must** describe how your jurisdiction will track and report the progress of action implementation such that an update can be provided in the next iteration of the Plan. You **must** describe existing authorities, policies, programs, **and** resources available for implementation of the chosen mitigation actions, **as well as** how your jurisdiction may improve upon these capabilities. Space has been provided for your answers after the action list.

You may also wish to consider choosing mitigation actions focused on increasing capacity for hazard mitigation actions across the board, such as integrating hazard mitigation practices into community Master Plans. In general, you are encouraged to emphasize actions that reduce the effects of hazards on new and existing buildings and infrastructure.

1. Evaluate the need for expanding coverage of warning sirens and other warning systems, and assist local governments in doing the same, along with updating existing sirens to 800mhz.
2. Encourage non-participating local governments to meet requirements and become members of Tree City USA.
3. Expand the library and increase availability of hazard mitigation GIS maps, databases, locations of critical infrastructure such as fire hydrants and curb stops, etc.
4. Assist local governments in integrating hazard mitigation principles into local Master Plans.
5. Identify potential projects to strengthen the County's infrastructure and increase its hazard resistance and encourage local governments to do the same.
6. Evaluate the necessity and viability of implementing County-wide zoning ordinances.
7. Apply for hazard mitigation grant funding for a mitigation project.
8. Evaluate and increase usage of snow fences to limit drifting along critical roadways.
9. Assist local governments in evaluating the need for construction of new local facilities or departments, or the expansion of existing facilities and departments, such as WTPs, WWTPs, and DPWs, to meet community growth.
10. Evaluate the need for a revision of FEMA flood maps and local government participation in the National Flood Insurance Program.
11. Provide NOAA weather radios to local public buildings, schools, hospitals, campgrounds, etc. for free or at a subsidized price by use of grant funding.
12. Encourage the burial of utility lines in new developments and in reconstruction of current development.
13. Become a participating member of the Michigan Emergency Management Assistance Compact (MEMAC).
14. Evaluate the viability of implementing a house numbering ordinance to improve emergency response and standardize number assignment throughout the county.

15. Ensure critical public buildings are outfitted with auxiliary sources of power, such as generators or battery systems, as necessary and assist local governments in doing the same.
16. Evaluate and ensure that enforcement of building/electrical/mechanical/plumbing codes is sufficient to ensure development adequately addresses hazard mitigation principles.
17. Evaluate the necessity and viability of developing and implementing an Ionia County Community Wildfire Protection Plan.
18. Evaluate potential state and federal sources of funding that can be used for specific hazard mitigation projects and assist local governments in doing the same.
19. Conduct a full evaluation of County hazard mitigation actions to ensure they are sufficiently meeting resident needs and assist local governments in doing the same.
20. Meet requirements and become a participating member of the National Weather Service's StormReady program.
21. Increase availability of planning documents such as the Emergency Operations Plan that provide a framework and guidance to County and local government officials for emergency/disaster response and recovery.
22. Create and implement a feedback mechanism for County residents to provide input on hazard mitigation actions, as well as to report hazards and hazardous conditions to officials.
23. Incorporate hazard mitigation principles into the County's next Capital Improvement Plan update.
24. Form an environmental review board to review land use permits, site plans, or any other applications that may pose significant impacts on the environment.
25. Work with critical facilities to develop emergency plans that take into account the unique factors of each facility (ex. evacuation needs for nursing homes or hospitals).
26. Explore the necessity and viability of establishing a Transfer of Development Rights program to limit development in high-risk areas such as floodplains.

27. Ensure the capacity for mobilization and operation of emergency shelters during an emergency or disaster event and assist local governments in doing the same.
28. Adopt an ordinance requiring the anchoring of manufactured home installations located outside of a designated floodplain and/or encourage manufactured home owners to voluntarily anchor their units.
29. Encourage local governments to adopt, implement, and maintain floodplain management practices that go beyond NFIP requirements.
30. Encourage local governments to meet requirements and become participating communities under the Community Rating System.
31. Establish public parks in identified local floodplains and assist local governments in doing the same.
32. Continue to evaluate the sufficiency of existing drainage management (culverts, drains, etc.) and identify insufficiencies.
33. Assist the Drain Commissioner's office in formalizing a maintenance plan for County drains.
34. Require notifications to/approvals from the Drain Commissioner's office for drainage tie-ins to County drains.
35. Evaluate the necessity and viability of expanding Ionia County's Communicable Disease reporting program to allow for a wider range of citizens to make related reports.
36. Disseminate disaster planning and response information to community groups and critical facilities.
37. Make available federal, state, and county emergency management, disaster preparedness, and other pertinent information on County website, ensure accessibility of information to speakers of Spanish, and assist local governments in doing the same.
38. Encourage individuals and families to develop their own disaster preparedness plans using resources such as the American Red Cross and County hazard mitigation information.

39. Assist local governments in enforcing requirements for burn permits, especially during sensitive times such as dry periods or high wind conditions.
40. Expand public education and awareness regarding activities (open burning, etc.) with the capacity to result in an uncontrolled wildfire.
41. Maintain adequate road and debris clearing capabilities and assist local governments in doing the same.
42. Apply structural hazard mitigation and sustainability concepts during construction or remodeling of government facilities and encourage local governments to do the same.
43. Promote low-impact development techniques in development that reduce stormwater runoff and resultant flooding.
44. Ensure that emergency plans continue to be maintained for Webber Dam.
45. Evaluate municipal wells for capacity to continue to meet projected growth and resultant demand and assist local governments in doing the same.
46. Evaluate the need to increase emergency/disaster response capabilities with alternative transportation vehicles (snowmobiles, ATVs, etc.)
47. Explore the necessity and viability of expanding the Ionia County Building Department's capabilities such that the County can perform duties such as permit application review and building code enforcement with in-house resources.
48. Incorporate hazard mitigation principles and priorities into the County land use plan upon its next review.
49. Continue to ensure that all current hazard mitigation actions are maintained or improved upon.

1. Evaluate the need for expanding coverage of warning sirens and other warning systems, and assist local governments in doing the same, along with updating existing sirens to 800mhz.
2. Encourage non-participating local governments to meet requirements and become members of Tree City USA.
3. Expand the library and increase availability of hazard mitigation GIS maps, databases, locations of critical infrastructure such as fire hydrants and curb stops, etc.
4. Assist local governments in integrating hazard mitigation principles into local Master Plans.
5. Identify potential projects to strengthen the County's infrastructure and increase its hazard resistance and encourage local governments to do the same.
6. Evaluate the necessity and viability of implementing County-wide zoning ordinances.
7. Apply for hazard mitigation grant funding for a mitigation project.
8. Evaluate and increase usage of snow fences to limit drifting along critical roadways.
9. Assist local governments in evaluating the need for construction of new local facilities or departments, or the expansion of existing facilities and departments, such as WTPs, WWTPs, and DPWs, to meet community growth.
10. Evaluate the need for a revision of FEMA flood maps and local government participation in the National Flood Insurance Program.
11. Provide NOAA weather radios to local public buildings, schools, hospitals, campgrounds, etc. for free or at a subsidized price by use of grant funding.
12. Encourage the burial of utility lines in new developments and in reconstruction of current development.
13. Become a participating member of the Michigan Emergency Management Assistance Compact (MEMAC).
14. Evaluate the viability of implementing a house numbering ordinance to improve emergency response and standardize number assignment throughout the county.

15. Ensure critical public buildings are outfitted with auxiliary sources of power, such as generators or battery systems, as necessary and assist local governments in doing the same.
16. Evaluate and ensure that enforcement of building/electrical/mechanical/plumbing codes is sufficient to ensure development adequately addresses hazard mitigation principles.
17. Evaluate the necessity and viability of developing and implementing an Ionia County Community Wildfire Protection Plan.
18. Evaluate potential state and federal sources of funding that can be used for specific hazard mitigation projects and assist local governments in doing the same.
19. Conduct a full evaluation of County hazard mitigation actions to ensure they are sufficiently meeting resident needs and assist local governments in doing the same.
20. Meet requirements and become a participating member of the National Weather Service's StormReady program.
21. Increase availability of planning documents such as the Emergency Operations Plan that provide a framework and guidance to County and local government officials for emergency/disaster response and recovery.
22. Create and implement a feedback mechanism for County residents to provide input on hazard mitigation actions, as well as to report hazards and hazardous conditions to officials.
23. Incorporate hazard mitigation principles into the County's next Capital Improvement Plan update.
24. Form an environmental review board to review land use permits, site plans, or any other applications that may pose significant impacts on the environment.
25. Work with critical facilities to develop emergency plans that take into account the unique factors of each facility (ex. evacuation needs for nursing homes or hospitals).
26. Explore the necessity and viability of establishing a Transfer of Development Rights program to limit development in high-risk areas such as floodplains.

27. Ensure the capacity for mobilization and operation of emergency shelters during an emergency or disaster event and assist local governments in doing the same.
28. Adopt an ordinance requiring the anchoring of manufactured home installations located outside of a designated floodplain and/or encourage manufactured home owners to voluntarily anchor their units.
29. Encourage local governments to adopt, implement, and maintain floodplain management practices that go beyond NFIP requirements.
30. Encourage local governments to meet requirements and become participating communities under the Community Rating System.
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35. Evaluate the necessity and viability of expanding Ionia County's Communicable Disease reporting program to allow for a wider range of citizens to make related reports.
36. Disseminate disaster planning and response information to community groups and critical facilities.
37. Make available federal, state, and county emergency management, disaster preparedness, and other pertinent information on County website, ensure accessibility of information to speakers of Spanish, and assist local governments in doing the same.
38. Encourage individuals and families to develop their own disaster preparedness plans using resources such as the American Red Cross and County hazard mitigation information.

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40. Expand public education and awareness regarding activities (open burning, etc.) with the capacity to result in an uncontrolled wildfire.
41. Maintain adequate road and debris clearing capabilities and assist local governments in doing the same.
42. Apply structural hazard mitigation and sustainability concepts during construction or remodeling of government facilities and encourage local governments to do the same.
43. Promote low-impact development techniques in development that reduce stormwater runoff and resultant flooding.
44. Ensure that emergency plans continue to be maintained for Webber Dam.
45. Evaluate municipal wells for capacity to continue to meet projected growth and resultant demand and assist local governments in doing the same.
46. Evaluate the need to increase emergency/disaster response capabilities with alternative transportation vehicles (snowmobiles, ATVs, etc.)
47. Explore the necessity and viability of expanding the Ionia County Building Department's capabilities such that the County can perform duties such as permit application review and building code enforcement with in-house resources.
48. Incorporate hazard mitigation principles and priorities into the County land use plan upon its next review.
49. Continue to ensure that all current hazard mitigation actions are maintained or improved upon.

SEBENA TOWNSHIP

(jurisdiction)

has selected the following mitigation action(s)

which it will implement, or fully attempt to implement, over the five-year lifespan of the finished Ionia County Hazard Mitigation Plan:

#49 Explore the necessity & viability of expanding ICBD capabilities

Upon adoption of the Ionia County Hazard Mitigation Plan - The Township of Sebena will review and adopt at the earliest possible date unless undue burden or harm is assessed by the Township of Sebena Board

SEBENA TOWNSHIP

(jurisdiction)

will leverage the following existing authorities,

policies, programs, and resources available for implementation of the above mitigation action(s):

#12 Encourage the burial of overhead lines in new & reconstruction development currently in construction

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SEBENA TOWNSHIP may improve upon these listed capabilities for  
(jurisdiction)

implementing the above mitigation action(s) in the following ways:

#47 Coordination between Township Assessor and ICBD

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SERENA TOWNSHIP will track and report the progress of the  
(jurisdiction)  
implementation of the above mitigation action(s) in the following ways:

*At least Annual contact from Supervisor to appropriate individuals,  
agencies, authorities concerning specific plans, actions,  
and activities of interest & concern to Township of Seneca  
and County of Ionia*

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## Critical Facilities

The following is a list of critical facilities within Ionia County sorted by category. FEMA defines critical facilities as "structures and institutions necessary for a community's response to and recovery from emergencies" who "must continue to operate during and following a disaster to reduce the severity of impacts and accelerate recovery". Please ensure all relevant critical facilities in your jurisdiction are accounted for in the appropriate category below and note any omissions, corrections, or additions in the space provided after the list.

### LAW ENFORCEMENT

Ionia County Sheriff Department  
City of Ionia Department of Public Safety  
City of Belding Police Department  
Michigan State Police  
Lake Odessa Police Department  
City of Portland Police Department  
Ionia Correctional Facility  
Bellamy Creek Correctional Facility  
Michigan Reformatory  
Richard A. Handlin Correctional Facility  
Ionia County Jail

### FIRE SERVICES

Hubbardston Fire Department  
City of Belding Fire Department  
Lake Odessa Fire Department  
City of Ionia Department of Public Safety, Fire Division  
Pewamo Fire Department  
Lyons-Muir Fire Department  
Saranac Fire Department  
Portland Fire Department  
Campbell Township (Clarksville) Fire Department  
Orleans Township Fire Department  
Ronald Township Fire Department  
Berlin-Orange Township Fire Department  
Grattan Township Fire Department  
Roxand Township Fire Department (Eaton County)  
Freeport Fire/Rescue (Barry County)

ADD  
SUNFIELD FIRE DEPT - SUNFIELD  
JOSHUA DANBY & all of  
SERENA

## **HEALTHCARE**

Lakewood Community Ambulance Service (located in Barry County)  
Belding Ambulance Service- Belding Fire Department  
Portland Ambulance Service- Portland Fire Department, Emergency Services Building  
Life EMS  
Sparrow Ionia Hospital  
Sparrow Group Ionia  
Sparrow Group Portland  
Ionia Senior Center  
Ionia County Health Department  
DaVita Ionia Dialysis  
Spectrum Health Family Practice

## **PUBLIC SCHOOLS**

Oakwood Elementary School  
Portland Middle School  
Westwood Elementary School  
Lakewood Elementary School  
Saranac Elementary School  
Ionia County Career Center  
Coon School  
A.A. Rather School  
Ionia High School  
Emerson School  
Ionia Middle School  
Jefferson School  
Twin Rivers Elementary School  
Haynor School  
North LeValley Elementary School  
R.B. Boyce Elementary School  
Belding Middle School  
Ellis Elementary School  
Belding High School  
Woodview Elementary School  
Saranac Jr/Sr High School

**PRIVATE SCHOOLS**

- Faith Community Christian School
- Ionia Seventh Day Adventist School
- Ss. Peter & Paul Elementary School
- St. Joseph Elementary School
- Ionia Nazarene Christian School
- Lakewood Christian School
- St. Joseph Elementary School (Belding)
- St. Joseph Elementary School (Pewamo)
- St. Patrick School

**CITY HALLS**

- Belding City Hall
- Ionia City Hall
- City of Portland Hall

**VILLAGE HALLS**

- Village of Muir Hall
- Village of Lyons Hall
- Village of Hubbardston Hall
- Village of Lake Odessa Hall
- Village of Clarksville Hall
- Village of Saranac Hall
- Village of Pewamo Hall

**TOWNSHIP HALLS**

- Campbell Township Hall
- Boston Township Hall
- Berlin Township Hall
- Keene Township Hall
- Ionia Township Hall
- Danby Township Hall
- Odessa Township Hall
- North Plains Township Hall
- Lyons Township Hall
- Ronald Township Hall
- Sebewa Township Hall
- Otisco Township Hall

Orleans Township Hall  
Orange Township Hall  
Easton Township Hall  
Portland Township Hall

**LIVING**

Lighthouse Senior Living  
Lighthouse Rehab  
Saranac Housing Commission  
Mission Point of Belding  
SKLD of Ionia  
Hope Network  
Green Acres Ionia  
Portland Assisted Living and Memory Center  
Hope Network  
Good Vibes Adult Foster Care  
Clarksville Manor

**PUBLIC WORKS**

Ionia County Road Department  
Ionia Department of Public Works  
Belding Department of Public Works  
Portland Department of Public Works

**WWTP**

Belding WWTP  
Ionia WWTP  
Portland WWTP  
Lakewood Wastewater Authority WWTP  
Clarksville-Morrison Lake WWTP  
Saranac WWSL

**UTILITIES**

Water Towers: 14  
Wind Turbines: 32  
Substations: 7

**TRAIN/BUS STATIONS/CARPOOL LOTS**

- Lake Odessa Park and Ride
- Portland – West Park and Ride
- Portland #2 (NE) Park and Ride
- Ionia/Belding Park and Ride
- Ionia Dial-A-Ride
- Belding Dial-A-Ride

**POST OFFICES**

- Belding Post Office
- Clarksville Post Office
- Hubbardston Post Office
- Ionia Post Office
- Lake Odessa Post Office
- Lyons Post Office
- Muir Post Office
- Orleans Post Office
- Pewamo Post Office
- Portland Post Office
- Saranac Post Office

**PUBLIC LIBRARIES**

- Alvah N. Belding Memorial Library
- Hall-Fowler Memorial Library
- Ionia Community Library
- Portland District Library
- Lyons Township District Library
- Lake Odessa Community Library
- Clarksville Area Library
- Saranac Public Library

**FOOD/AGRICULTURE**

- Herbruck’s Poultry Ranch
- \*\* ANY OTHER BIG ONES/COMMUNITY ANCHORS?**

**OTHER CRITICAL FACILITIES**

- \*\* ANYTHING NOTABLE?**

This list [ is | is not ] a comprehensive and applicable list of critical facilities in  
SERENA TOWNSHIP  
(jurisdiction) with Addition of SUNFIELD FIRE DEPT

If you circled "is not" for the above, please use the rest of this page to elaborate on why.

ADD SUNFIELD FIRE DEPARTMENT



TOWNSHIP OF SEBEWA- IONIA COUNTY

2975 BIPPLEY ROAD

PORTLAND, MI 48875

RESOLUTION NO. 2023-03

A RESOLUTION OF SEBEWA TOWNSHIP ADOPTING THE 2023 IONIA COUNTY HAZARD MITIGATION PLAN

JUNE 22, 2023

WHEREAS Sebewa Township recognizes the threat that natural hazards pose to people and property within Sebewa Township; and

WHEREAS Sebewa Township has prepared a multi-hazard mitigation plan, hereby known as Ionia County Hazard Mitigation Plan 2023 in accordance with the Disaster Mitigation Act of 2000; and WHEREAS the Ionia County Hazard Mitigation Plan of 2023 identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in Sebewa Township from the impacts of future hazards and disasters; and

WHEREAS adoption by Sebewa Township demonstrates their commitment to the hazard mitigation and achieving the goals outlined in the Ionia County Hazard Mitigation Plan 2023

NOW THEREFORE, BE IT RESOLVED BY THE TOWNSHIP OF SEBEWA , IONIA COUNTY, STATE OF MICHIGAN THAT

Section 1. In accordance with the Township of Sebewa, Ionia County adopts the 2023 Ionia County Hazard Mitigation Plan

Adopted by a vote of \_\_\_ in favor and \_\_\_ against, and \_\_\_ abstaining, this \_\_\_ day of \_\_\_\_\_, 2023

By John Piercefield, Supervisor \_\_\_\_\_

Attest By Marcia Lewis, Clerk \_\_\_\_\_

Approved as to Form by Marcia Lewis, Clerk \_\_\_\_\_

Supervisor  
John Piercefield  
3119 Knoll Road  
Portland, MI 48875  
517.204.2987

Clerk  
Marcia Lewis  
3688 E. Musgrove Hwy  
Lake Odessa, MI 48849  
517.566.8319

Treasurer  
Cindi Piercefield  
3119 Knoll Rd  
Portland, MI 48875  
517.204.3066

[Sebewa.supervisor@outlook.com](mailto:Sebewa.supervisor@outlook.com)

[sebewaclerk@outlook.com](mailto:sebewaclerk@outlook.com)

[sebewatreasurer@gmail.com](mailto:sebewatreasurer@gmail.com)

## Example Adoption Resolution

(LOCAL COMMUNITY)

(STATE)

RESOLUTION NO. \_\_\_\_\_

A RESOLUTION OF THE (LOCAL COMMUNITY) ADOPTING THE

(TITLE AND DATE OF MITIGATION PLAN)

WHEREAS the (local governing body) recognizes the threat that natural hazards pose to people and property within (local community); and

WHEREAS the (local community) has prepared a multi-hazard mitigation plan, hereby known as (title and date of mitigation plan) in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS (title and date of mitigation plan) identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in (local community) from the impacts of future hazards and disasters; and

WHEREAS adoption by the (local governing body) demonstrates their commitment to the hazard mitigation and achieving the goals outlined in the (title and date of mitigation plan).

NOW THEREFORE, BE IT RESOLVED BY THE (LOCAL COMMUNITY), (STATE), THAT:

Section 1. In accordance with (local rule for adopting resolutions), the (local governing body) adopts the (title and date of mitigation plan).

ADOPTED by a vote of \_\_\_\_ in favor and \_\_\_\_ against, and \_\_\_\_ abstaining, this \_\_\_\_ day of

\_\_\_\_\_, \_\_\_\_\_.

By: \_\_\_\_\_

(print name)

ATTEST:

By: \_\_\_\_\_

(print name)

APPROVED AS TO FORM:

By: \_\_\_\_\_

(print name)

SEBEWA TOWNSHIP - IONIA COUNTY  
2975 BIPPLEY ROAD PORTLAND, MI 48875  
Settled in 1838 - Established on March 19, 1845

**PROPOSED HAZARD MITIGATION PLAN FOR SEBEWA TOWNSHIP**

Frederick Straubel  
Director of Ionia County Emergency Management

Mr Straubel

In light of our rural characteristics and dispersed population throughout Sebewa Township, I believe we could benefit from an emergency warning siren system. The Township Hall is located at 2975 Bippley Road, which is almost the central location of our boundaries. An early warning siren could probably reach our borders alerting such things as tornados or other emergency alarms .

We are uncertain of the outcome of this idea and have not explored the extent of effectiveness, cost or public acceptance, but have identified this as our best resource for our Emergency Hazard Mitigation Plan

Respectfully submitted,  
John Piercefield  
Sebewa Supervisor

Supervisor  
John Piercefield  
3119 Knoll Road  
Portland, MI 48875  
517.204.2987  
[Sebewa.supervisor@outlook.com](mailto:Sebewa.supervisor@outlook.com)  
[sebewatreasurer@gmail.com](mailto:sebewatreasurer@gmail.com)

Clerk  
Marcia Lewis  
3688 E. Musgrove Hwy  
Lake Odessa, MI 48849  
517.566.8319  
[sebewaclerk@outlook.com](mailto:sebewaclerk@outlook.com)

Treasurer  
Cindi Piercefield  
3119 Knoll Rd  
Portland, MI 48875  
517.204.3066



## Ionia County Hazard Mitigation Plan Development Municipality Participation and Involvement Document

Ionia County is currently in the process of developing a county-wide Hazard Mitigation Plan in coordination with Fleis & VandenBrink. Having an approved Plan allows for the County to take advantage of funding through multiple FEMA grants that are aimed at supporting projects considering hazard mitigation actions. Municipalities within the County are able to take advantage of this funding as well if they are involved in the development of the Plan; for a municipality to be considered as having been involved in the development of a Plan, they must meet a certain level of participation as required by FEMA.

Some of you have already participated in this Plan development process through a comprehensive survey distributed earlier in the Plan development cycle and through other lines of related communication. The feedback received has been a key consideration in Plan development and so we thank you for your previous participation. This document is intended to ensure that every municipality in Ionia County can readily meet the minimum threshold of participation in Plan development in a standardized way and thus take advantage of these grant funding sources for future local projects. **Your jurisdiction must complete this document to be counted as a participating member of the Plan. The completed document must be returned by June 23<sup>rd</sup>, 2023 to Tage Heyn via email (see below) or regular mail (Tage Heyn c/o Fleis & VandenBrink, 2960 Lucerne Dr SE, Grand Rapids MI 49546). Failure to do so will constitute non-participation in the Plan's development and will render your jurisdiction ineligible for Hazard Mitigation Assistance grants.**

If you have any questions or comments while completing this document, please reach out to Tage Heyn at [theyn@fveng.com](mailto:theyn@fveng.com) or Jason Pattok at [jpattok@ioniacounty.org](mailto:jpattok@ioniacounty.org). Thank you for your time and participation in this development process!

You may find the following resources useful:

<https://www.fema.gov/grants/mitigation> | Information about these grants and their scope.

<https://www.fema.gov/emergency-managers/risk-management/hazard-mitigation-planning> | Information about hazard mitigation planning in general.

<https://www.fema.gov/grants/mitigation/building-resilient-infrastructure-communities/after-apply/fy-2021-subapplication-status> | Applications for BRIC grant funding from 2021 (bottom of page), showing project type and funding amount requested, as well as the status of each application.

## Introduction:

Name:

Shari Clark

Title:

Village Clerk

Jurisdiction representing:

Village of Clarksville

Email address:

Clarksville mi@clarksville mi, org

## Resolution of Adoption:

This Hazard Mitigation Plan will be adopted as an official plan of Ionia County upon its completion. Participating jurisdictions **must** adopt the finished Plan as well. A template adoption resolution is attached to the end of this document for reference.

Village of Clarksville [ will | will not ] adopt the Ionia County  
(jurisdiction) (circle one)

Hazard Mitigation Plan as an official municipal plan upon its completion.

Village of Clarksville [ will | will not ] participate in efforts to  
(jurisdiction) (circle one)

implement and update the plan throughout its five-year lifespan.

## Hazard Identification and Ranking

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The following is the list of natural hazards identified by the Ionia County Hazard Mitigation Planning Committee as having the potential to affect Ionia County. These hazards have been ranked by their Risk Assessment Value, which is a number calculated by formulaic consideration of the hazards' probability of occurrence, severity of impacts, and expected future change of event frequency. Their order in the below list reflects this ranking, with the "most important" hazards for mitigation action at the top and the "least important" at the bottom.

Floods  
Severe Winds  
Ice/Sleet Storms  
Hail  
Tornadoes  
Winter Storms/Heavy Snow Events/Blizzards  
Drought  
Thunderstorms/Lightning  
Dam Failures  
Extreme Cold  
Extreme Heat  
Public Health Emergencies  
Fog  
Subsidence  
Invasive Species  
Wildfires  
Earthquakes  
Space Weather  
Impacting Objects (Celestial)

This list [  is | is not ] a comprehensive list of natural hazards with the potential to affect Village of Clarksville.  
(jurisdiction)

The ranking of this list [  is | is not ] representative of the relative risk these hazards pose to Village of Clarksville.  
(jurisdiction)

If you circled "is not" for either of the two previous items, please use this page for elaboration. You may offer a re-ordered list or add items as desired.

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## Mitigation Capability

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The overarching purpose of hazard mitigation planning is to reduce or eliminate long-term risk to life and property from the occurrence of hazard events. To realize this purpose, Ionia County has set the following long-term goals:

Goal: Minimize injuries and deaths caused by or related to hazard events.

Goal: Minimize the loss or damage of public and private property from hazard events.

Goal: Promote community awareness, understanding, cooperation, and participation in hazard mitigation actions.

Goal: Promote local growth and development through a lens of hazard mitigation.

Each jurisdiction within Ionia County has different capabilities for engaging in mitigation activities and working towards accomplishing these goals. FEMA has identified the following four primary types of capabilities in their planning handbook:

- Planning and Regulatory – implementation and enforcement of plans, policies, codes, ordinances, local and State law, etc.
- Administrative and Technical – departments, personnel, equipment, coordination with other public and private entities, etc.
- Financial – availability of funding or ability to secure funding through taxes, grants, etc.
- Education and Outreach – ability to engage and communicate hazard mitigation information to the public.

FEMA **requires** local communities who are participating in the development of a hazard mitigation plan to evaluate their capabilities for accomplishing hazard mitigation goals. For **each** capability listed above, you **must** describe existing authorities, policies, programs, and resources available for implementation of hazard mitigation actions and projects that lean on that capability, **as well as** how your jurisdiction may improve upon these capabilities. These do not need to be long descriptions, but they **must** include all elements as stated above. You **must** summarize your jurisdiction's capability as being **low, medium, or high** – you can circle the corresponding word at the top of the following four pages, where space has also been provided for your written answers. You may wish to refer to the list of mitigation actions under consideration by the County included later in this document for additional context.

Village of Clarksville previously adopted Ordinance #62 Addressing Floodplain Management Provisions of the State Construction Code and Resolution #2015-01 Intent for Participation in the National Flood Insurance Program (NFIP). Although at that time FEMA had not mapped any flood zones within the village limits, this enables residents the option to purchase flood insurance at a discounted rate through FEMA if they choose to

Village of Clarksville designates Ionia County Building Department to enforce building code. The village also relies on Ionia County Drain Commissioner when tying into county drains and contracts with Fleis & Vandenbrink Engineering to study and map out <sup>village</sup> storm drains

The Village of Clarksville completed a Storm Water Asset Grant (SAW) in order to determine and prioritize needs and solutions

There is a need to develop a list of who to call for what issues. Village of Clarksville relies on Campbell Township (Clarksville) Fire Department to handle all emergency situations.

The Village owned Emergency Warning Siren is placed on and operated by Campbell Township (Clarksville) Fire Department.

Clarksville does not have a local police department. The Village relies on Ionia County Sheriff Department and Michigan State Police. The Village also contracts with Ionia County Sheriff Dept. for 8 additional hours of surveillance per month.

The Village of Clarksville will continue our plan to improve stormwater capacity. Recently sought out EGLE CWSRF grant but determined we would be ineligible since grant was aimed more at water quality (Clarksville does not have city water) and doesn't really consider the stormwater flooding challenges our village has. The Village will continue to work closely with Fleis & Vandenbrink Engineering to seek out future grant opportunities.

As budget allows, Village of Clarksville intends to continue to upgrade our stormwater system as outlined in our Stormwater Asset Management Plan. The needs greatly exceed village budget capabilities, emergent needs continue to get addressed first, the Village attempts to prioritize projects with highest needs and coordinate with other projects.

The Village of Clarksville cannot afford a local police dept.

Our Street Commissioner and Assistant Street Commissioner are working on utilizing tools learning how to access information on tablet with Village Storm Drain Data.

Communication between Clarksville-Morrison Lake Sewer Authority open to determine future sewer capacity, should it become limited.

Village of Clarksville utilizes email, phone, electronic sign, notice boards, website, and Facebook for community to reach out for information.

## Mitigation Actions

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Ionia County has identified a list of hazard mitigation actions to work towards implementing on the county level over the five-year lifespan of the finished Plan; this unsorted list is included below for your reference. Now that you have characterized your jurisdiction's hazard mitigation capabilities, you **must** also identify and select at least one mitigation action that your jurisdiction will implement, or fully attempt to implement, over the five-year lifespan of the finished Plan. You may choose from the list in this document, but you are **strongly recommended** to provide mitigation actions that are not listed below and address a **specific** local vulnerability. You **must** describe how your jurisdiction will track and report the progress of action implementation such that an update can be provided in the next iteration of the Plan. You **must** describe existing authorities, policies, programs, and resources available for implementation of the chosen mitigation actions, as well as how your jurisdiction may improve upon these capabilities. Space has been provided for your answers after the action list.

You may also wish to consider choosing mitigation actions focused on increasing capacity for hazard mitigation actions across the board, such as integrating hazard mitigation practices into community Master Plans. In general, you are encouraged to emphasize actions that reduce the effects of hazards on new and existing buildings and infrastructure.

1. Evaluate the need for expanding coverage of warning sirens and other warning systems, and assist local governments in doing the same, along with updating existing sirens to 800mhz.
2. Encourage non-participating local governments to meet requirements and become members of Tree City USA.
3. Expand the library and increase availability of hazard mitigation GIS maps, databases, locations of critical infrastructure such as fire hydrants and curb stops, etc.
4. Assist local governments in integrating hazard mitigation principles into local Master Plans.
5. Identify potential projects to strengthen the County's infrastructure and increase its hazard resistance and encourage local governments to do the same.
6. Evaluate the necessity and viability of implementing County-wide zoning ordinances.
7. Apply for hazard mitigation grant funding for a mitigation project.
8. Evaluate and increase usage of snow fences to limit drifting along critical roadways.
9. Assist local governments in evaluating the need for construction of new local facilities or departments, or the expansion of existing facilities and departments, such as WTPs, WWTPs, and DPWs, to meet community growth.
10. Evaluate the need for a revision of FEMA flood maps and local government participation in the National Flood Insurance Program.
11. Provide NOAA weather radios to local public buildings, schools, hospitals, campgrounds, etc. for free or at a subsidized price by use of grant funding.
12. Encourage the burial of utility lines in new developments and in reconstruction of current development.
13. Become a participating member of the Michigan Emergency Management Assistance Compact (MEMAC).
14. Evaluate the viability of implementing a house numbering ordinance to improve emergency response and standardize number assignment throughout the county.

15. Ensure critical public buildings are outfitted with auxiliary sources of power, such as generators or battery systems, as necessary and assist local governments in doing the same.
16. Evaluate and ensure that enforcement of building/electrical/mechanical/plumbing codes is sufficient to ensure development adequately addresses hazard mitigation principles.
17. Evaluate the necessity and viability of developing and implementing an Ionia County Community Wildfire Protection Plan.
18. Evaluate potential state and federal sources of funding that can be used for specific hazard mitigation projects and assist local governments in doing the same.
19. Conduct a full evaluation of County hazard mitigation actions to ensure they are sufficiently meeting resident needs and assist local governments in doing the same.
20. Meet requirements and become a participating member of the National Weather Service's StormReady program.
21. Increase availability of planning documents such as the Emergency Operations Plan that provide a framework and guidance to County and local government officials for emergency/disaster response and recovery.
22. Create and implement a feedback mechanism for County residents to provide input on hazard mitigation actions, as well as to report hazards and hazardous conditions to officials.
23. Incorporate hazard mitigation principles into the County's next Capital Improvement Plan update.
24. Form an environmental review board to review land use permits, site plans, or any other applications that may pose significant impacts on the environment.
25. Work with critical facilities to develop emergency plans that take into account the unique factors of each facility (ex. evacuation needs for nursing homes or hospitals).
26. Explore the necessity and viability of establishing a Transfer of Development Rights program to limit development in high-risk areas such as floodplains.

27. Ensure the capacity for mobilization and operation of emergency shelters during an emergency or disaster event and assist local governments in doing the same.
28. Adopt an ordinance requiring the anchoring of manufactured home installations located outside of a designated floodplain and/or encourage manufactured home owners to voluntarily anchor their units.
29. Encourage local governments to adopt, implement, and maintain floodplain management practices that go beyond NFIP requirements.
30. Encourage local governments to meet requirements and become participating communities under the Community Rating System.
31. Establish public parks in identified local floodplains and assist local governments in doing the same.
32. Continue to evaluate the sufficiency of existing drainage management (culverts, drains, etc.) and identify insufficiencies.
33. Assist the Drain Commissioner's office in formalizing a maintenance plan for County drains.
34. Require notifications to/approvals from the Drain Commissioner's office for drainage tie-ins to County drains.
35. Evaluate the necessity and viability of expanding Ionia County's Communicable Disease reporting program to allow for a wider range of citizens to make related reports.
36. Disseminate disaster planning and response information to community groups and critical facilities.
37. Make available federal, state, and county emergency management, disaster preparedness, and other pertinent information on County website, ensure accessibility of information to speakers of Spanish, and assist local governments in doing the same.
38. Encourage individuals and families to develop their own disaster preparedness plans using resources such as the American Red Cross and County hazard mitigation information.

39. Assist local governments in enforcing requirements for burn permits, especially during sensitive times such as dry periods or high wind conditions.
40. Expand public education and awareness regarding activities (open burning, etc.) with the capacity to result in an uncontrolled wildfire.
41. Maintain adequate road and debris clearing capabilities and assist local governments in doing the same.
42. Apply structural hazard mitigation and sustainability concepts during construction or remodeling of government facilities and encourage local governments to do the same.
43. Promote low-impact development techniques in development that reduce stormwater runoff and resultant flooding.
44. Ensure that emergency plans continue to be maintained for Webber Dam.
45. Evaluate municipal wells for capacity to continue to meet projected growth and resultant demand and assist local governments in doing the same.
46. Evaluate the need to increase emergency/disaster response capabilities with alternative transportation vehicles (snowmobiles, ATVs, etc.)
47. Explore the necessity and viability of expanding the Ionia County Building Department's capabilities such that the County can perform duties such as permit application review and building code enforcement with in-house resources.
48. Incorporate hazard mitigation principles and priorities into the County land use plan upon its next review.
49. Continue to ensure that all current hazard mitigation actions are maintained or improved upon.

Village of Clarksville  
(jurisdiction)

has selected the following mitigation action(s)

which it will implement, or fully attempt to implement, over the five-year lifespan of the finished Ionia County Hazard Mitigation Plan:

1. Create an Emergency Operation Plan for Village officials to utilize.
2. Update Master Plan to include Emergency Flood Plan Management and Flood/Storm Drains.
3. Adopt an Ordinance to outline guidelines for storm drain easements based on line size and depth.
4. Emergency Shelter for Community (power outage, ice, wind, etc.)

Village of Clarksville  
(jurisdiction)

will leverage the following existing authorities,

policies, programs, and resources available for implementation of the above mitigation action(s):

1. Rely on Ionia County Sheriff, Michigan State Police. Campbell Township (Clarksville) Fire Department may be able to point out best resources within our area.
2. Village Master Plan will be updated as recommended by Village Planning Commission.
3. Village would like to be able to add or designate some duties to Ionia County Drain Commissioner in regard to Village Storm Drains.
4. Clarksville Village Hall is available but subject to same issues as residential homes (power outage, ice, wind, etc.)

Continued →

implementation → continued:

1. The Village of Clarksville currently reaches out to Ionia County Sheriff, Michigan State Police, and Campbell Township (Clarksville) Fire Department to assist in all emergencies and will continue to do so.
2. Public Hearing will be held to update Village Master Plan, adjacent municipalities will be notified for comment. Ionia County does not have zoning, <sup>county</sup> Planning Commission is inactive.
3. Village clerk will work on drafting ordinance seeking example from Ionia County Drain Commission.
4. Village will seek out options and is willing to partner with Campbell Township.

Village of Clarksville may improve upon these listed capabilities for  
(jurisdiction)

implementing the above mitigation action(s) in the following ways:

1. This <sup>emergency</sup> contact list to include who to call for specific needs/emergency situations
2. Continue to work with engineers to map out old storm drains.
3. Communication w/Ionia County Drain Commissioner, Village Zoning Administrator simply needs to be aware of building setbacks from drains prior to approving Village Zoning Permit Applications.
4. Campbell Township has emergency backup generator. Village of Clarksville does not.

Village of Clarksville will track and report the progress of the  
(jurisdiction)

implementation of the above mitigation action(s) in the following ways:

1. A report will be shared w/ Clarksville Village Council and  
Village Planning Commission.

2. The Village Master Plan 2021 should be updated by  
Year 2026.

3. Clarksville Village Council formally adopts ordinance,  
published in newspaper.

4. Village Clerk will report at Council Meeting,  
Solutions will be sought out.

## Critical Facilities

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The following is a list of critical facilities within Ionia County sorted by category. FEMA defines critical facilities as "structures and institutions necessary for a community's response to and recovery from emergencies" who "must continue to operate during and following a disaster to reduce the severity of impacts and accelerate recovery". Please ensure all relevant critical facilities in your jurisdiction are accounted for in the appropriate category below and note any omissions, corrections, or additions in the space provided after the list.

### LAW ENFORCEMENT

Ionia County Sheriff Department ✓  
City of Ionia Department of Public Safety  
City of Belding Police Department  
Michigan State Police ✓  
Lake Odessa Police Department  
City of Portland Police Department  
Ionia Correctional Facility  
Bellamy Creek Correctional Facility  
Michigan Reformatory  
Richard A. Handlin Correctional Facility  
Ionia County Jail

### FIRE SERVICES

Hubbardston Fire Department  
City of Belding Fire Department  
Lake Odessa Fire Department  
City of Ionia Department of Public Safety, Fire Division  
Pewamo Fire Department  
Lyons-Muir Fire Department  
Saranac Fire Department  
Portland Fire Department  
Campbell Township (Clarksville) Fire Department ✓  
Orleans Township Fire Department  
Ronald Township Fire Department  
Berlin-Orange Township Fire Department  
Grattan Township Fire Department  
Roxand Township Fire Department (Eaton County)  
Freeport Fire/Rescue (Barry County)

## HEALTHCARE

Lakewood Community Ambulance Service (located in Barry County)

Belding Ambulance Service- Belding Fire Department

Portland Ambulance Service- Portland Fire Department, Emergency Services Building

Life EMS ✓ ?

Sparrow Ionia Hospital

Sparrow Group Ionia

Sparrow Group Portland

Ionia Senior Center

Ionia County Health Department

DaVita Ionia Dialysis

Spectrum Health Family Practice

## PUBLIC SCHOOLS

Oakwood Elementary School

Portland Middle School

Westwood Elementary School

Lakewood Elementary School ✓

Saranac Elementary School

Ionia County Career Center

Coon School

A.A. Rather School

Ionia High School

Emerson School

Ionia Middle School

Jefferson School

Twin Rivers Elementary School

Haynor School

North LeValley Elementary School

R.B. Boyce Elementary School

Belding Middle School

Ellis Elementary School

Belding High School

Woodview Elementary School

Saranac Jr/Sr High School

#### **PRIVATE SCHOOLS**

Faith Community Christian School  
Ionia Seventh Day Adventist School  
Ss. Peter & Paul Elementary School  
St. Joseph Elementary School  
Ionia Nazarene Christian School  
Lakewood Christian School  
St. Joseph Elementary School (Belding)  
St. Joseph Elementary School (Pewamo)  
St. Patrick School

#### **CITY HALLS**

Belding City Hall  
Ionia City Hall  
City of Portland Hall

#### **VILLAGE HALLS**

Village of Muir Hall  
Village of Lyons Hall  
Village of Hubbardston Hall  
Village of Lake Odessa Hall  
Village of Clarksville Hall ✓  
Village of Saranac Hall  
Village of Pewamo Hall

#### **TOWNSHIP HALLS**

Campbell Township Hall ✓  
Boston Township Hall  
Berlin Township Hall  
Keene Township Hall  
Ionia Township Hall  
Danby Township Hall  
Odessa Township Hall  
North Plains Township Hall  
Lyons Township Hall  
Ronald Township Hall  
Sebewa Township Hall  
Otisco Township Hall

Orleans Township Hall  
Orange Township Hall  
Easton Township Hall  
Portland Township Hall

#### LIVING

Lighthouse Senior Living  
Lighthouse Rehab  
Saranac Housing Commission  
Mission Point of Belding  
SKLD of Ionia  
Hope Network  
Green Acres Ionia  
Portland Assisted Living and Memory Center  
Hope Network  
Good Vibes Adult Foster Care  
Clarksville ~~Manor~~ <sup>Area</sup> Senior Housing / Bear Creek Villa ✓

#### PUBLIC WORKS

— Ionia County Road Department ✓  
Ionia Department of Public Works  
Belding Department of Public Works  
Portland Department of Public Works

#### WWTP

Belding WWTP  
Ionia WWTP  
Portland WWTP  
Lakewood Wastewater Authority WWTP  
Clarksville-Morrison Lake WWTP  
Saranac WWSL <sup>Sewer Authority</sup> ✓

#### UTILITIES

Water Towers: 14  
Wind Turbines: 32  
Substations: 7 — 2 within village limits ✓

#### **TRAIN/BUS STATIONS/CARPOOL LOTS**

Lake Odessa Park and Ride  
Portland – West Park and Ride  
Portland #2 (NE) Park and Ride  
Ionia/Belding Park and Ride  
Ionia Dial-A-Ride  
Belding Dial-A-Ride

#### **POST OFFICES**

Belding Post Office  
Clarksville Post Office ✓  
Hubbardston Post Office  
Ionia Post Office  
Lake Odessa Post Office  
Lyons Post Office  
Muir Post Office  
Orleans Post Office  
Pewamo Post Office  
Portland Post Office  
Saranac Post Office

#### **PUBLIC LIBRARIES**

Alvah N. Belding Memorial Library  
Hall-Fowler Memorial Library  
Ionia Community Library  
Portland District Library  
Lyons Township District Library  
Lake Odessa Community Library  
Clarksville Area Library ✓  
Saranac Public Library

#### **FOOD/AGRICULTURE**

Herbruck's Poultry Ranch  
\*\* ANY OTHER BIG ONES/COMMUNITY ANCHORS?

#### **OTHER CRITICAL FACILITIES**

\*\* ANYTHING NOTABLE? CSX RR ✓

This list [ is is not ] a comprehensive and applicable list of critical facilities in

Village of Clarksville.

(jurisdiction)

If you circled "is not" for the above, please use the rest of this page to elaborate on why.

CSX Rail Road runs through the Village.

Since there is no mention, it should perhaps be  
added someplace. The potential for an  
emergency is possible and should be  
noted, taken into consideration.

You have completed the required portion of this document. Thank you once again for your time and participation. Access to hazard mitigation funding can be the difference between a viable infrastructure project and a missed opportunity. These last two pages are here for any additional comments or information you'd like to share to ensure your jurisdiction is sufficiently represented in the County Plan.

as mentioned on previous page. Potential  
hazards should be noted for rail road  
also

Clarksville is fairly close to GRF Airport,  
planes preparing for landing nearby Kent County  
may also be considered.



## Example Adoption Resolution

(LOCAL COMMUNITY)

(STATE)

RESOLUTION NO. \_\_\_\_\_

A RESOLUTION OF THE (LOCAL COMMUNITY) ADOPTING THE  
(TITLE AND DATE OF MITIGATION PLAN)

WHEREAS the (local governing body) recognizes the threat that natural hazards pose to people and property within (local community); and

WHEREAS the (local community) has prepared a multi-hazard mitigation plan, hereby known as (title and date of mitigation plan) in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS (title and date of mitigation plan) identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in (local community) from the impacts of future hazards and disasters; and

WHEREAS adoption by the (local governing body) demonstrates their commitment to the hazard mitigation and achieving the goals outlined in the (title and date of mitigation plan).

NOW THEREFORE, BE IT RESOLVED BY THE (LOCAL COMMUNITY), (STATE), THAT:

Section 1. In accordance with (local rule for adopting resolutions), the (local governing body) adopts the (title and date of mitigation plan).

ADOPTED by a vote of \_\_\_\_ in favor and \_\_\_\_ against, and \_\_\_\_ abstaining, this \_\_\_\_ day of

\_\_\_\_\_, \_\_\_\_\_.

By: \_\_\_\_\_

(print name)

ATTEST:

By: \_\_\_\_\_

(print name)

APPROVED AS TO FORM:

By: \_\_\_\_\_

(print name)

# VILLAGE OF CLARKSVILLE

162 S. MAIN  
P.O. Box 118  
CLARKSVILLE, MI 48815

**Amy Byers, President**  
**Shari Clark, Clerk**  
**Rose Barratt, Treasurer**  
**Main**

**TRUSTEES**  
**Brad Clark**  
**Bonnie**

**Patricia Reser**  
**Allen Sheldon**  
**Debra Winkler**  
**Scott Briggs**

August 11, 2024

Village of Clarksville Hazard Mitigation Plan:

The Village of Clarksville, to mitigate a future hazard should consider and plan for situations such as a hazardous material spill if a train wreck (CSX Crossing) or a plane crash (we are in the path of the GRF airport) . . . this type of situation would be coordinated by the fire department, village officials need to develop a plan with the township how they can assist.

If there were a serious car pile-up on I-96 the Clarksville Village Hall could be a place to go during extreme weather that emergency personnel could bring people to. A contact list for appropriate Village Officials needs to be published to share with Ionia County Emergency Management in this type of instance to open up the building and provide any needed supplies. An inventory of supplies such as blankets & water should be kept on hand.

Some Village officials have taken FEMA training and the village encourages other officials to update or take training as well.

The Village of Clarksville has always relied on Campbell Township Fire Department for emergency services. A contact list of village officials is available to the fire department if needed to coordinate any services. (An example is when a building blew down on Main Street, the Village President and Clerk were available to assist as needed and provided space. Over the next few days, even the local bank operated out of the Clarksville Village Hall due to the building demolition clean-up they were adjacent to for safety reasons).

In case of certain emergency situations, such as a tornado, the Village of Clarksville is currently seeking out public buildings with basements that may be used as a tornado shelter (such as Clarksville Bible Church and the Clarksville Library) which could be made available to the public. An emergency contact list should be shared between the church/library and Village Officials.

In case of a power outage, research generator rental options and seek options to offer a cooling or warming shelter (the Clarksville Village Hall may be used - however the village may contemplate purchase of a generator to enable the a/c or heat to work during a power outage). Note: Campbell Township fire station has a backup generator, the Clarksville Village Hall does not.

The Village of Clarksville has had extensive studies, seeking ways to improve storm water capacity, and continues to upgrade stormwater infrastructure within its budget capabilities. The cost is much more than the village has funds, so the process is gradual. This ties directly to stormwater flooding management. The Village of Clarksville could utilize assistance from the Ionia County Drain Commission.

Prepared by,  
Shari Clark, Village Clerk

# VILLAGE OF CLARKSVILLE

162 S. MAIN  
P.O. Box 118  
CLARKSVILLE, MI 48815

*Amy Byers, President*  
*Shari Clark, Clerk*  
*Rose Barratt, Treasurer*  
*Main*

**TRUSTEES**  
*Brad Clark*  
*Bonnie*

*Patricia Reser*  
*Allen Sheldon*  
*Debra Winkler*  
*Scott Briggs*



## Ionia County Hazard Mitigation Plan Development Municipality Participation and Involvement Document

Ionia County is currently in the process of developing a county-wide Hazard Mitigation Plan in coordination with Fleis & VandenBrink. Having an approved Plan allows for the County to take advantage of funding through multiple FEMA grants that are aimed at supporting projects considering hazard mitigation actions. Municipalities within the County are able to take advantage of this funding as well if they are involved in the development of the Plan; for a municipality to be considered as having been involved in the development of a Plan, they must meet a certain level of participation as required by FEMA.

Some of you have already participated in this Plan development process through a comprehensive survey distributed earlier in the Plan development cycle and through other lines of related communication. The feedback received has been a key consideration in Plan development and so we thank you for your previous participation. This document is intended to ensure that every municipality in Ionia County can readily meet the minimum threshold of participation in Plan development in a standardized way and thus take advantage of these grant funding sources for future local projects. **Your jurisdiction must complete this document to be counted as a participating member of the Plan. The completed document must be returned by June 23<sup>rd</sup>, 2023 to Tage Heyn via email (see below) or regular mail (Tage Heyn c/o Fleis & VandenBrink, 2960 Lucerne Dr SE, Grand Rapids MI 49546). Failure to do so will constitute non-participation in the Plan's development and will render your jurisdiction ineligible for Hazard Mitigation Assistance grants.**

If you have any questions or comments while completing this document, please reach out to Tage Heyn at [theyn@fveng.com](mailto:theyn@fveng.com) or Jason Pattok at [jpattok@ioniacounty.org](mailto:jpattok@ioniacounty.org). Thank you for your time and participation in this development process!

You may find the following resources useful:

<https://www.fema.gov/grants/mitigation> | Information about these grants and their scope.

<https://www.fema.gov/emergency-managers/risk-management/hazard-mitigation-planning> | Information about hazard mitigation planning in general.

<https://www.fema.gov/grants/mitigation/building-resilient-infrastructure-communities/after-apply/fy-2021-subapplication-status> | Applications for BRIC grant funding from 2021 (bottom of page), showing project type and funding amount requested, as well as the status of each application.

## Introduction:

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Name: Ben Geiger

---

Title: Village Manager

---

Jurisdiction representing: Village of Lake Odessa

---

Email address: bgeiger@lakeodessa.org

---

## Resolution of Adoption:

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This Hazard Mitigation Plan will be adopted as an official plan of Ionia County upon its completion. Participating jurisdictions **must** adopt the finished Plan as well. A template adoption resolution is attached to the end of this document for reference.

Village of Lake Odessa \_\_\_\_\_ [ will | will not ] adopt the Ionia County  
(jurisdiction) (circle one)

Hazard Mitigation Plan as an official municipal plan upon its completion.

Village of Lake Odessa \_\_\_\_\_ [ will | will not ] participate in efforts to  
(jurisdiction) (circle one)

implement and update the plan throughout its five-year lifespan.

## Hazard Identification and Ranking

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The following is the list of natural hazards identified by the Ionia County Hazard Mitigation Planning Committee as having the potential to affect Ionia County. These hazards have been ranked by their Risk Assessment Value, which is a number calculated by formulaic consideration of the hazards' probability of occurrence, severity of impacts, and expected future change of event frequency. Their order in the below list reflects this ranking, with the "most important" hazards for mitigation action at the top and the "least important" at the bottom.

Floods  
Severe Winds  
Ice/Sleet Storms  
Hail  
Tornadoes  
Winter Storms/Heavy Snow Events/Blizzards  
Drought  
Thunderstorms/Lightning  
Dam Failures  
Extreme Cold  
Extreme Heat  
Public Health Emergencies  
Fog  
Subsidence  
Invasive Species  
Wildfires  
Earthquakes  
Space Weather  
Impacting Objects (Celestial)

This list [  is |  is not ] a comprehensive list of natural hazards with the potential to affect the Village of Lake Odessa.  
(jurisdiction)

The ranking of this list [  is |  is not ] representative of the relative risk these hazards pose to the Village of Lake Odessa.  
(jurisdiction)



## Mitigation Capability

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The overarching purpose of hazard mitigation planning is to reduce or eliminate long-term risk to life and property from the occurrence of hazard events. To realize this purpose, Ionia County has set the following long-term goals:

Goal: Minimize injuries and deaths caused by or related to hazard events.

Goal: Minimize the loss or damage of public and private property from hazard events.

Goal: Promote community awareness, understanding, cooperation, and participation in hazard mitigation actions.

Goal: Promote local growth and development through a lens of hazard mitigation.

Each jurisdiction within Ionia County has different capabilities for engaging in mitigation activities and working towards accomplishing these goals. FEMA has identified the following four primary types of capabilities in their planning handbook:

- Planning and Regulatory – implementation and enforcement of plans, policies, codes, ordinances, local and State law, etc.
- Administrative and Technical – departments, personnel, equipment, coordination with other public and private entities, etc.
- Financial – availability of funding or ability to secure funding through taxes, grants, etc.
- Education and Outreach – ability to engage and communicate hazard mitigation information to the public.

FEMA **requires** local communities who are participating in the development of a hazard mitigation plan to evaluate their capabilities for accomplishing hazard mitigation goals. For **each** capability listed above, you **must** describe existing authorities, policies, programs, **and** resources available for implementation of hazard mitigation actions and projects that lean on that capability, **as well as** how your jurisdiction may improve upon these capabilities. These do not need to be long descriptions, but they **must** include all elements as stated above. You **must** summarize your jurisdiction's capability as being **low, medium, or high** – you can circle the corresponding word at the top of the following four pages, where space has also been provided for your written answers. You may wish to refer to the list of mitigation actions under consideration by the County included later in this document for additional context.

Summary of **Planning and Regulatory** capabilities: [ Low | **Medium** | High ]

Staff are trained in their individual roles. Regularly meet with other local leaders to refine disaster response plans. Familiar with Michigan's local emergency operation guidelines and statutes. Proactive in outreach with other local leaders. Despite different positions, all village staff place compliance with local, state and federal rules as a top priority.

Summary of **Administrative and Technical** capabilities: [ Low | **Medium** | High ]

As mentioned, staff has deep knowledge and understanding of individual roles. Incorporation of continuous education and training limited by small staff, limited equipment, geographic location and Village resources.

Summary of **Financial** capabilities: [ Low | **Medium** | High ]

Village maintains an appropriate fund balance for its size. However, given the cost of new equipment, major capital purchases with replacement schedule would not be sustainable.

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Summary of **Education and Outreach** capabilities: [ Low | **Medium** | High ]

Lake Odessa has an engaged population. However, it is extremely challenging to dedicate staff time to writing an effective curriculum with outreach and marking plans.

## Mitigation Actions

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Ionia County has identified a list of hazard mitigation actions to work towards implementing on the county level over the five-year lifespan of the finished Plan; this unsorted list is included below for your reference. Now that you have characterized your jurisdiction’s hazard mitigation capabilities, you **must** also identify and select **at least one** mitigation action that your jurisdiction will implement, or fully attempt to implement, over the five-year lifespan of the finished Plan. You may choose from the list in this document, but you are **strongly recommended** to provide mitigation actions that are not listed below and address a **specific** local vulnerability. You **must** describe how your jurisdiction will track and report the progress of action implementation such that an update can be provided in the next iteration of the Plan. You **must** describe existing authorities, policies, programs, **and** resources available for implementation of the chosen mitigation actions, **as well as** how your jurisdiction may improve upon these capabilities. Space has been provided for your answers after the action list.

You may also wish to consider choosing mitigation actions focused on increasing capacity for hazard mitigation actions across the board, such as integrating hazard mitigation practices into community Master Plans. In general, you are encouraged to emphasize actions that reduce the effects of hazards on new and existing buildings and infrastructure.

1. Evaluate the need for expanding coverage of warning sirens and other warning systems, and assist local governments in doing the same, along with updating existing sirens to 800mhz.
2. Encourage non-participating local governments to meet requirements and become members of Tree City USA.
3. Expand the library and increase availability of hazard mitigation GIS maps, databases, locations of critical infrastructure such as fire hydrants and curb stops, etc.
4. Assist local governments in integrating hazard mitigation principles into local Master Plans.
5. Identify potential projects to strengthen the County's infrastructure and increase its hazard resistance and encourage local governments to do the same.
6. Evaluate the necessity and viability of implementing County-wide zoning ordinances.
7. Apply for hazard mitigation grant funding for a mitigation project.
8. Evaluate and increase usage of snow fences to limit drifting along critical roadways.
9. Assist local governments in evaluating the need for construction of new local facilities or departments, or the expansion of existing facilities and departments, such as WTPs, WWTPs, and DPWs, to meet community growth.
10. Evaluate the need for a revision of FEMA flood maps and local government participation in the National Flood Insurance Program.
11. Provide NOAA weather radios to local public buildings, schools, hospitals, campgrounds, etc. for free or at a subsidized price by use of grant funding.
12. Encourage the burial of utility lines in new developments and in reconstruction of current development.
13. Become a participating member of the Michigan Emergency Management Assistance Compact (MEMAC).
14. Evaluate the viability of implementing a house numbering ordinance to improve emergency response and standardize number assignment throughout the county.

15. Ensure critical public buildings are outfitted with auxiliary sources of power, such as generators or battery systems, as necessary and assist local governments in doing the same.
16. Evaluate and ensure that enforcement of building/electrical/mechanical/plumbing codes is sufficient to ensure development adequately addresses hazard mitigation principles.
17. Evaluate the necessity and viability of developing and implementing an Ionia County Community Wildfire Protection Plan.
18. Evaluate potential state and federal sources of funding that can be used for specific hazard mitigation projects and assist local governments in doing the same.
19. Conduct a full evaluation of County hazard mitigation actions to ensure they are sufficiently meeting resident needs and assist local governments in doing the same.
20. Meet requirements and become a participating member of the National Weather Service's StormReady program.
21. Increase availability of planning documents such as the Emergency Operations Plan that provide a framework and guidance to County and local government officials for emergency/disaster response and recovery.
22. Create and implement a feedback mechanism for County residents to provide input on hazard mitigation actions, as well as to report hazards and hazardous conditions to officials.
23. Incorporate hazard mitigation principles into the County's next Capital Improvement Plan update.
24. Form an environmental review board to review land use permits, site plans, or any other applications that may pose significant impacts on the environment.
25. Work with critical facilities to develop emergency plans that take into account the unique factors of each facility (ex. evacuation needs for nursing homes or hospitals).
26. Explore the necessity and viability of establishing a Transfer of Development Rights program to limit development in high-risk areas such as floodplains.

27. Ensure the capacity for mobilization and operation of emergency shelters during an emergency or disaster event and assist local governments in doing the same.
28. Adopt an ordinance requiring the anchoring of manufactured home installations located outside of a designated floodplain and/or encourage manufactured home owners to voluntarily anchor their units.
29. Encourage local governments to adopt, implement, and maintain floodplain management practices that go beyond NFIP requirements.
30. Encourage local governments to meet requirements and become participating communities under the Community Rating System.
31. Establish public parks in identified local floodplains and assist local governments in doing the same.
32. Continue to evaluate the sufficiency of existing drainage management (culverts, drains, etc.) and identify insufficiencies.
33. Assist the Drain Commissioner's office in formalizing a maintenance plan for County drains.
34. Require notifications to/approvals from the Drain Commissioner's office for drainage tie-ins to County drains.
35. Evaluate the necessity and viability of expanding Ionia County's Communicable Disease reporting program to allow for a wider range of citizens to make related reports.
36. Disseminate disaster planning and response information to community groups and critical facilities.
37. Make available federal, state, and county emergency management, disaster preparedness, and other pertinent information on County website, ensure accessibility of information to speakers of Spanish, and assist local governments in doing the same.
38. Encourage individuals and families to develop their own disaster preparedness plans using resources such as the American Red Cross and County hazard mitigation information.

39. Assist local governments in enforcing requirements for burn permits, especially during sensitive times such as dry periods or high wind conditions.
40. Expand public education and awareness regarding activities (open burning, etc.) with the capacity to result in an uncontrolled wildfire.
41. Maintain adequate road and debris clearing capabilities and assist local governments in doing the same.
42. Apply structural hazard mitigation and sustainability concepts during construction or remodeling of government facilities and encourage local governments to do the same.
43. Promote low-impact development techniques in development that reduce stormwater runoff and resultant flooding.
44. Ensure that emergency plans continue to be maintained for Webber Dam.
45. Evaluate municipal wells for capacity to continue to meet projected growth and resultant demand and assist local governments in doing the same.
46. Evaluate the need to increase emergency/disaster response capabilities with alternative transportation vehicles (snowmobiles, ATVs, etc.)
47. Explore the necessity and viability of expanding the Ionia County Building Department's capabilities such that the County can perform duties such as permit application review and building code enforcement with in-house resources.
48. Incorporate hazard mitigation principles and priorities into the County land use plan upon its next review.
49. Continue to ensure that all current hazard mitigation actions are maintained or improved upon.

Village of Lake Odesa \_\_\_\_\_ has selected the following mitigation action(s)  
(jurisdiction)

which it will implement, or fully attempt to implement, over the five-year lifespan of the finished Ionia County Hazard Mitigation Plan:

- 1) Within five years, foster a collaborative effort that enables our community to respond to emergencies on local waters.
- 2) Increase availability of planning documents such as the Emergency Operations Plan that provide a framework and guidance to County and local government officials for emergency/disaster response and recovery.

Village of Lake Odessa \_\_\_\_\_ will leverage the following existing authorities,  
(jurisdiction)

policies, programs, and resources available for implementation of the above mitigation action(s):

Comprehensive analysis of local resources, long-term budgeting for major capital purchases, incorporating individual and organizational achievements at every Council meeting.

Village of Lake Odessa \_\_\_\_\_ may improve upon these listed capabilities for  
(jurisdiction)

implementing the above mitigation action(s) in the following ways:

Collaborating with other similar jurisdictions in water training, incorporating planning and training events into organization culture, highlighting preparedness through regular public updates to the Village Council, on social media, and by speaking to print media.

Village of Lake Odessa \_\_\_\_\_ will track and report the progress of the  
(jurisdiction)

implementation of the above mitigation action(s) in the following ways:

To accommodate delays and obstacles, we will work with Ionia County and MSP-EMHSD to draft an achievable plan for reaching our goals in 4 years. We will give quarterly reports to the Village Council on status of meeting our benchmarks, along with the status of staff certifications and licenses.

## **Critical Facilities**

---

The following is a list of critical facilities within Ionia County sorted by category. FEMA defines critical facilities as “structures and institutions necessary for a community’s response to and recovery from emergencies” who “must continue to operate during and following a disaster to reduce the severity of impacts and accelerate recovery”. Please ensure all relevant critical facilities in your jurisdiction are accounted for in the appropriate category below and note any omissions, corrections, or additions in the space provided after the list.

### **LAW ENFORCEMENT**

Ionia County Sheriff Department  
City of Ionia Department of Public Safety  
City of Belding Police Department  
Michigan State Police  
Lake Odessa Police Department  
City of Portland Police Department  
Ionia Correctional Facility  
Bellamy Creek Correctional Facility  
Michigan Reformatory  
Richard A. Handlin Correctional Facility  
Ionia County Jail

### **FIRE SERVICES**

Hubbardston Fire Department  
City of Belding Fire Department  
Lake Odessa Fire Department  
City of Ionia Department of Public Safety, Fire Division  
Pewamo Fire Department  
Lyons-Muir Fire Department  
Saranac Fire Department  
Portland Fire Department  
Campbell Township (Clarksville) Fire Department  
Orleans Township Fire Department  
Ronald Township Fire Department  
Berlin-Orange Township Fire Department  
Grattan Township Fire Department  
Roxand Township Fire Department (Eaton County)  
Freeport Fire/Rescue (Barry County)

## **HEALTHCARE**

Lakewood Community Ambulance Service (located in Barry County)

Belding Ambulance Service- Belding Fire Department

Portland Ambulance Service- Portland Fire Department, Emergency Services Building  
Life EMS

Sparrow Ionia Hospital

Sparrow Group Ionia

Sparrow Group Portland

Ionia Senior Center

Ionia County Health Department

DaVita Ionia Dialysis

Spectrum Health Family Practice

## **PUBLIC SCHOOLS**

Oakwood Elementary School

Portland Middle School

Westwood Elementary School

Lakewood Elementary School

Saranac Elementary School

Ionia County Career Center

Coon School

A.A. Rather School

Ionia High School

Emerson School

Ionia Middle School

Jefferson School

Twin Rivers Elementary School

Haynor School

North LeValley Elementary School

R.B. Boyce Elementary School

Belding Middle School

Ellis Elementary School

Belding High School

Woodview Elementary School

Saranac Jr/Sr High School

## **PRIVATE SCHOOLS**

Faith Community Christian School  
Ionia Seventh Day Adventist School  
Ss. Peter & Paul Elementary School  
St. Joseph Elementary School  
Ionia Nazarene Christian School  
Lakewood Christian School  
St. Joseph Elementary School (Belding)  
St. Joseph Elementary School (Pewamo)  
St. Patrick School

## **CITY HALLS**

Belding City Hall  
Ionia City Hall  
City of Portland Hall

## **VILLAGE HALLS**

Village of Muir Hall  
Village of Lyons Hall  
Village of Hubbardston Hall  
Village of Lake Odessa Hall  
Village of Clarksville Hall  
Village of Saranac Hall  
Village of Pewamo Hall

## **TOWNSHIP HALLS**

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Odessa Township Hall  
North Plains Township Hall  
Lyons Township Hall  
Ronald Township Hall  
Sebewa Township Hall  
Otisco Township Hall

Orleans Township Hall  
Orange Township Hall  
Easton Township Hall  
Portland Township Hall

**LIVING**

Lighthouse Senior Living  
Lighthouse Rehab  
Saranac Housing Commission  
Mission Point of Belding  
SKLD of Ionia  
Hope Network  
Green Acres Ionia  
Portland Assisted Living and Memory Center  
Hope Network  
Good Vibes Adult Foster Care  
Clarksville Manor

**PUBLIC WORKS**

Ionia County Road Department  
Ionia Department of Public Works  
Belding Department of Public Works  
Portland Department of Public Works

**WWTP**

Belding WWTP  
Ionia WWTP  
Portland WWTP  
Lakewood Wastewater Authority WWTP  
Clarkesville-Morrison Lake WWTP  
Saranac WWSL

**UTILITIES**

Water Towers: 14  
Wind Turbines: 32  
Substations: 7

## **TRAIN/BUS STATIONS/CARPOOL LOTS**

Lake Odessa Park and Ride  
Portland – West Park and Ride  
Portland #2 (NE) Park and Ride  
Ionia/Belding Park and Ride  
Ionia Dial-A-Ride  
Belding Dial-A-Ride

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Hall-Fowler Memorial Library  
Ionia Community Library  
Portland District Library  
Lyons Township District Library  
Lake Odessa Community Library  
Clarksville Area Library  
Saranac Public Library

## **FOOD/AGRICULTURE**

Herbruck's Poultry Ranch  
\*\* ANY OTHER BIG ONES/COMMUNITY ANCHORS?

## **OTHER CRITICAL FACILITIES**

\*\* ANYTHING NOTABLE?

This list [ is | is not ] a comprehensive and applicable list of critical facilities in the Village of Lake Odessa.  
(jurisdiction)

If you circled "is not" for the above, please use the rest of this page to elaborate on why.  
With

1. Lakewood Community Ambulance is no longer operating.
2. Cargill and Twin City Foods are major agriculture/industrial centers in our area.
3. Lake Odessa Department of Public Works was omitted from your list.





## Example Adoption Resolution

(LOCAL COMMUNITY)

(STATE)

RESOLUTION NO. \_\_\_\_\_

A RESOLUTION OF THE (LOCAL COMMUNITY) ADOPTING THE

(TITLE AND DATE OF MITIGATION PLAN)

WHEREAS the (local governing body) recognizes the threat that natural hazards pose to people and property within (local community); and

WHEREAS the (local community) has prepared a multi-hazard mitigation plan, hereby known as (title and date of mitigation plan) in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS (title and date of mitigation plan) identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in (local community) from the impacts of future hazards and disasters; and

WHEREAS adoption by the (local governing body) demonstrates their commitment to the hazard mitigation and achieving the goals outlined in the (title and date of mitigation plan).

NOW THEREFORE, BE IT RESOLVED BY THE (LOCAL COMMUNITY), (STATE), THAT:

Section 1. In accordance with (local rule for adopting resolutions), the (local governing body) adopts the (title and date of mitigation plan).

ADOPTED by a vote of \_\_\_\_ in favor and \_\_\_\_ against, and \_\_\_\_ abstaining, this \_\_\_\_ day of

\_\_\_\_\_, \_\_\_\_\_.

By: \_\_\_\_\_

(print name)

ATTEST:

By: \_\_\_\_\_

(print name)

APPROVED AS TO FORM:

By: \_\_\_\_\_

(print name)

LAKE ODESSA

Sgt. Straubel –

I am writing in request to your requests for information about any local hazard mitigation actions or projects the Village of Lake Odessa has initiated. Chief Kendra Backing provided the following with regard to risks associated with the annual Art in the Park event and Lakewood Schools:

“I have ICS-205 forms for Art in the Park that include Phone Lists, Mapping, Matrix, Road Closures, ect. They were revised in 2019 and 2023 and need updated. I also have Lakewood Public schools emergency plans that need to be updated. I do not have any other plans pertaining to natural disasters.”

DPW Director Jesse Trout was not aware of any hazard mitigation strategies pursued through his department.

I hope this is responsive to your needs.

Gregg Guetschow  
Village Manager

**Introduction:**

Name: Susan Craft

Title: Muir Village Clerk

Jurisdiction representing: Village of Muir

Email address: clerk @ village of muir mi. gov

**Resolution of Adoption:**

This Hazard Mitigation Plan will be adopted as an official plan of Ionia County upon its completion. Participating jurisdictions **must** adopt the finished Plan as well. A template adoption resolution is attached to the end of this document for reference.

Village of Muir [  will | will not ] adopt the Ionia County  
(jurisdiction) (circle one)

Hazard Mitigation Plan as an official municipal plan upon its completion.

Village of Muir [  will | will not ] participate in efforts to  
(jurisdiction) (circle one)

implement and update the plan throughout its five-year lifespan.

## Hazard Identification and Ranking

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The following is the list of natural hazards identified by the Ionia County Hazard Mitigation Planning Committee as having the potential to affect Ionia County. These hazards have been ranked by their Risk Assessment Value, which is a number calculated by formulaic consideration of the hazards' probability of occurrence, severity of impacts, and expected future change of event frequency. Their order in the below list reflects this ranking, with the "most important" hazards for mitigation action at the top and the "least important" at the bottom.

Floods  
Severe Winds  
Ice/Sleet Storms  
Hail  
Tornadoes  
Winter Storms/Heavy Snow Events/Blizzards  
Drought  
Thunderstorms/Lightning  
Dam Failures  
Extreme Cold  
Extreme Heat  
Public Health Emergencies  
Fog  
Subsidence  
Invasive Species  
Wildfires  
Earthquakes  
Space Weather  
Impacting Objects (Celestial)

This list [  is ] is not [  ] a comprehensive list of natural hazards with the potential to affect Village of Muir.  
(jurisdiction)

The ranking of this list [  is ] is not [  ] representative of the relative risk these hazards pose to Village of Muir.  
(jurisdiction)



## Mitigation Capability

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The overarching purpose of hazard mitigation planning is to reduce or eliminate long-term risk to life and property from the occurrence of hazard events. To realize this purpose, Ionia County has set the following long-term goals:

Goal: Minimize injuries and deaths caused by or related to hazard events.

Goal: Minimize the loss or damage of public and private property from hazard events.

Goal: Promote community awareness, understanding, cooperation, and participation in hazard mitigation actions.

Goal: Promote local growth and development through a lens of hazard mitigation.

Each jurisdiction within Ionia County has different capabilities for engaging in mitigation activities and working towards accomplishing these goals. FEMA has identified the following four primary types of capabilities in their planning handbook:

- Planning and Regulatory – implementation and enforcement of plans, policies, codes, ordinances, local and State law, etc.
- Administrative and Technical – departments, personnel, equipment, coordination with other public and private entities, etc.
- Financial – availability of funding or ability to secure funding through taxes, grants, etc.
- Education and Outreach – ability to engage and communicate hazard mitigation information to the public.

FEMA **requires** local communities who are participating in the development of a hazard mitigation plan to evaluate their capabilities for accomplishing hazard mitigation goals. For **each** capability listed above, you **must** describe existing authorities, policies, programs, and resources available for implementation of hazard mitigation actions and projects that lean on that capability, **as well as** how your jurisdiction may improve upon these capabilities. These do not need to be long descriptions, but they **must** include all elements as stated above. You **must** summarize your jurisdiction's capability as being **low**, **medium**, or **high** – you can circle the corresponding word at the top of the following four pages, where space has also been provided for your written answers. You may wish to refer to the list of mitigation actions under consideration by the County included later in this document for additional context.







Summary of **Education and Outreach** capabilities: [ Low | Medium | High ]

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## Mitigation Actions

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Ionia County has identified a list of hazard mitigation actions to work towards implementing on the county level over the five-year lifespan of the finished Plan; this unsorted list is included below for your reference. Now that you have characterized your jurisdiction's hazard mitigation capabilities, you **must** also identify and select **at least one** mitigation action that your jurisdiction will implement, or fully attempt to implement, over the five-year lifespan of the finished Plan. You may choose from the list in this document, but you are **strongly recommended** to provide mitigation actions that are not listed below and address a **specific** local vulnerability. You **must** describe how your jurisdiction will track and report the progress of action implementation such that an update can be provided in the next iteration of the Plan. You **must** describe existing authorities, policies, programs, and resources available for implementation of the chosen mitigation actions, **as well as** how your jurisdiction may improve upon these capabilities. Space has been provided for your answers after the action list.

You may also wish to consider choosing mitigation actions focused on increasing capacity for hazard mitigation actions across the board, such as integrating hazard mitigation practices into community Master Plans. In general, you are encouraged to emphasize actions that reduce the effects of hazards on new and existing buildings and infrastructure.

1. Evaluate the need for expanding coverage of warning sirens and other warning systems, and assist local governments in doing the same, along with updating existing sirens to 800mhz.
2. Encourage non-participating local governments to meet requirements and become members of Tree City USA.
3. Expand the library and increase availability of hazard mitigation GIS maps, databases, locations of critical infrastructure such as fire hydrants and curb stops, etc.
4. Assist local governments in integrating hazard mitigation principles into local Master Plans.
5. Identify potential projects to strengthen the County's infrastructure and increase its hazard resistance and encourage local governments to do the same.
6. Evaluate the necessity and viability of implementing County-wide zoning ordinances.
7. Apply for hazard mitigation grant funding for a mitigation project.
8. Evaluate and increase usage of snow fences to limit drifting along critical roadways.
9. Assist local governments in evaluating the need for construction of new local facilities or departments, or the expansion of existing facilities and departments, such as WTPs, WWTPs, and DPWs, to meet community growth.
10. Evaluate the need for a revision of FEMA flood maps and local government participation in the National Flood Insurance Program.
11. Provide NOAA weather radios to local public buildings, schools, hospitals, campgrounds, etc. for free or at a subsidized price by use of grant funding.
12. Encourage the burial of utility lines in new developments and in reconstruction of current development.
13. Become a participating member of the Michigan Emergency Management Assistance Compact (MEMAC).
14. Evaluate the viability of implementing a house numbering ordinance to improve emergency response and standardize number assignment throughout the county.

15. Ensure critical public buildings are outfitted with auxiliary sources of power, such as generators or battery systems, as necessary and assist local governments in doing the same.
16. Evaluate and ensure that enforcement of building/electrical/mechanical/plumbing codes is sufficient to ensure development adequately addresses hazard mitigation principles.
17. Evaluate the necessity and viability of developing and implementing an Ionia County Community Wildfire Protection Plan.
18. Evaluate potential state and federal sources of funding that can be used for specific hazard mitigation projects and assist local governments in doing the same.
19. Conduct a full evaluation of County hazard mitigation actions to ensure they are sufficiently meeting resident needs and assist local governments in doing the same.
20. Meet requirements and become a participating member of the National Weather Service's StormReady program.
21. Increase availability of planning documents such as the Emergency Operations Plan that provide a framework and guidance to County and local government officials for emergency/disaster response and recovery.
22. Create and implement a feedback mechanism for County residents to provide input on hazard mitigation actions, as well as to report hazards and hazardous conditions to officials.
23. Incorporate hazard mitigation principles into the County's next Capital Improvement Plan update.
24. Form an environmental review board to review land use permits, site plans, or any other applications that may pose significant impacts on the environment.
25. Work with critical facilities to develop emergency plans that take into account the unique factors of each facility (ex. evacuation needs for nursing homes or hospitals).
26. Explore the necessity and viability of establishing a Transfer of Development Rights program to limit development in high-risk areas such as floodplains.

27. Ensure the capacity for mobilization and operation of emergency shelters during an emergency or disaster event and assist local governments in doing the same.
28. Adopt an ordinance requiring the anchoring of manufactured home installations located outside of a designated floodplain and/or encourage manufactured home owners to voluntarily anchor their units.
29. Encourage local governments to adopt, implement, and maintain floodplain management practices that go beyond NFIP requirements.
30. Encourage local governments to meet requirements and become participating communities under the Community Rating System.
31. Establish public parks in identified local floodplains and assist local governments in doing the same.
32. Continue to evaluate the sufficiency of existing drainage management (culverts, drains, etc.) and identify insufficiencies.
33. Assist the Drain Commissioner's office in formalizing a maintenance plan for County drains.
34. Require notifications to/approvals from the Drain Commissioner's office for drainage tie-ins to County drains.
35. Evaluate the necessity and viability of expanding Ionia County's Communicable Disease reporting program to allow for a wider range of citizens to make related reports.
36. Disseminate disaster planning and response information to community groups and critical facilities.
37. Make available federal, state, and county emergency management, disaster preparedness, and other pertinent information on County website, ensure accessibility of information to speakers of Spanish, and assist local governments in doing the same.
38. Encourage individuals and families to develop their own disaster preparedness plans using resources such as the American Red Cross and County hazard mitigation information.

39. Assist local governments in enforcing requirements for burn permits, especially during sensitive times such as dry periods or high wind conditions.
40. Expand public education and awareness regarding activities (open burning, etc.) with the capacity to result in an uncontrolled wildfire.
41. Maintain adequate road and debris clearing capabilities and assist local governments in doing the same.
42. Apply structural hazard mitigation and sustainability concepts during construction or remodeling of government facilities and encourage local governments to do the same.
43. Promote low-impact development techniques in development that reduce stormwater runoff and resultant flooding.
44. Ensure that emergency plans continue to be maintained for Webber Dam.
45. Evaluate municipal wells for capacity to continue to meet projected growth and resultant demand and assist local governments in doing the same.
46. Evaluate the need to increase emergency/disaster response capabilities with alternative transportation vehicles (snowmobiles, ATVs, etc.)
47. Explore the necessity and viability of expanding the Ionia County Building Department's capabilities such that the County can perform duties such as permit application review and building code enforcement with in-house resources.
48. Incorporate hazard mitigation principles and priorities into the County land use plan upon its next review.
49. Continue to ensure that all current hazard mitigation actions are maintained or improved upon.

Village of Muir  
(jurisdiction)

has selected the following mitigation action(s)

which it will implement, or fully attempt to implement, over the five-year lifespan of the finished Ionia County Hazard Mitigation Plan:

1. Update the tornado warning system so that it can be remotely deployed and replace antiquated equipment
2. Update tree trimming response especially in transmission line areas and major collector streets
3. Find money to install a generator at the Muir water tower for continuous power to the County 911 antenna
4. Continue wellhead protection source water activities to protect the municipal system from contamination and make agriculture facilities who are irrigating aware of overpumping and depleting fresh water supply
5. Assist neighboring communities and county with manpower & equipment in emergency situations

Village of Muir  
(jurisdiction)

will leverage the following existing authorities,

policies, programs, and resources available for implementation of the above mitigation action(s):

1. Intergovernment agreement with Lyons Township for Fire and Emergency services
2. Intergovernment agreement with Village of Lyons for mutual emergency aid and shared services
3. Ionia County Emergency Management for resources & policies, programs, grants, bulk buying etc.
4. Ionia County for Sheriff, Road Dept., 911, Fire as mutual aid and resources needed.

5. Fire Depts from Lyons Township in Incident Command training & implementation of village DPW resources
6. Water & Sewer operators available for responding to public health emergencies
7. Village buildings & water system available for command post and water for fires 200,000 gallon tower with 2 wells combined capacity 900 gallons/minute

Village of Muir  
(Jurisdiction)

may improve upon these listed capabilities for

implementing the above mitigation action(s) in the following ways:

1. Collaborate with county & neighboring jurisdictions for Warning systems & 800 radios
2. Collaborate with county for grants to provide generator for 200,000 gallon tower & DPW garage
3. Collaborate with Lyons for Fire Dept needs & equipment

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Village of Muir will track and report the progress of the  
(jurisdiction)

implementation of the above mitigation action(s) in the following ways:

1. Attend County meetings for plan
2. Update Master Plan
3. Provide written report to Hazard Mitigation Committee with progress or challenges

## Critical Facilities

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The following is a list of critical facilities within Ionia County sorted by category. FEMA defines critical facilities as “structures and institutions necessary for a community’s response to and recovery from emergencies” who “must continue to operate during and following a disaster to reduce the severity of impacts and accelerate recovery”. Please ensure all relevant critical facilities in your jurisdiction are accounted for in the appropriate category below and note any omissions, corrections, or additions in the space provided after the list.

### LAW ENFORCEMENT

Ionia County Sheriff Department  
City of Ionia Department of Public Safety  
City of Belding Police Department  
Michigan State Police  
Lake Odessa Police Department  
City of Portland Police Department  
Ionia Correctional Facility  
Bellamy Creek Correctional Facility  
Michigan Reformatory  
Richard A. Handlin Correctional Facility  
Ionia County Jail

### FIRE SERVICES

Hubbardston Fire Department  
City of Belding Fire Department  
Lake Odessa Fire Department  
City of Ionia Department of Public Safety, Fire Division  
Pewamo Fire Department  
Lyons-Muir Fire Department  
Saranac Fire Department  
Portland Fire Department  
Campbell Township (Clarksville) Fire Department  
Orleans Township Fire Department  
Ronald Township Fire Department  
Berlin-Orange Township Fire Department  
Grattan Township Fire Department  
Roxand Township Fire Department (Eaton County)  
Freeport Fire/Rescue (Barry County)

## **HEALTHCARE**

Lakewood Community Ambulance Service (located in Barry County)

Belding Ambulance Service- Belding Fire Department

Portland Ambulance Service- Portland Fire Department, Emergency Services Building

Life EMS

Sparrow Ionia Hospital

Sparrow Group Ionia

Sparrow Group Portland

Ionia Senior Center

Ionia County Health Department

DaVita Ionia Dialysis

Spectrum Health Family Practice

## **PUBLIC SCHOOLS**

Oakwood Elementary School

Portland Middle School

Westwood Elementary School

Lakewood Elementary School

Saranac Elementary School

Ionia County Career Center

Coon School

A.A. Rather School

Ionia High School

Emerson School

Ionia Middle School

Jefferson School

Twin Rivers Elementary School

Haynor School

North LeValley Elementary School

R.B. Boyce Elementary School

Belding Middle School

Ellis Elementary School

Belding High School

Woodview Elementary School

Saranac Jr/Sr High School

**PRIVATE SCHOOLS**

- Faith Community Christian School
- Ionia Seventh Day Adventist School
- Ss. Peter & Paul Elementary School
- St. Joseph Elementary School
- Ionia Nazarene Christian School
- Lakewood Christian School
- St. Joseph Elementary School (Belding)
- St. Joseph Elementary School (Pewamo)
- St. Patrick School

**CITY HALLS**

- Belding City Hall
- Ionia City Hall
- City of Portland Hall

**VILLAGE HALLS**

- Village of Muir Hall
- Village of Lyons Hall
- Village of Hubbardston Hall
- Village of Lake Odessa Hall
- Village of Clarksville Hall
- Village of Saranac Hall
- Village of Pewamo Hall

**TOWNSHIP HALLS**

- Campbell Township Hall
- Boston Township Hall
- Berlin Township Hall
- Keene Township Hall
- Ionia Township Hall
- Danby Township Hall
- Odessa Township Hall
- North Plains Township Hall
- Lyons Township Hall
- Ronald Township Hall
- Sebewa Township Hall
- Otisco Township Hall

Orleans Township Hall  
Orange Township Hall  
Easton Township Hall  
Portland Township Hall

**LIVING**

Lighthouse Senior Living  
Lighthouse Rehab  
Saranac Housing Commission  
Mission Point of Belding  
SKLD of Ionia  
Hope Network  
Green Acres Ionia  
Portland Assisted Living and Memory Center  
Hope Network  
Good Vibes Adult Foster Care

Clarksville Manor  
*Low Income Apts Blanchard & Prospect in Muir*

**PUBLIC WORKS**

Ionia County Road Department  
Ionia Department of Public Works  
Belding Department of Public Works  
Portland Department of Public Works

*Muir ✓ ✓ ✓  
Lyons ✓*

**WWTP**

Belding WWTP  
Ionia WWTP  
Portland WWTP  
Lakewood Wastewater Authority WWTP  
Clarksville-Morrison Lake WWTP  
Saranac WWSL

~~Muir WWSL~~

**UTILITIES**

Water Towers: 14  
Wind Turbines: 32  
Substations: 7

*Muir 1 (200,000 gal) Lyons 1 (100,000 gal)  
Inter connected system with  
ability to utilize both towers &  
4 wells supporting them*

**TRAIN/BUS STATIONS/CARPOOL LOTS**

- Lake Odessa Park and Ride
- Portland – West Park and Ride
- Portland #2 (NE) Park and Ride
- Ionia/Belding Park and Ride
- Ionia Dial-A-Ride
- Belding Dial-A-Ride

**POST OFFICES**

- Belding Post Office
- Clarksville Post Office
- Hubbardston Post Office
- Ionia Post Office
- Lake Odessa Post Office
- Lyons Post Office
- Muir Post Office
- Orleans Post Office
- Pewamo Post Office
- Portland Post Office
- Saranac Post Office

**PUBLIC LIBRARIES**

- Alvah N. Belding Memorial Library
- Hall-Fowler Memorial Library
- Ionia Community Library
- Portland District Library
- Lyons Township District Library
- Lake Odessa Community Library
- Clarksville Area Library
- Saranac Public Library

**FOOD/AGRICULTURE**

- Herbruck’s Poultry Ranch

\*\* ANY OTHER BIG ONES/COMMUNITY ANCHORS?

**OTHER CRITICAL FACILITIES**

\*\* ANYTHING NOTABLE?

This list [ is | is not ] a comprehensive and applicable list of critical facilities in

Village of Muir  
(jurisdiction)

If you circled "is not" for the above, please use the rest of this page to elaborate on why.

1. Muir & Lyons are interconnected in their Water System with 300,000 gal tower capacity & 4 wells to fill the towers. This greatly enhances water sources from the south Lyons limit on Libhart, north to Marsh Ridge off M-21 on Liberty - west to village limit on Riverside & limit in Muir on M-21, east to Hayes Rd (Plain St) in Muir and east Higbee St in Lyons. Lyons has hydrants east on E. Bridge but they can NOT be used for fire due to 20 psi pressure on the hill in Lyons & no pressure pumps, just gravity
2. Potable water sources & fire sources are critical components & available in both towns
3. Muir has 2 lagoons for wastewater serving Lyons-Muir & part of Lyons Township - Failure impacts both the Maple & Grand rivers
4. Muir has a gas station for fuel
5. Muir has 3 low income apt complexes with people with ADA needs

You have completed the required portion of this document. Thank you once again for your time and participation. Access to hazard mitigation funding can be the difference between a viable infrastructure project and a missed opportunity. These last two pages are here for any additional comments or information you'd like to share to ensure your jurisdiction is sufficiently represented in the County Plan.

Resolution to be brought to July 11th Pluric  
Council meeting



## Example Adoption Resolution

(LOCAL COMMUNITY)

(STATE)

RESOLUTION NO. \_\_\_\_\_

A RESOLUTION OF THE (LOCAL COMMUNITY) ADOPTING THE

(TITLE AND DATE OF MITIGATION PLAN)

WHEREAS the (local governing body) recognizes the threat that natural hazards pose to people and property within (local community); and

WHEREAS the (local community) has prepared a multi-hazard mitigation plan, hereby known as (title and date of mitigation plan) in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS (title and date of mitigation plan) identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in (local community) from the impacts of future hazards and disasters; and

WHEREAS adoption by the (local governing body) demonstrates their commitment to the hazard mitigation and achieving the goals outlined in the (title and date of mitigation plan).

NOW THEREFORE, BE IT RESOLVED BY THE (LOCAL COMMUNITY), (STATE), THAT:

Section 1. In accordance with (local rule for adopting resolutions), the (local governing body) adopts the (title and date of mitigation plan).

ADOPTED by a vote of \_\_\_\_\_ in favor and \_\_\_\_\_ against, and \_\_\_\_\_ abstaining, this \_\_\_\_\_ day of

\_\_\_\_\_.

By: \_\_\_\_\_

(print name)

ATTEST:

By: \_\_\_\_\_

(print name)

APPROVED AS TO FORM:

By: \_\_\_\_\_

(print name)

August 2, 2024

Sgt. Straubel

Emergency Manager for Ionia County

Updates to the 2023 submittal for the Village of Muir

1. High Priority: The warning system has recently been tied to Ionia County Central Dispatch but there are issues with the systems operation. Lyons and Muir both have antiquated tornado sirens and for some reason the recent test on July 27, 2024 did not confirm that the Muir siren activated. People west of the siren did not hear the test nor did people on Railroad St, closer to downtown. In Lyons, people on the west side of town did not hear the siren. I suspect it may be the age of the sirens causing these issues. The Muir siren will be checked at the next test August 3, 2024 to ensure that it activates.
2. Tree trimming continues to be an issue, although Consumers Energy did go through both towns this year and mitigated a lot of overhanging limbs. Many of the trees in both villages are very old and subject to storm damage from hollow trunks and dead limbs. Continued trimming needs to be a priority.
3. Muir still needs a grant to install a generator at the water tower, especially since the 911 signal is attached to this tower.
4. Wellhead protection is a joint municipality effort, at issue are three large wells on the old Chrysler plant property at 117 Edward St which are in poor condition and prone to freezing and free flowing because of the rundown condition of the property. These wells are directly tied to the aquifer that serves both towns and have been proven to be impacted by pump testing of municipal wells. From a public health standpoint the proper abandonment of these wells needs to be a priority. Muir has an EGLE certified S3/D3 operator for Water and an L1 for sewer lagoons.
5. Lyons has not addressed the low pressure issue on E. Bridge Street going up hill to the village limits. 20 psi for the hydrants on the hill makes them unusable for fire flow. Lyons needs to be encouraged to fix this with a booster station.
6. Lyons and Muir are interconnected with a combined tower storage of 300,000 and 4 wells. Both systems operate independently of one another normally but during emergencies or maintenance they operate as one.
7. DPW in Muir is always ready to assist neighboring communities and the county with manpower and equipment in emergencies.
8. Fire protection is through Lyons Township for both Lyons and Muir. Staffing during the day is a challenge as the department is volunteer. Recent retirements have highlighted the problem. The local department was successful getting a \$30,000 grant for gear in the past year.
9. Missing on the original list were the low income apartments in Muir and the availability of both towns Department of Public Works.

Attached are the original papers. Muir is committed to working together as a community with other communities. Communication is an integral part of the success of a county-wide mitigation plan.

Submitted by Susan Craft, Clerk

Village of Muir has selected the following mitigation action(s)  
(jurisdiction)

which it will implement, or fully attempt to implement, over the five-year lifespan of the finished Ionia County Hazard Mitigation Plan:

1. Update the tornado warning system so that it can be remotely deployed and replace antiquated equipment
2. Update tree trimming response especially in transmission line and major collector streets
3. Find money to install a generator at the Muir water tower for continuous power to the County 911 antenna
4. Continue wellhead protection source water activities to protect the municipal system from contamination and make agriculture facilities who are irrigating aware of overpumping and deplete fresh water supply
5. Assist neighboring communities and county with manpower & eq in emergency situations

Village of Muir will leverage the following existing authorities,  
(jurisdiction)

policies, programs, and resources available for implementation of the above mitigation action(s):

1. Intergovernment agreement with Lyons Township for Fire and Emergency services
2. Intergovernment agreement with Village of Lyons for mutual emergency aid and shared services
3. Ionia County Emergency Management for resources & policies, programs, grants, bulk buying etc.
4. Ionia County for Sheriff, Road Dept., 911, Fire as mutual aid and resources needed.

5. Fire Depts from Lyons Township in Incident Command training & implementation of village DPW resources

6. Water & Sewer operators available for responding to public health emergencies

7. Village buildings & water system available for command post and water for fires 200,000 gallon tower with 2 wells combined capacity 900 gallons/minute

Village of Muir  
(jurisdiction)

may improve upon these listed capabilities for

implementing the above mitigation action(s) in the following ways:

1. Collaborate with county & neighboring jurisdictions for Warning systems & 800 radios

2. Collaborate with county for grants to provide generator for 200,000 gallon tower & DPW garage

3. Collaborate with Lyons for Fire Dept needs & equipment

**LIVING**

- Lighthouse Senior Living
- Lighthouse Rehab
- Saranac Housing Commission
- Mission Point of Beiding
- SKLD of Ionia
- Hope Network
- Green Acres Ionia
- Portland Assisted Living and Memory Center
- Hope Network
- Good Vibes Adult Foster Care

Clarksville Manor  
*Low Income Apts Blanchard & Prospect in Muir*

**PUBLIC WORKS**

- Ionia County Road Department
- Ionia Department of Public Works
- Beiding Department of Public Works
- Portland Department of Public Works

*Muir*  
*Lyons*

**WWTP**

- Beiding WWTP
- Ionia WWTP
- Portland WWTP
- Lakewood Wastewater Authority WWTP
- Clarksville-Morrison Lake WWTP
- Saranac WWSL

~~Muir WWTP~~

**UTILITIES**

- Water Towers: 14
- Wind Turbines: 32
- Substations: 7

*Muir 1 (200,000 gal) Lyons 1 (100,000 gal)*  
*Interconnected system with ability to utilize both towers & 4 wells supporting them*

This list [ is | is not ] a comprehensive and applicable list of critical facilities in

Village of Muir  
(jurisdiction)

If you circled "is not" for the above, please use the rest of this page to elaborate on why.

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2. Potable water sources & fire sources are critical components & available in both towns
3. Muir has 2 lagoons for wastewater serving Lyons-Muir & part of Lyons Township - Failure impacts both the Maple & Grand rivers
4. Muir has a gas station for fuel
5. Muir has 3 low income apt complexes with people with ADA needs



## Ionia County Hazard Mitigation Plan Development Municipality Participation and Involvement Document

Ionia County is currently in the process of developing a county-wide Hazard Mitigation Plan in coordination with Fleis & VandenBrink. Having an approved Plan allows for the County to take advantage of funding through multiple FEMA grants that are aimed at supporting projects considering hazard mitigation actions. Municipalities within the County are able to take advantage of this funding as well if they are involved in the development of the Plan; for a municipality to be considered as having been involved in the development of a Plan, they must meet a certain level of participation as required by FEMA.

Some of you have already participated in this Plan development process through a comprehensive survey distributed earlier in the Plan development cycle and through other lines of related communication. The feedback received has been a key consideration in Plan development and so we thank you for your previous participation. This document is intended to ensure that every municipality in Ionia County can readily meet the minimum threshold of participation in Plan development in a standardized way and thus take advantage of these grant funding sources for future local projects. **Your jurisdiction must complete this document to be counted as a participating member of the Plan. The completed document must be returned by June 23<sup>rd</sup>, 2023 to Tage Heyn via email (see below) or regular mail (Tage Heyn c/o Fleis & VandenBrink, 2960 Lucerne Dr SE, Grand Rapids MI 49546). Failure to do so will constitute non-participation in the Plan's development and will render your jurisdiction ineligible for Hazard Mitigation Assistance grants.**

If you have any questions or comments while completing this document, please reach out to Tage Heyn at [theyn@fveng.com](mailto:theyn@fveng.com) or Jason Pattok at [jpattok@ioniacounty.org](mailto:jpattok@ioniacounty.org). Thank you for your time and participation in this development process!

You may find the following resources useful:

<https://www.fema.gov/grants/mitigation> | Information about these grants and their scope.

<https://www.fema.gov/emergency-managers/risk-management/hazard-mitigation-planning> | Information about hazard mitigation planning in general.

<https://www.fema.gov/grants/mitigation/building-resilient-infrastructure-communities/after-apply/fy-2021-subapplication-status> | Applications for BRIC grant funding from 2021 (bottom of page), showing project type and funding amount requested, as well as the status of each application.

**Introduction:**

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Mike Scollon  
Name: Sandy Wolniakowski

DPW Supervisor  
Title: Clerk

Jurisdiction representing: Village of Pewamo

Email address: clerk@pewamo.gov

**Resolution of Adoption:**

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This Hazard Mitigation Plan will be adopted as an official plan of Ionia County upon its completion. Participating jurisdictions **must** adopt the finished Plan as well. A template adoption resolution is attached to the end of this document for reference.

Village of Pewamo [ will | will not ] adopt the Ionia County  
(jurisdiction) (circle one)

Hazard Mitigation Plan as an official municipal plan upon its completion.

Village of Pewamo [ will | will not ] participate in efforts to  
(jurisdiction) (circle one)

implement and update the plan throughout its five-year lifespan.

## Hazard Identification and Ranking

---

The following is the list of natural hazards identified by the Ionia County Hazard Mitigation Planning Committee as having the potential to affect Ionia County. These hazards have been ranked by their Risk Assessment Value, which is a number calculated by formulaic consideration of the hazards' probability of occurrence, severity of impacts, and expected future change of event frequency. Their order in the below list reflects this ranking, with the "most important" hazards for mitigation action at the top and the "least important" at the bottom.

Floods  
Severe Winds  
Ice/Sleet Storms  
Hail  
Tornadoes  
Winter Storms/Heavy Snow Events/Blizzards  
Drought  
Thunderstorms/Lightning  
Dam Failures  
Extreme Cold  
Extreme Heat  
Public Health Emergencies  
Fog  
Subsidence  
Invasive Species  
Wildfires  
Earthquakes  
Space Weather  
Impacting Objects (Celestial)

This list [  is | is not ] a comprehensive list of natural hazards with the potential to affect Pewamo (jurisdiction).

The ranking of this list [  is | is not ] representative of the relative risk these hazards pose to Pewamo (jurisdiction).



## Mitigation Capability

---

The overarching purpose of hazard mitigation planning is to reduce or eliminate long-term risk to life and property from the occurrence of hazard events. To realize this purpose, Ionia County has set the following long-term goals:

Goal: Minimize injuries and deaths caused by or related to hazard events.

Goal: Minimize the loss or damage of public and private property from hazard events.

Goal: Promote community awareness, understanding, cooperation, and participation in hazard mitigation actions.

Goal: Promote local growth and development through a lens of hazard mitigation.

Each jurisdiction within Ionia County has different capabilities for engaging in mitigation activities and working towards accomplishing these goals. FEMA has identified the following four primary types of capabilities in their planning handbook:

- Planning and Regulatory – implementation and enforcement of plans, policies, codes, ordinances, local and State law, etc.
- Administrative and Technical – departments, personnel, equipment, coordination with other public and private entities, etc.
- Financial – availability of funding or ability to secure funding through taxes, grants, etc.
- Education and Outreach – ability to engage and communicate hazard mitigation information to the public.

FEMA **requires** local communities who are participating in the development of a hazard mitigation plan to evaluate their capabilities for accomplishing hazard mitigation goals. For **each** capability listed above, you **must** describe existing authorities, policies, programs, **and** resources available for implementation of hazard mitigation actions and projects that lean on that capability, **as well as** how your jurisdiction may improve upon these capabilities. These do not need to be long descriptions, but they **must** include all elements as stated above. You **must** summarize your jurisdiction's capability as being **low, medium, or high** – you can circle the corresponding word at the top of the following four pages, where space has also been provided for your written answers. You may wish to refer to the list of mitigation actions under consideration by the County included later in this document for additional context.

Summary of **Planning and Regulatory** capabilities: [ Low | Medium | High ]

\* Council makes every attempt to enforce all existing ordinances and policies for the safety and well being of ~~the~~ the Village and its residents.

Summary of **Administrative and Technical** capabilities: [ Low | Medium | High ]

\* See first answer

In addition we work closely with our local fire/rescue department and all Ionia County agencies; including but not limited to Ionia County Sheriff, Drain Commissioner & Building Department.

Summary of **Financial** capabilities: ( Low | Medium | High )

As a very small municipality, our resources are limited.

Summary of **Education and Outreach** capabilities: [ Low | Medium | High ]

We have bi-annual newsletters, website & Facebook.  
Also, we are small enough that word of mouth  
is very effective.

## Mitigation Actions

---

Ionia County has identified a list of hazard mitigation actions to work towards implementing on the county level over the five-year lifespan of the finished Plan; this unsorted list is included below for your reference. Now that you have characterized your jurisdiction's hazard mitigation capabilities, you **must** also identify and select **at least one** mitigation action that your jurisdiction will implement, or fully attempt to implement, over the five-year lifespan of the finished Plan. You may choose from the list in this document, but you are **strongly recommended** to provide mitigation actions that are not listed below and address a **specific** local vulnerability. You **must** describe how your jurisdiction will track and report the progress of action implementation such that an update can be provided in the next iteration of the Plan. You **must** describe existing authorities, policies, programs, **and** resources available for implementation of the chosen mitigation actions, **as well as** how your jurisdiction may improve upon these capabilities. Space has been provided for your answers after the action list.


You may also wish to consider choosing mitigation actions focused on increasing capacity for hazard mitigation actions across the board, such as integrating hazard mitigation practices into community Master Plans. In general, you are encouraged to emphasize actions that reduce the effects of hazards on new and existing buildings and infrastructure.

Localized flooding has been a concern/issue in the past two years.

We are working closely with the Ionia Co. Drain Commissioner to mitigate this in the future.

Water retention sites have been proposed, close inspection and repair of the Dutton Drain is ongoing.

Ionia County Drain Commissioner is currently contacting a study and will propose the best resolutions based on the findings of the study.

1. Evaluate the need for expanding coverage of warning sirens and other warning systems, and assist local governments in doing the same, along with updating existing sirens to 800mhz.
2. Encourage non-participating local governments to meet requirements and become members of Tree City USA.
3. Expand the library and increase availability of hazard mitigation GIS maps, databases, locations of critical infrastructure such as fire hydrants and curb stops, etc.
4. Assist local governments in integrating hazard mitigation principles into local Master Plans.
5. Identify potential projects to strengthen the County's infrastructure and increase its hazard resistance and encourage local governments to do the same.
6. Evaluate the necessity and viability of implementing County-wide zoning ordinances.
7. Apply for hazard mitigation grant funding for a mitigation project.
8. Evaluate and increase usage of snow fences to limit drifting along critical roadways.
9. Assist local governments in evaluating the need for construction of new local facilities or departments, or the expansion of existing facilities and departments, such as WTPs, WWTPs, and DPWs, to meet community growth.
10. Evaluate the need for a revision of FEMA flood maps and local government participation in the National Flood Insurance Program.
11. Provide NOAA weather radios to local public buildings, schools, hospitals, campgrounds, etc. for free or at a subsidized price by use of grant funding.
12. Encourage the burial of utility lines in new developments and in reconstruction of current development.
13. Become a participating member of the Michigan Emergency Management Assistance Compact (MEMAC).
-  14. Evaluate the viability of implementing a house numbering ordinance to improve emergency response and standardize number assignment throughout the county.

15. Ensure critical public buildings are outfitted with auxiliary sources of power, such as generators or battery systems, as necessary and assist local governments in doing the same.
16. Evaluate and ensure that enforcement of building/electrical/mechanical/plumbing codes is sufficient to ensure development adequately addresses hazard mitigation principles.
17. Evaluate the necessity and viability of developing and implementing an Ionia County Community Wildfire Protection Plan.
18. Evaluate potential state and federal sources of funding that can be used for specific hazard mitigation projects and assist local governments in doing the same.
19. Conduct a full evaluation of County hazard mitigation actions to ensure they are sufficiently meeting resident needs and assist local governments in doing the same.
20. Meet requirements and become a participating member of the National Weather Service's StormReady program.
21. Increase availability of planning documents such as the Emergency Operations Plan that provide a framework and guidance to County and local government officials for emergency/disaster response and recovery.
22. Create and implement a feedback mechanism for County residents to provide input on hazard mitigation actions, as well as to report hazards and hazardous conditions to officials.
23. Incorporate hazard mitigation principles into the County's next Capital Improvement Plan update.
24. Form an environmental review board to review land use permits, site plans, or any other applications that may pose significant impacts on the environment.
25. Work with critical facilities to develop emergency plans that take into account the unique factors of each facility (ex. evacuation needs for nursing homes or hospitals).
26. Explore the necessity and viability of establishing a Transfer of Development Rights program to limit development in high-risk areas such as floodplains.

27. Ensure the capacity for mobilization and operation of emergency shelters during an emergency or disaster event and assist local governments in doing the same.
28. Adopt an ordinance requiring the anchoring of manufactured home installations located outside of a designated floodplain and/or encourage manufactured home owners to voluntarily anchor their units.
29. Encourage local governments to adopt, implement, and maintain floodplain management practices that go beyond NFIP requirements.
30. Encourage local governments to meet requirements and become participating communities under the Community Rating System.
31. Establish public parks in identified local floodplains and assist local governments in doing the same.
32. Continue to evaluate the sufficiency of existing drainage management (culverts, drains, etc.) and identify insufficiencies.
33. Assist the Drain Commissioner's office in formalizing a maintenance plan for County drains.
34. Require notifications to/approvals from the Drain Commissioner's office for drainage tie-ins to County drains.
35. Evaluate the necessity and viability of expanding Ionia County's Communicable Disease reporting program to allow for a wider range of citizens to make related reports.
36. Disseminate disaster planning and response information to community groups and critical facilities.
37. Make available federal, state, and county emergency management, disaster preparedness, and other pertinent information on County website, ensure accessibility of information to speakers of Spanish, and assist local governments in doing the same.
38. Encourage individuals and families to develop their own disaster preparedness plans using resources such as the American Red Cross and County hazard mitigation information.

39. Assist local governments in enforcing requirements for burn permits, especially during sensitive times such as dry periods or high wind conditions.
40. Expand public education and awareness regarding activities (open burning, etc.) with the capacity to result in an uncontrolled wildfire.
41. Maintain adequate road and debris clearing capabilities and assist local governments in doing the same.
42. Apply structural hazard mitigation and sustainability concepts during construction or remodeling of government facilities and encourage local governments to do the same.
43. Promote low-impact development techniques in development that reduce stormwater runoff and resultant flooding.
44. Ensure that emergency plans continue to be maintained for Webber Dam.
45. Evaluate municipal wells for capacity to continue to meet projected growth and resultant demand and assist local governments in doing the same.
46. Evaluate the need to increase emergency/disaster response capabilities with alternative transportation vehicles (snowmobiles, ATVs, etc.)
47. Explore the necessity and viability of expanding the Ionia County Building Department's capabilities such that the County can perform duties such as permit application review and building code enforcement with in-house resources.
48. Incorporate hazard mitigation principles and priorities into the County land use plan upon its next review.
49. Continue to ensure that all current hazard mitigation actions are maintained or improved upon.

Village of Pewamo  
(jurisdiction)

has selected the following mitigation action(s)

which it will implement, or fully attempt to implement, over the five-year lifespan of the finished Ionia County Hazard Mitigation Plan:

#14

Village of Pewamo  
(jurisdiction)

will leverage the following existing authorities,

policies, programs, and resources available for implementation of the above mitigation action(s):

Council, Zoning, Planning Commission



Pewamo \_\_\_\_\_ will track and report the progress of the  
(jurisdiction)

implementation of the above mitigation action(s) in the following ways:

Begin the process of introducing and passing  
an ordinance.

## **Critical Facilities**

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The following is a list of critical facilities within Ionia County sorted by category. FEMA defines critical facilities as “structures and institutions necessary for a community’s response to and recovery from emergencies” who “must continue to operate during and following a disaster to reduce the severity of impacts and accelerate recovery”. Please ensure all relevant critical facilities in your jurisdiction are accounted for in the appropriate category below and note any omissions, corrections, or additions in the space provided after the list.

### **LAW ENFORCEMENT**

Ionia County Sheriff Department  
City of Ionia Department of Public Safety  
City of Belding Police Department  
Michigan State Police  
Lake Odessa Police Department  
City of Portland Police Department  
Ionia Correctional Facility  
Bellamy Creek Correctional Facility  
Michigan Reformatory  
Richard A. Handlin Correctional Facility  
Ionia County Jail

### **FIRE SERVICES**

Hubbardston Fire Department  
City of Belding Fire Department  
Lake Odessa Fire Department  
City of Ionia Department of Public Safety, Fire Division  
Pewamo Fire Department  
Lyons-Muir Fire Department  
Saranac Fire Department  
Portland Fire Department  
Campbell Township (Clarksville) Fire Department  
Orleans Township Fire Department  
Ronald Township Fire Department  
Berlin-Orange Township Fire Department  
Grattan Township Fire Department  
Roxand Township Fire Department (Eaton County)  
Freeport Fire/Rescue (Barry County)

## **HEALTHCARE**

Lakewood Community Ambulance Service (located in Barry County)  
Belding Ambulance Service- Belding Fire Department  
Portland Ambulance Service- Portland Fire Department, Emergency Services Building  
Life EMS  
Sparrow Ionia Hospital  
Sparrow Group Ionia  
Sparrow Group Portland  
Ionia Senior Center  
Ionia County Health Department  
DaVita Ionia Dialysis  
Spectrum Health Family Practice

## **PUBLIC SCHOOLS**

Oakwood Elementary School  
Portland Middle School  
Westwood Elementary School  
Lakewood Elementary School  
Saranac Elementary School  
Ionia County Career Center  
Coon School  
A.A. Rather School  
Ionia High School  
Emerson School  
Ionia Middle School  
Jefferson School  
Twin Rivers Elementary School  
Haynor School  
North LeValley Elementary School  
R.B. Boyce Elementary School  
Belding Middle School  
Ellis Elementary School  
Belding High School  
Woodview Elementary School  
Saranac Jr/Sr High School

## **PRIVATE SCHOOLS**

Faith Community Christian School  
Ionia Seventh Day Adventist School  
Ss. Peter & Paul Elementary School  
St. Joseph Elementary School  
Ionia Nazarene Christian School  
Lakewood Christian School  
St. Joseph Elementary School (Belding)  
St. Joseph Elementary School (Pewamo)  
St. Patrick School

## **CITY HALLS**

Belding City Hall  
Ionia City Hall  
City of Portland Hall

## **VILLAGE HALLS**

Village of Muir Hall  
Village of Lyons Hall  
Village of Hubbardston Hall  
Village of Lake Odessa Hall  
Village of Clarksville Hall  
Village of Saranac Hall  
Village of Pewamo Hall

## **TOWNSHIP HALLS**

Campbell Township Hall  
Boston Township Hall  
Berlin Township Hall  
Keene Township Hall  
Ionia Township Hall  
Danby Township Hall  
Odessa Township Hall  
North Plains Township Hall  
Lyons Township Hall  
Ronald Township Hall  
Sebewa Township Hall  
Otisco Township Hall

Orleans Township Hall  
Orange Township Hall  
Easton Township Hall  
Portland Township Hall

**LIVING**

Lighthouse Senior Living  
Lighthouse Rehab  
Saranac Housing Commission  
Mission Point of Belding  
SKLD of Ionia  
Hope Network  
Green Acres Ionia  
Portland Assisted Living and Memory Center  
Hope Network  
Good Vibes Adult Foster Care  
Clarksville Manor

**PUBLIC WORKS**

Ionia County Road Department  
Ionia Department of Public Works  
Belding Department of Public Works  
Portland Department of Public Works

**WWTP**

Belding WWTP  
Ionia WWTP  
Portland WWTP  
Lakewood Wastewater Authority WWTP  
Clarkesville-Morrison Lake WWTP  
Saranac WWSL

**UTILITIES**

Water Towers: 14  
Wind Turbines: 32  
Substations: 7

**TRAIN/BUS STATIONS/CARPOOL LOTS**

Lake Odessa Park and Ride  
Portland – West Park and Ride  
Portland #2 (NE) Park and Ride  
Ionia/Belding Park and Ride  
Ionia Dial-A-Ride  
Belding Dial-A-Ride

**POST OFFICES**

Belding Post Office  
Clarksville Post Office  
Hubbardston Post Office  
Ionia Post Office  
Lake Odessa Post Office  
Lyons Post Office  
Muir Post Office  
Orleans Post Office  
Pewamo Post Office  
Portland Post Office  
Saranac Post Office

**PUBLIC LIBRARIES**

Alvah N. Belding Memorial Library  
Hall-Fowler Memorial Library  
Ionia Community Library  
Portland District Library  
Lyons Township District Library  
Lake Odessa Community Library  
Clarksville Area Library  
Saranac Public Library

**FOOD/AGRICULTURE**

Herbruck’s Poultry Ranch  
\*\* ANY OTHER BIG ONES/COMMUNITY ANCHORS?

**OTHER CRITICAL FACILITIES**

\*\* ANYTHING NOTABLE?







## **5 Year Hazard Mitigation Plan**

**August 2024**

### **Mitigating Future Hazards:**

In the summer of 2021, the Village of Pewamo was in the bullseye of what was considered to be a 200 year rain event. Residents experienced some flooding in their basements, with the worse of the flooding occurring in the Louis Court residential district.

Following this event, the Village Department of Public Works began working with Robert Rose, Ionia County Drain Commissioner, to address possible means of eliminating flood risk. Some repairs were made to ensure that the Dutton Drain was operating at full capacity. Please see the attached letter for further details.

### **Improving/Utilizing Existing Resources:**

The Village of Pewamo currently has a Community Center and Fire/Rescue Meeting Room which can be used as a shelter during a widespread power outage due to severe storms or ice events. This site is equipped with a generator and restrooms.

The Pewamo Fire/Rescue Department will also deploy as many local emergency service people as available to assist in rescuing and serving the needs of Village residents.

Randall Zenk, President 616-893-8013

Kohl Falor, DPW Supervisor 989-534-6060

Sandy Wolniakowski, Clerk 517-242-5204

Office Hours:  
Monday thru Friday,  
8:30 – Noon and 1:00 – 5:00



Telephone (616) 527-5373  
Fax (616) 527-5323  
E-Mail: [rose@ioniacounty.org](mailto:rose@ioniacounty.org)

## IONIA COUNTY DRAIN COMMISSIONER

**Robert J. Rose**  
County Courthouse  
100 W. Main Street  
Ionia, MI 48846

March 3, 2022

To The Village Of Pewamo

I am writing this informational letter to update the residents in the Dutton Drain District about the work done at the end of last year. Soon after the flood of summer of 2021 I went to talk with some of the residents of the flooding. The water was already receded less than 24 hours of the event. I told them unfortunately the rain event was too much for the newer drain line and the original drain line to instantly take the water away from the result of a 7inch rain event . I explained to some of the residents that I will inspect the older line down stream to see if there is a blockage. I previously worked on it a few years ago when I worked for Mike Cook the old line had a suck hole just west of the curve of West Washington St. which resulted in sediment getting in the downstream side of pipe.

As a result checking the old line I found a 4 foot section under a village water main and repaired that and found a 10 foot area of pipe  $\frac{3}{4}$  full of sediment as a result of a suck hole from 9 years ago.

I was able to remove most of the 10 foot area of sediment by flushing the original line out with water. I believe this original line will convey water at a larger rate by the repairs on it. This will help out in the next huge rain event by relieving the newer concrete drain line. If anyone still has questions feel free to contact me at the Ionia County Drain Commission Office.

Sincerely Submitted

A handwritten signature in cursive script that reads "Robert J. Rose".

Robert J. Rose



## Ionia County Hazard Mitigation Plan Development Municipality Participation and Involvement Document

Ionia County is currently in the process of developing a county-wide Hazard Mitigation Plan in coordination with Fleis & VandenBrink. Having an approved Plan allows for the County to take advantage of funding through multiple FEMA grants that are aimed at supporting projects considering hazard mitigation actions. Municipalities within the County are able to take advantage of this funding as well if they are involved in the development of the Plan; for a municipality to be considered as having been involved in the development of a Plan, they must meet a certain level of participation as required by FEMA.

Some of you have already participated in this Plan development process through a comprehensive survey distributed earlier in the Plan development cycle and through other lines of related communication. The feedback received has been a key consideration in Plan development and so we thank you for your previous participation. This document is intended to ensure that every municipality in Ionia County can readily meet the minimum threshold of participation in Plan development in a standardized way and thus take advantage of these grant funding sources for future local projects. **Your jurisdiction must complete this document to be counted as a participating member of the Plan. The completed document must be returned by June 23<sup>rd</sup>, 2023 to Tage Heyn via email (see below) or regular mail (Tage Heyn c/o Fleis & VandenBrink, 2960 Lucerne Dr SE, Grand Rapids MI 49546). Failure to do so will constitute non-participation in the Plan's development and will render your jurisdiction ineligible for Hazard Mitigation Assistance grants.**

If you have any questions or comments while completing this document, please reach out to Tage Heyn at [theyn@fveng.com](mailto:theyn@fveng.com) or Jason Pattok at [jpattok@ioniacounty.org](mailto:jpattok@ioniacounty.org). Thank you for your time and participation in this development process!

You may find the following resources useful:

<https://www.fema.gov/grants/mitigation> | Information about these grants and their scope.

<https://www.fema.gov/emergency-managers/risk-management/hazard-mitigation-planning> | Information about hazard mitigation planning in general.

<https://www.fema.gov/grants/mitigation/building-resilient-infrastructure-communities/after-apply/fy-2021-subapplication-status> | Applications for BRIC grant funding from 2021 (bottom of page), showing project type and funding amount requested, as well as the status of each application.

## Introduction:

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Name: Tony Koster and Becky Straubel

Title: Fire Chief / DPW Director (Tony); Treasurer (Becky)

Jurisdiction representing: Village of Saranac

Email address: saranacdpw@gmail.com (Tony); saranacoffice@gmail.com (Becky)

## Resolution of Adoption:

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This Hazard Mitigation Plan will be adopted as an official plan of Ionia County upon its completion. Participating jurisdictions **must** adopt the finished Plan as well. A template adoption resolution is attached to the end of this document for reference.

Village of Saranac

(jurisdiction)

[ will | will not ] adopt the Ionia County  
(circle one)

Hazard Mitigation Plan as an official municipal plan upon its completion.

Village of Saranac

(jurisdiction)

[ will | will not ] participate in efforts to  
(circle one)

implement and update the plan throughout its five-year lifespan.

## Hazard Identification and Ranking

---

The following is the list of natural hazards identified by the Ionia County Hazard Mitigation Planning Committee as having the potential to affect Ionia County. These hazards have been ranked by their Risk Assessment Value, which is a number calculated by formulaic consideration of the hazards' probability of occurrence, severity of impacts, and expected future change of event frequency. Their order in the below list reflects this ranking, with the "most important" hazards for mitigation action at the top and the "least important" at the bottom.

Floods  
Severe Winds  
Ice/Sleet Storms  
Hail  
Tornadoes  
Winter Storms/Heavy Snow Events/Blizzards  
Drought  
Thunderstorms/Lightning  
Dam Failures  
Extreme Cold  
Extreme Heat  
Public Health Emergencies  
Fog  
Subsidence  
Invasive Species  
Wildfires  
Earthquakes  
Space Weather  
Impacting Objects (Celestial)

This list [  is ] is not [  ] a comprehensive list of natural hazards with the potential to affect Village of Saranac (jurisdiction).

The ranking of this list [  is ] is not [  ] representative of the relative risk these hazards pose to Village of Saranac (jurisdiction).



## Mitigation Capability

The overarching purpose of hazard mitigation planning is to reduce or eliminate long-term risk to life and property from the occurrence of hazard events. To realize this purpose, Ionia County has set the following long-term goals:

Goal: Minimize injuries and deaths caused by or related to hazard events.

Goal: Minimize the loss or damage of public and private property from hazard events.

Goal: Promote community awareness, understanding, cooperation, and participation in hazard mitigation actions.

Goal: Promote local growth and development through a lens of hazard mitigation.

Each jurisdiction within Ionia County has different capabilities for engaging in mitigation activities and working towards accomplishing these goals. FEMA has identified the following four primary types of capabilities in their planning handbook:

- Planning and Regulatory – implementation and enforcement of plans, policies, codes, ordinances, local and State law, etc.
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FEMA **requires** local communities who are participating in the development of a hazard mitigation plan to evaluate their capabilities for accomplishing hazard mitigation goals. For **each** capability listed above, you **must** describe existing authorities, policies, programs, and resources available for implementation of hazard mitigation actions and projects that lean on that capability, **as well as** how your jurisdiction may improve upon these capabilities. These do not need to be long descriptions, but they **must** include all elements as stated above. You **must** summarize your jurisdiction's capability as being **low, medium, or high** – you can circle the corresponding word at the top of the following four pages, where space has also been provided for your written answers. You may wish to refer to the list of mitigation actions under consideration by the County included later in this document for additional context.









## Mitigation Actions

---

Ionia County has identified a list of hazard mitigation actions to work towards implementing on the county level over the five-year lifespan of the finished Plan; this unsorted list is included below for your reference. Now that you have characterized your jurisdiction's hazard mitigation capabilities, you **must** also identify and select **at least one** mitigation action that your jurisdiction will implement, or fully attempt to implement, over the five-year lifespan of the finished Plan. You may choose from the list in this document, but you are **strongly recommended** to provide mitigation actions that are not listed below and address a **specific** local vulnerability. You **must** describe how your jurisdiction will track and report the progress of action implementation such that an update can be provided in the next iteration of the Plan. You **must** describe existing authorities, policies, programs, **and** resources available for implementation of the chosen mitigation actions, **as well as** how your jurisdiction may improve upon these capabilities. Space has been provided for your answers after the action list.

You may also wish to consider choosing mitigation actions focused on increasing capacity for hazard mitigation actions across the board, such as integrating hazard mitigation practices into community Master Plans. In general, you are encouraged to emphasize actions that reduce the effects of hazards on new and existing buildings and infrastructure.

1. Evaluate the need for expanding coverage of warning sirens and other warning systems, and assist local governments in doing the same, along with updating existing sirens to 800mhz.
2. Encourage non-participating local governments to meet requirements and become members of Tree City USA.
3. Expand the library and increase availability of hazard mitigation GIS maps, databases, locations of critical infrastructure such as fire hydrants and curb stops, etc.
4. Assist local governments in integrating hazard mitigation principles into local Master Plans.
5. Identify potential projects to strengthen the County's infrastructure and increase its hazard resistance and encourage local governments to do the same.
6. Evaluate the necessity and viability of implementing County-wide zoning ordinances.
7. Apply for hazard mitigation grant funding for a mitigation project.
8. Evaluate and increase usage of snow fences to limit drifting along critical roadways.
9. Assist local governments in evaluating the need for construction of new local facilities or departments, or the expansion of existing facilities and departments, such as WTPs, WWTPs, and DPWs, to meet community growth.
10. Evaluate the need for a revision of FEMA flood maps and local government participation in the National Flood Insurance Program.
11. Provide NOAA weather radios to local public buildings, schools, hospitals, campgrounds, etc. for free or at a subsidized price by use of grant funding.
12. Encourage the burial of utility lines in new developments and in reconstruction of current development.
13. Become a participating member of the Michigan Emergency Management Assistance Compact (MEMAC).
14. Evaluate the viability of implementing a house numbering ordinance to improve emergency response and standardize number assignment throughout the county.

15. Ensure critical public buildings are outfitted with auxiliary sources of power, such as generators or battery systems, as necessary and assist local governments in doing the same.
16. Evaluate and ensure that enforcement of building/electrical/mechanical/plumbing codes is sufficient to ensure development adequately addresses hazard mitigation principles.
17. Evaluate the necessity and viability of developing and implementing an Ionia County Community Wildfire Protection Plan.
18. Evaluate potential state and federal sources of funding that can be used for specific hazard mitigation projects and assist local governments in doing the same.
19. Conduct a full evaluation of County hazard mitigation actions to ensure they are sufficiently meeting resident needs and assist local governments in doing the same.
20. Meet requirements and become a participating member of the National Weather Service's StormReady program.
21. Increase availability of planning documents such as the Emergency Operations Plan that provide a framework and guidance to County and local government officials for emergency/disaster response and recovery.
22. Create and implement a feedback mechanism for County residents to provide input on hazard mitigation actions, as well as to report hazards and hazardous conditions to officials.
23. Incorporate hazard mitigation principles into the County's next Capital Improvement Plan update.
24. Form an environmental review board to review land use permits, site plans, or any other applications that may pose significant impacts on the environment.
25. Work with critical facilities to develop emergency plans that take into account the unique factors of each facility (ex. evacuation needs for nursing homes or hospitals).
26. Explore the necessity and viability of establishing a Transfer of Development Rights program to limit development in high-risk areas such as floodplains.

27. Ensure the capacity for mobilization and operation of emergency shelters during an emergency or disaster event and assist local governments in doing the same.
28. Adopt an ordinance requiring the anchoring of manufactured home installations located outside of a designated floodplain and/or encourage manufactured home owners to voluntarily anchor their units.
29. Encourage local governments to adopt, implement, and maintain floodplain management practices that go beyond NFIP requirements.
30. Encourage local governments to meet requirements and become participating communities under the Community Rating System.
31. Establish public parks in identified local floodplains and assist local governments in doing the same.
32. Continue to evaluate the sufficiency of existing drainage management (culverts, drains, etc.) and identify insufficiencies.
33. Assist the Drain Commissioner's office in formalizing a maintenance plan for County drains.
34. Require notifications to/approvals from the Drain Commissioner's office for drainage tie-ins to County drains.
35. Evaluate the necessity and viability of expanding Ionia County's Communicable Disease reporting program to allow for a wider range of citizens to make related reports.
36. Disseminate disaster planning and response information to community groups and critical facilities.
37. Make available federal, state, and county emergency management, disaster preparedness, and other pertinent information on County website, ensure accessibility of information to speakers of Spanish, and assist local governments in doing the same.
38. Encourage individuals and families to develop their own disaster preparedness plans using resources such as the American Red Cross and County hazard mitigation information.

39. Assist local governments in enforcing requirements for burn permits, especially during sensitive times such as dry periods or high wind conditions.
40. Expand public education and awareness regarding activities (open burning, etc.) with the capacity to result in an uncontrolled wildfire.
41. Maintain adequate road and debris clearing capabilities and assist local governments in doing the same.
42. Apply structural hazard mitigation and sustainability concepts during construction or remodeling of government facilities and encourage local governments to do the same.
43. Promote low-impact development techniques in development that reduce stormwater runoff and resultant flooding.
44. Ensure that emergency plans continue to be maintained for Webber Dam.
45. Evaluate municipal wells for capacity to continue to meet projected growth and resultant demand and assist local governments in doing the same.
46. Evaluate the need to increase emergency/disaster response capabilities with alternative transportation vehicles (snowmobiles, ATVs, etc.)
47. Explore the necessity and viability of expanding the Ionia County Building Department's capabilities such that the County can perform duties such as permit application review and building code enforcement with in-house resources.
48. Incorporate hazard mitigation principles and priorities into the County land use plan upon its next review.
49. Continue to ensure that all current hazard mitigation actions are maintained or improved upon.

Village of Saranac has selected the following mitigation action(s)  
(jurisdiction)

which it will implement, or fully attempt to implement, over the five-year lifespan of the finished Ionia County Hazard Mitigation Plan:

Expand warning siren coverage - update to 800 MHz

Budget requests, fundraising, grants

Village of Saranac will leverage the following existing authorities,  
(jurisdiction)

policies, programs, and resources available for implementation of the above mitigation action(s):

Emergency Management, Fire Board, Village Council, Boston Township Board



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Village of Saranac will track and report the progress of the  
(jurisdiction)

Implementation of the above mitigation action(s) in the following ways:

Attendance of and participation in meetings held by entities listed on page 15.

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## **Critical Facilities**

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The following is a list of critical facilities within Ionia County sorted by category. FEMA defines critical facilities as “structures and institutions necessary for a community’s response to and recovery from emergencies” who “must continue to operate during and following a disaster to reduce the severity of impacts and accelerate recovery”. Please ensure all relevant critical facilities in your jurisdiction are accounted for in the appropriate category below and note any omissions, corrections, or additions in the space provided after the list.

### **LAW ENFORCEMENT**

Ionia County Sheriff Department  
City of Ionia Department of Public Safety  
City of Belding Police Department  
Michigan State Police  
Lake Odessa Police Department  
City of Portland Police Department  
Ionia Correctional Facility  
Bellamy Creek Correctional Facility  
Michigan Reformatory  
Richard A. Handlin Correctional Facility  
Ionia County Jail

### **FIRE SERVICES**

Hubbardston Fire Department  
City of Belding Fire Department  
Lake Odessa Fire Department  
City of Ionia Department of Public Safety, Fire Division  
Pewamo Fire Department  
Lyons-Muir Fire Department  
Saranac Fire Department  
Portland Fire Department  
Campbell Township (Clarksville) Fire Department  
Orleans Township Fire Department  
Ronald Township Fire Department  
Berlin-Orange Township Fire Department  
Grattan Township Fire Department  
Roxand Township Fire Department (Eaton County)  
Freeport Fire/Rescue (Barry County)

## **HEALTHCARE**

Lakewood Community Ambulance Service (located in Barry County)  
Belding Ambulance Service- Belding Fire Department  
Portland Ambulance Service- Portland Fire Department, Emergency Services Building  
Life EMS  
Sparrow Ionia Hospital  
Sparrow Group Ionia  
Sparrow Group Portland  
Ionia Senior Center  
Ionia County Health Department  
DaVita Ionia Dialysis  
Spectrum Health Family Practice

## **PUBLIC SCHOOLS**

Oakwood Elementary School  
Portland Middle School  
Westwood Elementary School  
Lakewood Elementary School  
Saranac Elementary School  
Ionia County Career Center  
Coon School  
A.A. Rather School  
Ionia High School  
Emerson School  
Ionia Middle School  
Jefferson School  
Twin Rivers Elementary School  
Haynor School  
North LeValley Elementary School  
R.B. Boyce Elementary School  
Belding Middle School  
Ellis Elementary School  
Belding High School  
Woodview Elementary School  
Saranac Jr/Sr High School

**PRIVATE SCHOOLS**

Faith Community Christian School  
Ionia Seventh Day Adventist School  
Ss. Peter & Paul Elementary School  
St. Joseph Elementary School  
Ionia Nazarene Christian School  
Lakewood Christian School  
St. Joseph Elementary School (Belding)  
St. Joseph Elementary School (Pewamo)  
St. Patrick School

**CITY HALLS**

Belding City Hall  
Ionia City Hall  
City of Portland Hall

**VILLAGE HALLS**

Village of Muir Hall  
Village of Lyons Hall  
Village of Hubbardston Hall  
Village of Lake Odessa Hall  
Village of Clarksville Hall  
Village of Saranac Hall  
Village of Pewamo Hall

**TOWNSHIP HALLS**

Campbell Township Hall  
Boston Township Hall  
Berlin Township Hall  
Keene Township Hall  
Ionia Township Hall  
Danby Township Hall  
Odessa Township Hall  
North Plains Township Hall  
Lyons Township Hall  
Ronald Township Hall  
Sebewa Township Hall  
Otisco Township Hall

Orleans Township Hall  
Orange Township Hall  
Easton Township Hall  
Portland Township Hall

**LIVING**

Lighthouse Senior Living  
Lighthouse Rehab  
Saranac Housing Commission  
Mission Point of Belding  
SKLD of Ionia  
Hope Network  
Green Acres Ionia  
Portland Assisted Living and Memory Center  
Hope Network  
Good Vibes Adult Foster Care  
Clarksville Manor

**PUBLIC WORKS**

Ionia County Road Department  
Ionia Department of Public Works  
Belding Department of Public Works  
Portland Department of Public Works

**WWTP**

Belding WWTP  
Ionia WWTP  
Portland WWTP  
Lakewood Wastewater Authority WWTP  
Clarksville-Morrison Lake WWTP  
Saranac WWSL

**UTILITIES**

Water Towers: 14  
Wind Turbines: 32  
Substations: 7

**TRAIN/BUS STATIONS/CARPOOL LOTS**

Lake Odessa Park and Ride  
Portland – West Park and Ride  
Portland #2 (NE) Park and Ride  
Ionia/Belding Park and Ride  
Ionia Dial-A-Ride  
Belding Dial-A-Ride

**POST OFFICES**

Belding Post Office  
Clarksville Post Office  
Hubbardston Post Office  
Ionia Post Office  
Lake Odessa Post Office  
Lyons Post Office  
Muir Post Office  
Orleans Post Office  
Pewamo Post Office  
Portland Post Office  
Saranac Post Office

**PUBLIC LIBRARIES**

Alvah N. Belding Memorial Library  
Hall-Fowler Memorial Library  
Ionia Community Library  
Portland District Library  
Lyons Township District Library  
Lake Odessa Community Library  
Clarksville Area Library  
Saranac Public Library

**FOOD/AGRICULTURE**

Herbruck’s Poultry Ranch  
\*\* ANY OTHER BIG ONES/COMMUNITY ANCHORS?

**OTHER CRITICAL FACILITIES**

\*\* ANYTHING NOTABLE?

This list [ is | is not ] a comprehensive and applicable list of critical facilities in  
Village of Saranac & Keene Township  
(jurisdiction)

If you circled "is not" for the above, please use the rest of this page to elaborate on why.

Add to "Public Works": Saranac Department of Public Works

Add to "Food/Agriculture": Maple Row Dairy (milk production); and

Krieger Farms (pork production)



Lined area for text input.



August 12, 2024

RE: Response to Ionia County Emergency Manager's request for information relative to the Village of Saranac's participation in the Ionia County Hazardous Mitigation Plan

**Village of Saranac Current & Recently Added Mitigation Strategies**

- We have created a list of contractors willing to mobilize during and after an event, to assist with prevention efforts, clean-up, restoration, etc.
  
- We have added generators to the following facilities, to ensure that critical infrastructure remains operational during an event.
  - Wastewater Treatment Plant
  - Water Tower
  - Wells (2)
  - Village Office
  - Fire Department

**Village of Saranac Proposed New Mitigation Strategies**

- We currently have an air raid siren located in the downtown area, to warn residents of incoming storms. The siren needs to be turned on manually at the Fire Department. The range of the siren is very limited and the time lost dispatching someone to the station to activate it, causes dangerous delays.


We would like to work with Boston Township and members of the community to research grants and funding to update our warning system. The goal will be to have several sirens added to the village, so all residents are able to hear them. Additionally, we will be able to activate them remotely through Ionia County Central Dispatch. Boston Township has expressed an interest in working on this project together and adding sirens to the more populated areas (Morrison Lake) of Boston Township as well.

**Appendix C**  
**Supporting Documentation**

## Ionia County Hazardous Kick Off Meeting

 Bob Elliott joined the conversation.

Monday, January 31, 2022

 Bob Elliott named the meeting to Ionia County Mitigation Plan - Kick Off Meeting.

 Brian Rice and 2 others were invited to the meeting.

 Jon Moxey was invited to the meeting.

 Joe Benjamin was invited to the meeting.

Thursday, February 17, 2022

 2/17/2022 8:37 AM Meeting ended: 1m 57s




### Attendance report

[Click here to download attendance report](#)


 2/17/2022 12:55 PM Meeting started

 Chris Jensen has temporarily joined the chat.

 Precia Garland (Guest) has temporarily joined the chat.

 Anne Hagedorn has temporarily joined the chat.


 **Chris Jensen** 2/17/2022 1:03 PM  
yes

 mike scollon (Guest) has temporarily joined the chat.

 Ben Gurk (Guest) has temporarily joined the chat.

 Susan Craft (Guest) has temporarily joined the chat.

 Ben Gurk (Guest) no longer has access to the chat.

 Precia Garland (Guest) no longer has access to the chat.

 Susan Craft (Guest) no longer has access to the chat.

 Anne Hagedorn no longer has access to the chat.

# Sign-In Sheet



Project Title: Ionia County Hazard Mitigation Plan

Date: August 10<sup>th</sup>, 2022

Name	Jurisdiction/Entity Representing	Role	Phone	Email
WILLIAM HERRNS	Sparrow Hospital	HOSPITAL EM	517-526-4921	WILLIAM.HERRNS@SPARROW-ONL0
ALIVIS JONES	ICHD	EPC	517-526-5075	ajones@ioniacounty.org
JOHN NIENIELA	IONIA CO RD. DEPARTMENT	MANAGING DIRECTOR	517 256 7943	johnnie@ioniacounty.org
Lance Langdon	IONIA 911	Director	517-666-902-0512	llangdon@ioniacounty.org
Kevin Heinlein	IONIA D.P.S.	Deputy Director	616-527-4431	kheinlein@ci.ionia.mi.us
Charlie Holc	Sheriff's Office	Sheriff	616-527-5383	charlie@ioniacounty.org
Andrew Hayes	IONIA DHHS	Supervisor	616-755-0315	HayesA@Michigan.gov
Tage Heyn	Fleis & VandenBrink	Planner	(616) 481-8576	theyn@fveng.com
Brian Rice	"	"	616.977.1000	BRIAN@FVNB-CORP

Sign-In Sheet



Project Title: Ionia County Hazard Mitigation Plan  
 Date: December 21st, 2022

Name	Jurisdiction/Entity Representing	Role	Phone	Email
WILLIAM HASKINS	SPARRAW IONIA	EM	616-526-4924	WILLIAM.HASKINS@SPARRAW.ORG
Lance Langford	911	Director	616-902-0512	Langford@ioniacounty.org
BEAN RICE	FAV	CONSULTANT	616-977-1000	BRICE@EVENTS.COM
Alexis Jones	ICTHD	EPC	517-520-5075	ajones@ioniacounty.org
Star Thomas	Portland (P.D./Ambulance)	Chief/Director	616-443-3618	StarThomas@portland-michigan.org
Jason Pothok	Ionia County Emergency Management	EM	616-902-3252	jpothok@ioniacounty.org
TIM LUBITZ	BELOING FIRE DEPT.	FIRE CHIEF	616-891-0110	T.LUBITZ@CI.BELOING.MI.US
Tage Heyn	Fleis & VandenBrink	Planner	616-431-8576	theyn@fveng.com

Sign-In Sheet



Project Title: Ionia County Hazard Mitigation Plan  
 Date: February 8th, 2023

Name	Jurisdiction/Entity Representing	Role	Phone	Email
Math Bennett	BOFO ICFC	Chief	616 292 6333	mathb@reliableinter.nct
Kevin Henley	IONIA DPS	Deputy Director	616 527-4431	khenley@siouxis.mi.us
Alexis Jones	ICHD	EPC	517-576-5675	ajones@ioniacounty.org
John Monas	Portland P.O	Chief	517-647-2934	startthomas@portland-michigan.org
Orville Theaker	MSP EMSD	6TH D.C.	269.953.6099	TheakerO@michigan.gov
TIM LUBITZ	BELDING FIRE	CHIEF	(616) 891-4670	t.lubitz@ci.belding.mi.us
Jason Kuttak	Emergency Manager	EM	616-702-3252	jpkuttak@ioniacounty
Tadge Heyn	Fleis & VandenBrink	Planner	(616) 491-8576	theyn@fveng.com

Sign-In Sheet

Project Title: Ionia County Hazard Mitigation Plan  
 Date: May 3rd, 2023



Name	Jurisdiction/Entity Representing	Role	Phone	Email
Alexis Jones	Ionia County Health Dept	EPC	517-570-5675	ajones@ioniacounty.org
Patrick Jordan	Administration	Administrator	616-527-5200	pjordan@ioniacounty.org
Robert Rose	Ionia County Drain Commissioner	Drain Commissioner	616 527 5973	rose@ioniacounty.org
Ethan Ebenstein	Ionia County Intermediate School District	Superintendent	616 885-2316	eebenstein@ioniaisd.org
Dion Sower	Belding PD	Chief	616-794-1900	d.sower@ci.belding.mi.us
Jason Kattok	Ionia County Emergency Management	EM	616-902-3252	jkattok@ioniacounty.org
TIM LUBITZ	BELDING F.D.	CHIEF	616 894-4670	t.lubit@ci.belding.mi.us
Tage Heyn	Fleis & VandenBrink	Planner	(616) 481-8576	theyn@fveng.com

Project Title: Ionia County Hazard Mitigation Plan  
 Date: August 13, 2024

Sign-In Sheet



Name	Jurisdiction/Entity Representing	Role	Email
Blaine Lowetz	Road Dept	Supervisor	Blawetz@ioniacountyroads.org
Orville Treake	MSF EMS/SD		
DAVE WIERZBICKI	EGLE	IN C. MGR	WIERZBICKID@MI.GOV
Tony KOSTER	SARANAC FIRE	CHIEF	SARANACFIRE@GMAIL.COM
TIM LUBITZ	BEUDING FIRE	CHIEF	T.LUBITZ@CL.BEUDING.MI.O5
Linda Piquet	Ionia County Rd Dept	MGR	lpiquet@ioniacountyroads.org
Frederick Stroud	Ionia County E.M	Emergency manager	FStroud@ioniacounty.org
Tage Heyn	Fleis & Vandenberg	Lead planner	theyn@fveng.com



**Ionia County Administration**  
**Patrick Jordan, County Administrator**  
Courthouse, 101 West Main Street, Ionia, MI 48846  
616.527.5300 Fax: 616.527.5380  
pjordan@ioniacounty.org

August 21, 2024

**MEETING NOTICE**  
**HAZARD MITIGATION PLAN-REVIEW WORKSHOP**  
**EMERGENCY MANAGEMENT**

**TUESDAY, SEPTEMBER 10, 2024**  
**100 W MAIN ST, COURTHOUSE**  
**MULTIPURPOSE ROOM**

**11:00 A.M.**

For those of you that wish to attend via Zoom, please see the instructions to connect below:

Connect to **Zoom** from your computer, tablet or smartphone.

**<https://fveng.zoom.us/j/88936341457?pwd=cJ27WsZvz2gfYxwvpPxOXiJujrje8W.1>**



Ionia County Health Department

September 27, 2022 · 🌐




Ionia County is currently in the process of putting together a Hazard Mitigation Plan, and we're looking for your input during this planning phase.

This image contains a list of natural hazards that are likely to affect Ionia County and its residents. How do you feel the County is equipped to deal with these hazards? Are you aware of programs and policies that are currently in place to address them? What are some programs and policies you'd like to see the county implement to address them? How have you and your family been significantly impacted by these hazards?


Community input is an integral part of the Hazard Mitigation Plan development process, and we greatly appreciate your feedback. If you'd like to learn more about what goes into a hazard mitigation plan and why it is important, please visit the following link: <https://www.fema.gov/.../risk.../hazard-mitigation-planning>

## IONIA COUNTY NATURAL HAZARDS



**SEVERE  
WINTER  
WEATHER**

- Extreme Cold
- Ice/Sleet Storms
- Winter Storms:
  - Heavy Snow
  - Blizzards
- (Freezing) Fog






**SEVERE  
SUMMER  
WEATHER**

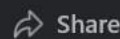
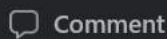
- High Winds
- Thunderstorms
- Lightning
- Tornadoes
- Hail
- Floods
- Extreme Heat
- Drought

**OTHER  
NATURAL  
HAZARDS**

- Dam Failures
- Wildfires
- Invasive Species
- Earthquakes
- Subsidence
- Space Weather (e.g. solar flares)
- Impacting Objects (e.g. meteorites)
- Public Health Emergencies

1 comment 2 shares



Most relevant ▼



Ionia County Sheriff Office

December 8, 2022 · 🌐




Ionia County is currently in the process of putting together a Hazard Mitigation Plan, and we're looking for your input during this planning phase.

This image contains a list of natural hazards that are likely to affect Ionia County and its residents. How do you feel the County is equipped to deal with these hazards? Are you aware of programs and policies that are currently in place to address them? What are some programs and policies you'd like to see the county implement to address them? How have you and your family been significantly impacted by these hazards?


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## IONIA COUNTY NATURAL HAZARDS



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- Space Weather (e.g. solar flares)
- Impacting Objects (e.g. meteorites)
- Public Health Emergencies

👍 54

23 comments 11 shares

👍 Like

💬 Comment

➦ Share

All comments ▼

**Ken Stoel**  
I agree with **Cindy Oosterhouse**. I don't understand why the road commission leaves it up to rural residents to either be stuck at home when there is a significant snow event or take it upon themselves to plow their way out. If it wasn't for myself plowing the road so me and my family could get to work, we would have been stuck and home for days in previous winters. Why does the rural population (which is most of Ionia County) have to be put on the back burner to get their road plowed? It seems to be only when the road commission is done babysitting I96 and the state highways do the rural roads get addressed. What happens if someone has a house fire or a medical emergency and the road is drifted shut?

Like Reply 30w

**Tammi Kneale**  
**Ken Stoel** our house burns down or we die.

Like Reply 30w

Reply to Ken Stoel...

**Cindy Oosterhouse**  
As far as winter weather I have been disappointed with road conditions. I don't understand the no plowing on weekends. As soon as I cross county line on any side the roads are vastly better. Would love to see snow removal and salt addressed.

Like Reply 30w

**Susan Long**  
**Cindy Oosterhouse** the county roads aren't the City's responsibility to plow.

Like Reply 29w

**Cindy Oosterhouse**  
**Susan Long** The post says Ionia County so I figured it was applicable.

Like Reply 29w

**Dawn Klinessmith**  
**Cindy Oosterhouse** I agree with you. And this is Ionia county so what better place to give our opinions.

Like Reply 29w

Reply to Cindy Oosterhouse...

**Tammi Kneale**  
Rural Ionia County is an afterthought. Gravel roads are crap. Craters in the warm weather and drifted shut for days in the winter. They get scraped, not graded, if we're lucky twice a year. Grading maybe every 2 years. Plows come through on day 3-5 post snow event. Farmers clear the roads before the county so we all can get to work, the store, school buses can pick up students, so Meals on Wheels can get to their elderly clients, or emergency vehicles can get through. Depending on where you are fire and ambulance service can be up to a 30 minute wait. By then your house/barn is gone or you're dead. In the past 3 years alone there have been 3 tornadoes that have touched down and caused substantial damage within 2-4 miles of my home. No warning sirens out here so you can seek shelter like the townies have! Not everyone watches network TV to follow weather alerts, and if there's a power outage during a severe weather event... well, good luck that you don't end up like Dorothy! FYI not all AM/FM radio stations that can be received in the boonies broadcast severe weather alerts/information, if nearby cell towers go down your phone is useless. No local weather on SIRIUS/XM if you have it in your vehicle. So basically if you live in rural Ionia County you don't receive the same consideration/timely service as those living within the city limits. We may have chosen a rural lifestyle but that doesn't mean we're not as important as those living within the city limits.

Like Reply 30w

**Jenny Quint**  
Maybe fix the bridge on our road that has been out since 2019. If there was a house fire the fire trucks have to go the long way to reach the place. Ionia road department keeps changing stories of when it is going to fix!

Like Reply 30w

**Top commenter**  
**Mark S Cull Jr.**  
Natural hazards are defined as environmental phenomena that have the potential to impact societies and the human environment. I'm puzzled how public health Emergencies fit into that?

Like Reply 30w

**Rob Dale**  
**Mark S Cull Jr.** we're not quite sure how to fully implement that into HMPs because as you note they aren't part of the "common" natural hazard assessment. I expect changes in FEMA guidance regarding them with the next update.

<https://www.sciencedirect.com/.../pii/S2590061722000540>

**SCIENTEDIRECT.COM**  
The role of natural hazard mitigation plans in an age of pandemics

Like Reply 30w

**Hope Pakalins**  
**Mark** water boiling emergencies, large gas leaks, etc. especially when timely notification is of the essence.

Like Reply 30w

**Tage Heyn**  
Hi Mark,  
FEMA's requirements for an HMP only stipulate an analysis of natural hazards. Many states and counties will also include analyses of technological and human-related hazards, and those plans will generally lump public health emergencies into the latter category. For jurisdictions that only consider natural hazards, PHEs are often included in that group, and I suppose it's not that much of a stretch; viruses and bacteria and other such disease-causing elements are naturally-occurring, so even if the PHE itself is caused by human-to-human spread, it originates from a natural hazard. This line of reasoning is also why dam failures are considered here as a natural hazard instead of a technological hazard; even if the event itself is technological, the consequences (flooding, etc) are natural

Like Reply 27w

Reply to Mark S Cull Jr....

**Paul Haynor**  
How about a sink hole?

Like Reply 29w

**Kelly Cooper**  
Are you asking for our input on Facebook or is there another avenue for us to review and comment on the plans?

Like Reply 29w

**Tage Heyn**  
**Kelly Cooper** The plan will be a BOC meeting item during both its development stage (current status) and review stage (next few months). This post is just to get some extra thoughts from a broader group, but you'll definitely have an opportunity to review and comment on the finished draft plans

Like Reply 27w

**Kelly Cooper**  
**Tage Heyn** Thank you!

Like Reply 27w

**Kelly Cooper**  
**Tage Heyn** I would just encourage that all plans for emergencies would include contingencies for homebound aging adults or those with disabilities. Typically a commission on aging or area agency on aging would know about any of those individuals who receive services as a homebound individual.

Like Reply 27w Edited

**Chris Partin**  
I walk to work in town and sometimes it's just too hard to get there because of black ice on sidewalks and snow all together. But I'm grateful for the effort they put last year, really helps people.

Like Reply 30w

**Robert Metvier**  
Hmmm who woulda thought LOL

Like Reply 30w

**Melanie Amber**  
**Isaac Hooker** 😄

Like Reply 30w

**William M. Sandborn**  
I feel like the county was going towards a strong network of volunteers in CERT, skywarn, etc. but it was on the backs of a few to bear the weight. It's hard to keep the public informed, because over warning them numbs them to when a real threat of a dangerous situation. Public information seems to be digested better when it is a trusted representative is relaying it. Kent county has had a good track record of dealing with public information, and Montcalm county skywarn has a good rapport with getting warning information out and going live during severe weather.

Like Reply 30w



Village of Saranac MI

October 5, 2022 · 🌐



Ionia County is currently in the process of putting together a Hazard Mitigation Plan, and we would like your input during the planning phase.

The image below contains a list of natural hazards that could affect Ionia County and its residents. Do you feel the County is equipped to deal with these hazards? Are you aware of programs and policies that are currently in place to address them? What are some programs and policies you would like to see the County implement to address them? How have you and your family been significantly impacted by these hazards?

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<https://www.fema.gov/.../risk.../hazard-mitigation-planning>

# IONIA COUNTY NATURAL HAZARDS



## SEVERE WINTER WEATHER

- Extreme Cold
- Ice/Sleet Storms
- Winter Storms:
  - Heavy Snow
  - Blizzards
- (Freezing) Fog



## SEVERE SUMMER WEATHER

- High Winds
- Thunderstorms
- Lightning
- Tornadoes
- Hail
- Floods
- Extreme Heat
- Drought

## OTHER NATURAL HAZARDS

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- Wildfires
- Invasive Species
- Earthquakes
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- Space Weather (e.g. solar flares)
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- Public Health Emergencies



FEMA



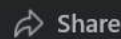
FLEIS & VANDENBRINK  
DESIGN, BUILD, OPERATE



Like



Comment



Share

# THE JUMP



SANDY MAIN  
smain@thedailynews.cc

## Once Upon a Daily

150 YEARS AGO

**“Proposed charter amendment”** — An amendment to our city charter is proposed, which shall change the time of election for city officers from April 1st to some time in the year when the floating population cannot control the election as it did last spring. It is also proposed to levy the tax for city purposes in the spring when ordinarily itinerant merchants sojourn in our city.

**“The Grand Masquerade Ball”** — The most elegant ball of the season was the Grand Masquerade at Rider Hall last Friday evening under the auspices of the Young Men’s Club. About fifty couples in masks participated in the festivities of the occasion, and a large number enjoyed themselves as spectators. The affair was conducted with the utmost decorum, not a masked person being admitted to the hall without first exhibiting a card of invitation. Mr. C. Turner, costumeur of Detroit, furnished a large number of the costumes, but some of the most elegant were made by the ladies who wore them. Some were exceedingly grotesque and comical, but none of such a character as to offend the most fastidious.

— Greenville Independent

100 YEARS AGO

**“Hot lunch at school”** — Hot lunches are being served at cost to the high school students by the home economics department under the supervision of Miss Mary Ann Gilchrist. Soup and sandwiches are prepared each day and cost five cents each. Between fifty and sixty of the students, who live so far away from school that they are unable to go home for lunch, have been availing themselves of the opportunity to get a hot lunch at a small price.

**“Forty-two years service record”** — Claims recently made by Mrs. M.C. Speer, Akron, Ohio, of having the longest service record of any woman in railroad service with a grand total of thirty-six years, have been rudely shattered by Miss Luella Eaton of Greenville, who has been in the service of the Pere Marquette railroad for the past forty-two years as ticket agent and operator in this city. In 1880 Miss Eaton mastered the intricacies of the Morse code. Four years later she accepted her first position with the Pere Marquette.

**“Box social a success”** — Over \$50 was cleared at the box social held in the high school gymnasium Friday night. The highest price paid for a box was three dollars bid by Leon Greene. The boxes sold at prices ranging from fifty cents to three dollars. Following the social a dance was held. Music was furnished by an orchestra made up of high school students.

— Greenville Independent

75 YEARS AGO

**“Lions Club will sponsor ‘Whisker Derby’”** — Greenville’s Lions — and every other male in town, they hope — will be roaring through their beads after Feb. 1 in honor of the city’s 1948 Centennial celebration. The club voted at its Monday night meeting to sponsor an all-out beard growing contest, and set Feb. 1 as the starting date. The decision came after spirited debate and attempts to find a more original contest idea. It became apparent, however, that the sentiment is strongly in favor of a beard contest.

**“Break ground for armory building”** — Greenville was a step nearer today to the realization of a National Guard armory as ground was broken to begin construction of the new \$50,000 building. The building, 80x96 feet and of cinder block construction, is being erected just east of the Washington street bridge, on the south side of the street opposite the Converse Coal Co. The erection of the building will give the Guard company, presently headquartered inadequately on the third floor of the First State Bank building, ample room to receive the military equipment to which it is entitled.

— Greenville Daily News

# Public input requested to help create Ionia County Hazard Mitigation Plan

TIM MCALLISTER  
tmcallister@thedailynews.cc

IONIA — Blizzards, extreme cold, tornadoes and floods are the most common disasters Ionia County residents are likely to deal with, and the area would also be directly in the path of a hypothetical breach of Webber Dam. The county is currently in the process of creating its Hazard Mitigation Plan, a document that will identify these potential risks and implement hazard mitigation strategies.

Hazard mitigation strategies include tasks as simple as salting slippery streets in the winter, or as expensive as regularly replacing snow plow trucks.

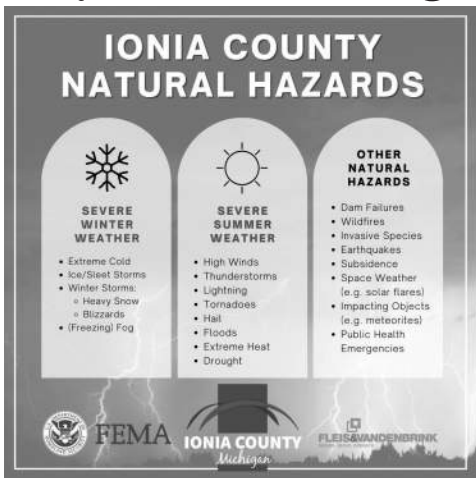
Once complete, the plan will be used to support applications for grant money from the Federal Emergency Management Agency (FEMA).

Ionia County is now seeking public input by asking area residents to complete a short online survey, found at forms.gle/iqNrC8T7CCayH9ZSA

Tage Heyn, environmental engineer in training at Fleis and VandenBrink, a Grand Rapids engineering and architecture firm, is overseeing the project. Heyn said he is working closely with Ionia County’s emergency manager, Sgt. Jason Pattok of the Ionia County Sheriff’s Department.

Pattok did not respond to multiple requests to comment for this article.

Precisely how much grant money will be available is impossible to determine at this time, but having such a plan is one of the basic requirements



Weather-related disasters are the most common in Ionia County. — Submitted graphic | Tage Heyn of Fleis and VandenBrink

to apply for free federal dollars from three main sources: the Hazard Mitigation Grant Program (HMGP), Building Resilient Infrastructure and Communities (BRIC) grants and Flood Mitigation Assistance grants.

“The HMGP allows the jurisdiction to build back after a disaster with risk mitigation in mind, as opposed to just building back what was already there,” Heyn explained. “In other words, they can spend a little bit more to try and make sure whatever it was doesn’t happen again. The second one

is the BRIC, and that’s the one that lets the community invest in projects before a disaster happens. The last one lets you implement mitigation projects for properties that are both insured under the NFIP (National Flood Insurance Program) and have also been designated as repetitive loss properties.”

The Ionia County Hazard Mitigation Plan will contain hard data from various sources, including the U.S. Census, the Environmental Protection Agency and the National Weather Service.

“That part is more straightforward because it’s based on objective data,” Heyn said. “There are fewer gray areas in evaluating data from a database. We have also been collaborating a fair amount with fire departments, public works departments and school representatives. Those are the groups we’re collaborating the most with because they’re the ones who are most intimately involved with public activities.”

More than a dozen people will have worked on the document for thousands of hours by the time it’s completed, and it could end up a couple hundred pages long including supporting documentation such as meeting minutes and surveys. Heyn estimated the process is about 40% complete and should be finished by the end of April.

After it’s been created and approved by the Ionia County Board of Commissioners, the plan must be reexamined by FEMA every five years.

“This is a living document, and it’s kept current during its lifespan,” Heyn said. “The update process isn’t that much. You basically reevaluate your hazards and you look at your mitigation strategies. You know — what did you do, what didn’t you do, what new things are you considering and so forth. It’s really the mitigation section that you’re going to be revisiting heavily.”

There will be another opportunity for public input when the matter is brought before the Ionia County Board of Commissioners at a future meeting of that body.

## MAISD moves ahead with IT assessment

Continued from Page 1

bringing in someone from the outside, to see if maybe there’s a better way to do certain things that he hasn’t thought of.”

Hamlin expressed confidence in Plante Moran providing an assessment that would be worthy of the expenditure.

“They are very reputable. This company specializes in technology and they work with nothing but school districts,” he said. “They will look at processes. They will look at if we have enough people running and supporting this. Remember, we are also providing (technology) services to Lakeview, Montabella and Vestaburg. We want to continue to do that well.”

However, Treasurer Kurt Peasley expressed reservations about the large expenditure.

“I don’t mind paying somebody to do something like that, but here’s what I’ve found in the past that happens,” he said. “They sit down with our people, they listen to what our people tell them, but I’m not sure what you get for your \$18,000 to \$20,000 isn’t something that we don’t get just from sitting down and looking at what we need, technology-wise, or where we think we’re lacking because we’re the people working with it every day. It just makes no sense to me to pay someone \$18,000 to \$20,000, to come up with some sort of plan. Maybe you guys can persuade me I’m wrong.”

Peasley said he’s witnessed assessments from companies that he believed were a waste of money.

“I’ve seen it time and time again that when they come up with that thing, I kind of look at it and say, ‘oh my gosh, we could have done that exact same thing in two or three meetings



Montcalm Area Intermediate School District Board of Education Treasurer Kurt Peasley, left, shares his thoughts during the Jan. 19 meeting on the district potentially hiring an outside consultant to evaluate the MAISD’s information technology department, as Vice President Mark Christensen listens. — DN Photo | Cory Smith



Montcalm Area Intermediate School District Board of Education President Steve Foster, left, listens as Superintendent Kyle Hamlin speaks at the Jan. 19 meeting. — DN Photo | Cory Smith

and been \$20,000 ahead to put into technology,” he said. “I believe the ideas that they have and things they implement are things that, 99% of the time, are things we already knew we needed to do. So someone convince me that’s not how this is going to work.”

Associate Superintendent of Special Education Daniel Brant said he doesn’t believe the MAISD on its own could provide the same results as an outside consultant.

“I would say, we don’t know what to do, as far as the technology assessment,” he said. “There

are about nine areas specifically that Plante Moran’s assessment does. It looks at risk assessment, longevity, infrastructure and whether or not our current technology has the flexibility to continue to meet the needs of the organization.

“I would argue that as much as I appreciate Tom and think he has great leadership skills, I don’t know if he has all of the skills to hit all of those nine areas,” he continued. “As we start to plan for the future, from a personal perspective, it’s important to look at things that we may not have expertise in. There are several things in that assessment where we don’t have the expertise, nor should we.”

“Kurt, I get what you are saying, but I think with the complexity of this issue and experience that Plante Moran has had with other ISDs, I would be inclined to support it,” Trustee Andrea Tabor said.

“I think we need to provide the best service for our students that we can,” Vice President Mark Christensen added. “Kurt has brought forth some of my own concerns, but we have to provide the best service, one way or another. I don’t have the expertise, I don’t see anyone else here who does. It’s a lot of money, but there’s got to be value at the end of the day. If we approve this, I hope someone comes back to us and says, ‘Board, this is what Plante Moran did.’ That’s what I need to see down the road.”

The board ultimately voted unanimously to hire the services of Plante Moran, with Peasley adding his vote came “with great qualifications.”

“I hear your concerns,” Hamlin said. “We will make sure you are being updated and we will show you the outcome.”

## Douglass Twp. Planning Commission chairman resigns

Continued from Page 1

outright abuse directed at our board and commission members. Our family farm business has experienced financial losses connected with my appointed position on the Planning Commission. Making a reliable return on investment in agriculture is a gamble anyway, so I do not need any non-farming issues threatening my income.

“My parents always impressed on us that we should never leave a job until it was finished. Walking away from an unfinished task was never an option for us Jeppesen kids. Because of my early training, I have been giving my role as Planning Commission chairman a lot of thought since the election of November 2022. It has become clear to me that the newly elected regime will require the Commission to do its bidding at all times. It will completely lose its ability to be effective in planning for the needs of all of the residents of our town-

ship. The new Planning Commission will have to rubberstamp whatever the regime gives it.

“I cannot, in good conscience, serve as a figurehead. This position, and the responsibilities that go along with it, have been an important part of my life for too many years. I am not willing or able to continue in my role as chairman without being able to serve the township residents as an independent voice. Therefore, I am resigning from the Planning Commission and from my position as chairman, effective immediately,” Jeppesen’s letter concluded (signed “respectfully submitted”).

Jack Jeppesen’s last few years on the Planning Commission have been tumultuous ones largely due to the ongoing wind energy debate — sometimes because of rowdy audience members and sometimes because of Jeppesen himself.

Chaotic Zoom meetings in the winter of 2021 set an early tone, with Jeppesen calling someone dropping off a packet of letters

from concerned citizens at his property “short of domestic terrorism” and saying he felt “threatened” as they could have “put poison into my milk vauk tank.” He said he would be contacting the police about the incident.

As planners continued the agonizing work of creating a wind ordinance that everyone could live with, an April 2021 meeting was indicative of many others — dominated by public comment and escalating emotions, including Jeppesen asking a Montcalm County sheriff’s sergeant to remove Joe Hansen of Sidney Township after Hansen repeated interrupted Jack’s wife Kellie during public comment — marking the first of several times that Hansen was warned he would be escorted out of local meetings for interrupting and derogatory name-calling.

In October 2021, Jack ordered his wife Kellie to leave the meeting after she spoke out of turn (she hadn’t been the only one interrupting the meeting).

IONIA  
SENTINEL-STANDARD

## PUBLIC- SAFETY

# Ionia County seeks public input for hazard mitigation plan

**Evan Sasiela**

Ionia Sentinel-Standard

Published 5:07 a.m. ET Jan. 25, 2023

IONIA — Officials are seeking public input to help craft a hazard mitigation plan for Ionia County.

Tage Heyn, environmental engineer-in-training at Fleis and VandenBrink in Grand Rapids, said the engineering firm is in the process of helping put together a hazard mitigation plan for Ionia County.

A survey is available online at [tinyurl.com/ioniahmpsurvey](https://tinyurl.com/ioniahmpsurvey) for the public to provide input on the plan.

A hazard mitigation plan describes a jurisdiction's vulnerability to a range of potential hazards, Heyn said. It summarizes a jurisdiction's present and future actions towards reducing or eliminating risk to human life, property and the economy — based on an analysis of this risk and the needs of the concerned communities.

“It's putting together what the community is doing and what the community wants to do to protect itself from these hazards that it's identified,” Heyn said.

Plans that are submitted to and approved by the Federal Emergency Management Agency (FEMA) makes the jurisdiction eligible for potential grant funding.

Heyn said there are five steps that go into completing a hazard mitigation plan: Planning Process; Community Profile; Hazard Identification and Risk Assessment; Mitigation Strategy; and Plan Maintenance/Update/Adoption. Public input is crucial to the planning process, Heyn said.

Creating the plan requires Ionia County to collaborate with constituent communities,

municipal departments and outside stakeholders — Heyn said. A FEMA-approved hazard mitigation plan would help the county take advantage of funds under the Hazard Mitigation Assistance program. Disaster relief funding is entirely separate from the program.

Three grants available under the Hazard Mitigation Assistance program umbrella are:

**Hazard Mitigation Grant Program (HMGP):** Allows the jurisdiction to rebuild after a presidentially declared disaster with hazard mitigation in mind

**Building Resilient Infrastructure and Communities (BRIC):** Allows the jurisdiction to implement hazard mitigation projects before a disaster or natural hazard happens

**Flood Mitigation Assistance:** Allows the jurisdiction to mitigate repetitive flood damage to buildings insured by the National Flood Insurance Program.

Hazards that Ionia County is most vulnerable to include winter blizzards and extreme cold, Heyn said. A particular concern is riverine flooding and the potential effects of a hypothetical Webber Dam breach, Heyn noted.

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Heyn hopes to prepare the plan for review by the end of April. It needs to be approved by the state of Michigan before going to FEMA, Heyn noted.

“The document really shows the process you went through but the process is the really important part,” Heyn said.

— *Contact reporter Evan Sasiela at [esasiela@sentinel-standard.com](mailto:esasiela@sentinel-standard.com). Follow him on Twitter @SalsaEvan.*

# Ionia County requests public input on hazard mitigation plan



By [WILX News 10](#)  
Published: Dec. 9, 2022 at 5:12 PM EST



IONIA, Mich. (WILX) - Officials with Ionia County are seeking input from residents to help them put together a hazard mitigation plan.

Some of those hazards include extreme cold, invasive species and wildfires.

"Community input is an integral part of the Hazard Mitigation Plan development process, and we greatly appreciate your feedback," officials said on social media.

More information on [Hazard Mitigation Planning](#) can be found on the [FEMA website](#).

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- [Grand Rapids announces 2023 ArtPrize 2.0 dates](#)
- [Stolen: Holiday polar bears at Esker Landing Park in Holt](#)
- [Flint water crisis charges dismissed against ex-Gov. Snyder](#)
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**A RESOLUTION OF THE CITY OF IONIA ADOPTING THE IONIA COUNTY HAZARD MITIGATION PLAN OF JUNE 10, 2025**

At a special meeting of the City Council for the City of Ionia held on October 15, 2025, at 6:15 PM, in the Council Chambers at Ionia City Hall, 114 N. Kidd Street, Ionia, Michigan, there were:

PRESENT:

ABSENT:

The following resolution was offered for adoption by Councilmember \_\_\_\_\_ and seconded by Councilmember \_\_\_\_\_:

**WHEREAS**, the Ionia City Council recognizes the threat that natural hazards pose to people and property within the City of Ionia and Ionia County as a whole; and

**WHEREAS**, the County of Ionia has prepared a multi-hazard mitigation plan, hereby known as the Ionia County Hazard Mitigation Plan of 2025, in accordance with the Disaster Mitigation Act of 2000; and

**WHEREAS**, the City of Ionia is a municipality located within the County of Ionia and would benefit from participating in the Ionia County Hazard Mitigation Plan; and

**WHEREAS**, the Ionia County Hazard Mitigation Plan of 2025 identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in the City of Ionia from impacts of future hazards and disasters; and

**WHEREAS**, adoption by the Ionia City Council demonstrates their commitment to hazard mitigation and achieving the goals outlined in the Ionia County Hazard Mitigation Plan of 2025.

**NOW, THEREFORE, BE IT RESOLVED BY THE CITY OF IONIA, MICHIGAN, THAT:** the Ionia City Council adopts the Ionia County Hazard Mitigation Plan of 2025.

YEAS: \_\_\_\_\_

NAYS: \_\_\_\_\_

ABSTAIN: \_\_\_\_\_

ABSENT: \_\_\_\_\_

**RESOLUTION 2025-26 DECLARED ADOPTED ON OCTOBER 15, 2025.**

---

John R. Milewski II, Mayor

ATTEST:

---

Jonathan T. Bowman, City Clerk

APPROVED AS TO FORM:

---

Jeffrey VH Sluggett, City Attorney

**CERTIFICATION**

I hereby certify that the foregoing is a true and complete copy of a Resolution adopted by the City Council of the City of Ionia, Ionia County, Michigan at a special meeting held on October 15, 2025, and that the public notices of said meeting were given pursuant to Act No. 267 of the Michigan Public Acts of 1976, including in the case of a special or rescheduled meeting notice of publication or posting at least eighteen (18) hours prior to the time set for the meeting.

---

Jonathan T. Bowman, City Clerk  
Ionia City Hall  
114 North Kidd Street  
Ionia, Michigan 48846  
Telephone No: (616) 527-4170



# CITY OF IONIA

## STAFF REPORT FOR COUNCIL AGENDA ITEM

Agenda Item: VII.3

TO: Mayor Milewski and Councilmembers  
 FROM: Precia Garland, City Manager  
 DATE: October 15, 2025  
 RE: Purchase of Employee Health and Related Insurances

**Background:**

The City’s employee health care insurance is renewed annually at the beginning of the calendar year. Since 2022, the City’s health insurance plan has been purchased through Priority Health, saving 8.2% over the proposed 2022 BCN rate. For 2023, 2024, and 2025, the renewal proposals from Priority Health resulted in rate increases of 5.8%, 3.2%, and 8.8% respectively. The 2026 rate increase was just received and is proposed to increase 3.7% year over year (YoY). The number of City-insured contracts increased by two from 45 to 47 and there was also variation in the number of contracts by size. Tallies below include three (3) family certificates on behalf of the Ionia Housing Commission that are fully reimbursed, as well as five (5) City retirees, also fully reimbursed but who do not receive an HSA contribution. Year over year rates compare in detail as follows:

		<b>Priority Health - 2025</b>		
	Rate per Month	Certificates	Total Cert/Mo.	Annual Rate
Single	\$ 497.38	10	\$ 4,973.80	\$ 59,685.60
Single (65+)	\$ 714.12	1	\$ 714.12	\$ 8,569.44
Two-Person	\$ 1,193.71	8	\$ 9,549.68	\$ 114,596.16
Family	\$ 1,469.58	26	\$38,209.08	\$ 458,508.96
<b>TOTALS</b>		45	\$53,446.68	\$ 641,360.16
		<b>Priority Health - 2026</b>		
	Rate per Month	Certificates	Total Cert/Mo.	Annual Rate
Single	\$ 515.51	10	\$ 5,155.10	\$ 61,861.20

Two-Person	\$ 1,237.22	11	\$13,609.42	\$ 163,313.04
Family	\$ 1,546.53	26	\$40,209.78	\$ 482,517.36
TOTALS		47	\$58,974.30	\$ 707,691.60
		<b>2026 HSA Contribution</b>		
Single	\$ 3,400.00	8	\$ 27,200.00	
Two-Person	\$ 6,800.00	9	\$ 61,200.00	
Family	\$ 6,800.00	21	\$142,800.00	
		38	\$231,200.00	
				<b>Increase YoY</b>
<b>Total Healthcare Spend</b>			<b>\$938,891.60</b>	<b>\$ 56,631.44</b>

A structural change began two years ago in healthcare plan, mandated by the IRS. The IRS mandates minimum embedded deductibles for high deductible health plans (HDHPs). The minimum deductible was increased to \$3,400 per single/\$6,800 per two person/full family coverage from \$3,300/\$6,600. The plan includes an HSA contribution equal to the embedded deductible, which led to an overall, year over year gross increase for health plan benefits of \$56,631.44, or 6.4%.

Assuming that the City continues to elect the 80/20 cost share as it has done since 2011 under PA 152, its actual cost for health insurance in 2026 would be as follows:

**\$938,891.61 x 0.80 = \$751,113.29 All insureds @ 80% cost share**

**\$938,891.61 x 0.20 = \$187,778.32 All insureds @ 20% cost share**

**\$818,880.93 x 0.80 = \$655,104.74 City only share (excludes HC & retirees)**

**\$818,880.93 x 0.20 = \$163,776.19 City employee only share (excludes HC & retirees)**

Quotes were also obtained for dental and vision insurance coverage. Rates were quoted with no rate increase compared to the prior year for dental coverage. A slight modification was requested to vision coverage, which increased the annual gross group rate by \$858.12. Rates for dental and vision for all insured certificates are as follows:

		<b>2026-Delta Dental</b>		
	Rate per Month	Certificates	Total Cert/Mo.	Annual Rate
Single	\$ 41.07	10	\$ 410.70	\$ 4,928.40
Two-Person	\$ 75.39	11	\$ 829.29	\$ 9,951.48

Family	\$134.59	26	\$3,499.34	\$ 41,992.08
TOTALS	\$251.05	47	\$4,739.33	\$ 56,871.96
		<b>2026-VSP Vision</b>		
	Rate per Month	Certificates	Total Cert/Mo.	Annual Rate
Single	\$ 7.54	10	\$ 75.40	\$ 904.80
Two-Person	\$ 11.50	11	\$ 126.50	\$ 1,518.00
Family	\$ 20.63	26	\$ 536.38	\$ 6,436.56
TOTALS	\$ 39.67	47	\$ 738.28	\$ 8,859.36
<b>DENTAL + VISION</b>				<b>\$ 65,731.32</b>

After reimbursement from the Ionia Housing Commission and retirees, total City cost for dental and vision coverage totals **\$54,118.32**.

Finally, the City provides basic group term life and long-term disability insurance for all City employees as specified in the City of Ionia Personnel Policy manual and/or collective bargaining agreements. This year’s annual renewal rate proposed by Lincoln Financial for all coverage is \$17,128. This reflects no rate increase over the prior year.

**Requested Action / Motion:**

It is requested the Ionia City Council consider approving the renewal proposal from Priority Health for 2026 employee health insurance, along with Delta Dental and VSP for dental and vision insurance, and Lincoln Financial for life and disability insurance, respectively, with rates as detailed above. Funds for this expense have been budgeted in the appropriate employee fringe benefit accounts across the FY25-26 City of Ionia budget.

**Motion By:**

**Seconded By:**

**Roll Call Vote:** Lee                    \_\_\_                    Winters                    \_\_\_  
Cook                    \_\_\_                    Patrick                    \_\_\_  
Millard                    \_\_\_                    Waterman                    \_\_\_  
Starr                    \_\_\_                    Cowling                    \_\_\_  
   Milewski                    \_\_\_



# CITY OF IONIA

## STAFF REPORT FOR COUNCIL AGENDA ITEM

Agenda Item: VII.4

TO: Mayor Milewski and Councilmembers

FROM: Precia Garland, City Manager

DATE: October 15, 2025

RE: PA 152 - 80/20 Cost Sharing of Publicly Funded Health Insurance

### Background:

Michigan Public Act 152, the “Publicly Funded Health Insurance Contribution Act” was passed in 2011. The Act limits public employers’ contributions to employee healthcare. The City is required to annually determine how it will comply with the Act. Choices include:

1. Abiding by the hard cap spending limit (per section 3 of the act)
2. Implementing the 80% employer; 20% employee cost share (per section 4 of the act)
3. Exempting itself from PA 152 compliance for the next plan year (requires a 2/3 vote of the Council).

The City has consistently implemented the 80/20 cost share with all employee groups since passage of PA 152, as reflected by its inclusion in all collective bargaining agreements and the City of Ionia Personnel Policy Manual. If the City approves the quote by Priority Health for 2026 health insurance, its cost will be \$655,104.74 (80% of premiums and HSA account contributions for City only participants). The maximum allowed spend under the hard cap for 2026 calculates to \$667,887.44, placing the City’s total plan costs \$12,782.70 under the maximum allowed, with the 80/20 cost share. Without the 80/20 cost share and assuming the City paid 100%, the total health insurance cost would have been \$818,883.93, which exceeds the annual hard cap spending limit by \$150,996.49.

### Requested Action / Motion:

It is requested the Ionia City Council consider approving the following Resolution 2025-27, which would implement the 80/20 cost share for the healthcare plan year beginning January 1, 2026.

**Motion By:**

**Seconded By:**

<b>Roll Call Vote:</b>	Lee	_____	Winters	_____
	Cook	_____	Patrick	_____
	Millard	_____	Waterman	_____
	Starr	_____	Cowling	_____





**CITY OF IONIA  
COUNTY OF IONIA, MICHIGAN  
CITY COUNCIL**

**A RESOLUTION TO ADOPT 80/20 COST SHARING OPTION AS SET FORTH IN  
2011 PUBLIC ACT 152, THE “PUBLICLY FUNDED HEALTH INSURANCE  
CONTRIBUTION ACT”**

At a special meeting of the City Council of the City of Ionia, held at the Ionia City Hall, 114 North Kidd Street, Ionia, Michigan, on the 15th day of October, 2025 at 6:15 p.m.

PRESENT:  
ABSENT:

The following resolution was offered by Councilmember \_\_\_\_\_ and seconded by Councilmember \_\_\_\_\_.

**WHEREAS**, 2011 Public Act 152 (the “Act”) was passed by the State Legislature and signed by the Governor on September 24, 2011;

**WHEREAS**, the Act contains three options for complying with the requirements of the Act;

**WHEREAS**, the three options are as follows:

1. Section 3 - “Hard Caps” Option - limits a public employer’s total annual health care costs for employees based on coverage levels, as defined in the Act;
2. Section 4 - “80/20” Option - limits a public employer’s share of total annual health care costs to not more than 80%. This option requires an annual majority vote of the governing body;
3. Section 8 - “Exemption” Option - a local unit of government, as defined in the Act, may exempt itself from the requirements of the Act by an annual 2/3 vote of the governing body;

**WHEREAS**, the City Council of the City of Ionia has decided to adopt the 80/20 option as its choice of compliance under the Act;

**NOW, THEREFORE, BE IT RESOLVED** the City Council of the City of Ionia elects to comply with the requirements of 2011 Public Act 152, the “Publicly Funded Health Insurance Contribution Act”, by adopting the 80/20 option for the medical benefit plan coverage year January 1, 2026 through December 31, 2026.

Upon a call of the roll, the vote was as follows:

YEAS: \_\_\_\_\_  
 NAYS: \_\_\_\_\_  
 ABSTAIN: \_\_\_\_\_  
 ABSENT: \_\_\_\_\_

**RESOLUTION 2025-27 DECLARED ADOPTED.**

\_\_\_\_\_  
Jonathan T. Bowman, City Clerk

CERTIFICATION: I hereby certify that the foregoing is a true and complete resolution adopted by the City Council of the City of Ionia at a special meeting held this 15th day of October, 2025.

\_\_\_\_\_  
Jonathan T. Bowman, City Clerk